NO. 22-003209-CV

JEFFERSON FISHER RANCH	§	**IN THE 725th DISTRICT COURT**
	§	
Plaintiff,	§	
	§	**IN AND FOR**
v.	§	
	§	
ARMADILLO MODERN POWER LIGHT ELECTRIC,	§	**BELL COUNTY**
	§	
	§	
Defendant.	§	**STATE OF LONE STAR**
	§	

Prepared by:

Major Atina T.E. Rizk Stavropoulos
Director, Professional Communications Program
Associate Professor, Administrative and Civil Law
The Judge Advocate General's Legal Center and School
Charlottesville, VA 22903

The Texas Young Lawyers Association commissioned this case file, and Major Stavropoulos prepared it for the 2023 National Trial Competition in her civilian capacity. To the extent that this problem expresses any views, they are those of the author and do not necessarily reflect the official policy or position of the Department of the Army, the Department of Defense, or the U.S. Government

NATIONAL TRIAL COMPETITION

JEFFERSON FISHER RANCH v.
ARMADILLO MODERN POWER LIGHT ELECTRIC

STATEMENT OF FACTS

This is a negligence action filed by Jefferson Fisher Ranch against Armadillo Modern Power Electric (AMPLE), a private corporation, as a result of the death of a herd of cattle who drank from a contaminated water source near an easement that AMPLE owned on the Jefferson Fisher Ranch. AMPLE used the easement to maintain power lines located on the Jefferson Fisher Ranch. The power line served the ranch and nearby urban areas, as it was part of the power line corridor of Lone Star. Water testing revealed that the pond closest to the easement was contaminated with a nonselective herbicide, sodium chlorate. The symptoms the herd exhibited: hemolysis, methemoglobinemia, and death, are consistent with herbicide poisoning.

NO. 22-003209-CV

JEFFERSON FISHER RANCH	§	**IN THE 725th DISTRICT COURT**
	§	
Plaintiff,	§	
	§	**IN AND FOR**
v.	§	
	§	
ARMADILLO MODERN POWER LIGHT ELECTRIC,	§	**BELL COUNTY**
	§	
	§	
Defendant.	§	**STATE OF LONE STAR**
	§	

PLAINTIFF'S ORIGINAL COMPLAINT

TO THE HONORABLE COURT:

COMES NOW, Plaintiff Jefferson Fisher Ranch and files this Original Complaint against Armadillo Modern Power Light Electric (AMPLE).

I.
GENERAL ALLEGATIONS

1. This is an action for damages within the jurisdictional limits of this Court.

2. Plaintiff is Jefferson Fisher Ranch. Plaintiff company is located within Bell County, Lone Star.

3. The Defendant, AMPLE is a private, for-profit incorporated business with its principal place of business in Charlottesville, Bell County, Lone Star. Its agent for service of process is the brilliant legal mind, Marvin W. Jones, its vice president, who may be served with process in this matter at 701 S. Taylor, Suite 500, Armadillo, Lone Star.

II.
COUNT – NEGLIGENCE

4. On April 29, 2021, an AMPLE employee, Drew M. Martins, was engaged in the process of maintaining the vegetation on the easement belonging to AMPLE, on certain premises while working as probationary employee. This was part of his regular duties. At the time and on the occasion in question, Martins was driving a truck that included large barrels of a chemical substance which he sprayed on the ground and on plants on the easement.

5. On the same day, 61 out of 66 head of cattle suffered from herbicide poisoning resulting in hemolysis, methemoglobinemia, and death. Those who survived had to be terminated due to contamination.

6. Jefferson Fisher Ranch, a family-owned operation, had owned the land for generations, and they were aware of the easement, which would necessitate occasional access by AMPLE employees to inspect and maintain the Lone Star power supply. The Fisher family has allowed their cattle to graze on this land for many years.

7. AMPLE, through its employee, Drew Martins, knew of the cattle, the nearby natural water supply, and had a duty to exercise a high degree of care under the circumstances in helping to maintain the land.

8. Drew Martins meets the definition of employee as he is an officer or agent of the in the paid service of AMPLE by competent authority. He is not an independent contractor, and on the day in question, he was working in the scope of his employment on the day in question.

9. Whenever a party does any act, omission or thing, it is meant that the party's employees, agents, officers, directors, servants, apparent agents, ostensible agents, agents by estoppel

and/or representatives did such act, omission or thing and that at the time such act, omission or thing was done it was done with the actual or implied knowledge of the party, or was done with the full authorization or ratification of the party, or was done in the normal and routine course and scope of agency or employment of the party's employees, agents, officers, directors, servants, apparent agents or ostensible agents, agents by estoppel and/or representatives. Such is the case with AMPLE and its employee, Drew Martins.

10. AMPLE failed to use a high degree of care in failing to do that which a very cautious, competent, and prudent person would have done under the same or similar circumstances when they applied sodium chlorate and amine to the land on the easement in order to kill back vegetation.

11. Sodium chlorate is a restricted use herbicide, and a dangerous commodity, because it has the capacity to poison the land and kill mammals including humans if ingested. It is colorless, odorless, and deadly. It is among the deadlier poisons known to man.

12. AMPLE failed to notify Jefferson Fisher Ranch personnel of its intent to use sodium chlorate and failed to protect the waterways and cattle, property of Jefferson Fisher Ranch.

13. AMPLE is liable for the death of the cattle under theory of negligence for their failure to act with due care.

14. As a result of the negligence of AMPLE, which caused the cattle's death, Plaintiff Jefferson Fisher Ranch has suffered the loss of the value of the cattle and incurred CERCLA costs to clean up the land and other pecuniary loss. Many say that the patriarch of Jefferson Fisher Ranch, Big Jeff himself, died of a broken heart after witnessing what transpired on 29 April 2021.

15. Accordingly, Plaintiff demands Judgment against AMPLE in an amount in excess of $10,000, interest, and costs, including reasonable attorney fees, and all other relief deemed just and equitable by this Court.

III.
JURY DEMAND

16. Plaintiff hereby requests trial by jury.

IV.
PRAYER FOR RELIEF

WHEREFORE, Plaintiff requests that the Defendant be cited to answer and appear, and that upon final hearing the Plaintiff have judgment for damages, pre- judgment and post-judgment interest as allowed by law, costs of suit and such other and further relief, at law or in equity, to which Plaintiff may be justly entitled.

Respectfully Submitted,

Law Offices of Ryan
Bauerle 83350 N.
Central Expressway
Suite 1700
Armadillo, Lone Star 76377-1950
(888) WILL SUE (Telephone)
(888) 945-5788 (Facsimile)
ryan@Bauerleyourface.com

By: /s/ Ryan Bauerle (electronically filed)

Ryan Bauerle
Lone Star State Bar No. 8675309

NO. 22-003209-CV

JEFFERSON FISHER RANCH	**§**	**IN THE 725th DISTRICT COURT**
	§	
Plaintiff,	**§**	
	§	**IN AND FOR**
v.	**§**	
	§	
ARMADILLO MODERN POWER LIGHT ELECTRIC,	**§**	**BELL COUNTY**
	§	
Defendant.	**§**	**STATE OF LONE STAR**
	§	

DEFENDANT'S ORIGINAL ANSWER

TO THE HONORABLE COURT:

COMES NOW, Defendant, Armadillo Modern Power Light Electric, and files this its Original Answer in response to the Original Complaint filed by Plaintiff.

ANSWER TO PLAINTIFF'S ALLEGATIONS

1. Defendant admits the allegations contained in Paragraph 1 of Plaintiff's Original Complaint.
2. Defendant admits the allegations contained in Paragraph 2 of Plaintiff's Original Complaint.
3. Defendant admits the allegations Paragraph 3 of Plaintiff's Original Complaint noting that brilliance is in the eye of the beholder.
4. Defendant is without knowledge or information sufficient to either admit or deny the allegations contained in Paragraph 4 of Plaintiff's Original Complaint, and therefore denies same.
5. Defendant admits that it uses the easement on which the accident in question

took place but denies all the remaining allegations contained in Paragraph 5 of Plaintiff's Original Complaint.

6. Defendant is without knowledge or information sufficient to either admit or deny the allegations contained in Paragraph 6 of Plaintiff's Original Complaint, and therefore denies same.

7. Defendant denies the allegations contained in Paragraph 7 of Plaintiff's Original Complaint.

8. Defendant denies the allegations contained in Paragraph 8 of Plaintiff's Original Complaint.

9. Defendant denies the allegations contained in Paragraph 9 of Plaintiff's Original Complaint. Also, the Defendant notes that it is inconceivable to quote movies in complaints, even the classics.

10. Defendant denies the allegations contained in Paragraph 10 of Plaintiff's Original Complaint.

11. Defendant categorically denies the allegations contained in Paragraph 11 of Plaintiff's Original Complaint.

12. Defendant denies the allegations contained in Paragraph 12 of Plaintiff's Original Complaint.

13. Defendant denies the allegations contained in Paragraph 13 of Plaintiff's Original Complaint.

14. Defendant denies the allegations contained in Paragraph 14 of Plaintiff's Original Complaint.

15. Defendant perceives the Plaintiff's demands arguing against their provision.

16. Defendant welcomes a trial by jury and accordingly independently demands a trial by jury.

II.
AFFIRMATIVE DEFENSES

17. Without waiver of the foregoing but in addition thereto, Defendant invokes the affirmative defense of comparative negligence. Plaintiff ranch personnel were negligent in their husbandry of the cattle and their stewardship of their own land.

18. Pleading further and without waiver of the foregoing, Defendant alleges that the incident in question and the cattle's death were caused in whole or in part by the acts of one or more third parties. Specifically:

    a. Jefferson Fisher Ranch personnel were negligent in attempting to grow crops and/or allowing vegetation to grow that exceeded the allowable height under a high voltage power line; and

    b. Jefferson Fisher Ranch personnel engaged in negligent animal husbandry which was the actual cause of the cattle's death.

    c. Drew Martins acted outside the scope of their employment in whatever behavior they allegedly engaged in on the day in question in light of the alleged behavior being well outside the general authority given by their employer.

19. If there was any misapplication of herbicide then Drew Martins did it intentionally in order to benefit a love interest misguidedly believing that doing anything for love included tortious acts.

III.
PRAYER

WHEREFORE, Defendant requests that upon final trial that Defendant have judgment that Plaintiff take nothing by their suit, that Defendant be discharged from any and all liability, that Defendant recover court costs and for such other and further relief, at law or in equity, general or special, to which Defendant may show itself justly entitled.

Respectfully submitted,

LAW OFFICES OF DAVID ROSS HAGAN
441 N. Fredonia St.
P.O. Box 1026
Longview, Lone Star 76707
(430) 831-7364
(430) 832-2628 FAX
dahag@hagan_americasdefender.com

By: /s/ [electronically signed and filed]
David Hagan
State Bar No. 31415926

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of Defendant's Original Answer has been electronically filed and served to Jefferson Fisher Ranch on this 1st day of December, 2021.

By: /s/ [electronically signed]
David Hagan, Himself

WITNESSES

Plaintiff

1. J. Fisher
2. Lee R. Jenkins

Defense

3. Drew M. Martins
4. Morgan Ageladakis

EXHIBITS

1. Photo of herd
2. Diagram of spray area and pond
3. Lone Star Administrative Code
4. Molecular structure of sodium chlorate
5. Farm Safely Flyer
6. “Crops and Power Lines Can Be Good Neighbors” Pamphlet
7. Satellite imagery of farm
8. By My Ranch Trifold Pamphlet
9. Photo taken by Drew Martins
10. AMPLE employee handbook
11. YouTube video about how to make sodium chlorate at home
12. Drew Martins Performance evaluation
13. Receipt for bleach, sand, sugar, ice, filter paper, beakers
14. LRJ Environmental Incident Report
15. Lonestar Lab Results
16. Jenkins Resume
17. NERC Standards
18. YouTube Watch History
19. Sodium Chlorate Fact Sheet
20. Veterinarian Report
21. Picture of Water Sampling Kit
22. Josiah Griffin Statement
23. Text exchange of Mr. Martins
24. Ageladakis Resume
25. Field Grade Article 15 – Non-Judicial Punishment
26. YouTube Liked Video List
27. AMINE advertisement

STIPULATIONS AS TO EVIDENTIARY MATTERS

Procedural Matters

1. Federal Rules of Civil Procedure and Federal Rules of Evidence apply.

2. All witnesses called to testify who have identified the parties, other individuals, or tangible evidence in depositions or prior testimony will, if asked, identify the same at trial.

3. Each witness who gave a deposition agreed under oath at the outset of his or her deposition to give a full and complete description of all material events that occurred and to correct the deposition for inaccuracies and completeness before signing the deposition.

4. All depositions were signed under oath.

5. For this competition, no team is permitted to attempt to impeach a witness by arguing to the jury that a signature appearing on a deposition does not comport with signatures or initials located on an exhibit.

6. Other than what is supplied in the problem itself, there is nothing exceptional or unusual about the background information of any of the witnesses that would bolster or detract from their credibility.

7. This competition does not permit a listed witness, while testifying, to "invent" an individual not mentioned in this problem and have testimony or evidence offered to the court or jury from that "invented" individual.

8. "Beyond the record" shall not be entertained as an objection. Rather, teams shall use cross examination as to necessary inferences from material facts pursuant to National Rules 7.4. Any party wishing to file a complaint concerning a violation of this rule shall use the procedure found in Rule VIII(4).

STIPULATIONS AS TO EVIDENTIARY MATTERS

9. The Plaintiff and the Defendant must call the two witnesses listed as that party's witnesses on the witness list.

10. All exhibits in the file are authentic. In addition, each exhibit contained in the file is the original of that document unless otherwise noted on the exhibit or as established by the evidence.

11. It is stipulated that no one shall attempt to contact the problem drafter about this problem before the conclusion of the 2023 NTC Regional Final Round. Contact with the competition officials concerning this problem must be pursuant to the rules of the competition.

12. The problem may or may not be based on actual events. No one shall attempt to search for any actual events, persons, lawsuits or other materials that might relate to an actual event or case.

13. 2023 is the year in which this case comes to trial.

14. Presentation and argument on pretrial motions shall be limited to a total time of sixteen minutes divided equally between the parties as follows: (1) the Plaintiff shall have four minutes to present any pretrial motions; (2) the Defendant shall have four minutes to respond to the Plaintiff's motion(s); (3) the Defendant shall have four minutes to present any pretrial motions; and (4) the Plaintiff shall have four minutes to respond to the Defendant's motion(s).

15. This competition permits teams to argue additional case law and other relevant authority to support the team's argument on motions and evidentiary issues. However, no additions or deletions are permitted to the provided jury instructions or to the jury verdict form.

STIPULATIONS AS TO EVIDENTIARY MATTERS

18. The Court has found that sodium chlorate is a restricted use herbicide, so it is a dangerous commodity, and, therefore, the heightened duty of care associated with a dangerous commodity, a high degree, would apply to anyone handling it.

19. The trial court ruled pretrial that the Josiah Griffin is unavailable as defined in chapter 8 of the Rules of Evidence.

20. The trial court declined to rule on the use of the Herd Demonstrative.

21. Prior to trial, Lee Jenkins reviewed the complete case file; this review did not change Jenkins's conclusions.

22. Judges will not permit competitors to treat witnesses they call as "hostile." Further, competitors may not move to do so.

DEPOSITION OF JAY FISHER

August 9, 2021

DIRECT

Q: State your name for the record.

A: Jay Fisher spelled, F-I-S-H-E-R, which is weird because we don't really eat fish at our house. You know what I mean?

Q: Why not?

A: Obviously, we're ranchers, so we're mostly meat eaters.

Q: Alright. I'm sorry; is your first name, "J"? [gestured to reflect quotation marks]

A: Yup, just Jay. My parents are a little unorthodox.

Q: Tell me: what's your relationship to the Jefferson Fisher Ranch?

A: I guess you could say I'm next in the line of succession, or I used to be, I guess. Circumstances do change. I've grown up on the ranch. Our family has owned it for generations. It was going to be mine since I am an only child. Never expected that there would be no cattle on it. But here we are.

Q: Can you tell me where the ranch is?

A: Charlottesville.

Q: Charlottesville, Virginia?

A: No, Charlottesville, Lone Star.

Q: Do you remember where you were on the 29th of April 2021?

A: Yes, sir, I do. That was the day that all our cattle died. I was right there when it happened.

Q: Tell me about it. Start with when you woke up. Was there anything different?

A: No nothing different at first. Well, I got up that morning to do my morning chores. The ranch is a lot of work for me and my family. We have hardly any help! But we do it anyway because we love what we do. We love treating animals well. We put their well-being before our own —

well, we used to.

Q: Tell me about your chores.

A: I got up. I fed the dogs. I went over to the chicken run and took care of that flock. Got all the eggs. The chickens lay a lot in April, so I had to make sure the broody hen didn't gather them all under her. We raise show chickens. Japanese bantams. They are hard to raise because breeding for good type is not easy. Very tricky. Definitely not a beginner's bird as they say. Just a small hobby. Anyway, sorry, I talk a lot when I'm nervous. Sorry. Where was I?

Q: You were telling us about your chores, hopefully moving towards the cattle.

A: Ok, so I took care of the bantams, then I went to milk the goats. They've got Type A2 milk, so there's a special kind of protein that's easier to digest in there, A2 casein, easier to digest — so I went from there to the kitchen to drop that milk off for yogurt. The kitchen staff seemed not to be ready for it because they said the cows were making a lot of noise, and it was bothering them in the night. I thought that was weird because the cattle are generally quiet at night, so I figured I'd go out and see if there was anything to see. That meant I had to walk a long way from the house. The cows were all by this pond a way's away.

Q: About how far did you walk?

A: Maybe 5 miles? I'm not good at guesstimating.

Q: Ok, how long did it take you to walk to the pond?

A: About five minutes.

Q: So, you walked a mile a minute?

A: I really am bad at estimates.

Q: What happened when you got to the pond?

A: Nothing at first. The cattle seemed to be ok. They were just bopping along, doing cow things,

grazing. Chewing cud. Then I noticed that my favorite cow, Jessi-Lea, seemed to be in distress.

Q: Describe Jessi-Lea.

A: Well, she's beautiful. An angus. She's about 1300 pounds, relatively short in stature compared to other breeds. Brown eyes. You know, a cow, but a pretty cow.

Q: I'm handing the witness exhibit 1, do you recognize this?

A: [wiping tears, handling exhibit] yes, this is a picture of some of our cows that are gone. This includes Jessi-Lea.

Q: How was she acting that day?

A: Well, she was blinking her eyes a lot. I could just tell that she was not well, that something was off. Then she sort of lied down on her side. Normally she would do that if it was gonna rain, but this was a bright sunny day, so it was weird. She started panting a lot. It was bright, but it was not hot. Not more than usual. So, like I said, it was really weird.

Q: Did you do anything about it?

A: Oh, yes, sir. I ran back to the house and called the emergency bovine vet right away.

Q: What's a bovine vet?

A: It's a special veterinarian who tends to beef cattle or dairy cows and their calves, of course. It's not like a vet that's actually a bovine. It's a vet that specialize in that kind of animal. Am I overexplaining? I've been told I'm a know-it-all, but I don't mean to be. I just — I'm curious about everything all the time. I'm only into cattle because of my family. I am interested in every aspect of the human experience.

Q: So, what happened next with the cow?

A: So, she was lying down like I said. My cell phone didn't have service, so I ran to the house, and I called the vet. It took about an hour or so to get the vet out there. Clearly, they don't hustle.

Q: When the vet got there, what did they do?

A: So the vet shows up, and there's all this poking and prodding. Vet asked me questions like: what did the cows eat? Good old fescue grass, as always. What was their primary water-source? The pond water obviously. Whether the cows had been treated? Well, we always give our animals a multivalent vaccine for blackleg at about three months of age.

Q: Did the vet register any concerns about what you said?

A: Not that I could tell.

Q: What happened next?

A: The vet stood up and dusted their pants off, basically said that it looked like ole Jessi-Lea was gonna be ok, that she just needed water. Diagnosed her with dehydration, but I knew this was no dehydration. Right when the vet was about to get in the truck, that's when suddenly the rest of the herd started dropping like flies.

Q: How many cattle ultimately died?

A: I am not 100% on it, but I think it was sixty-six head, dead by the time the sun went down. It was devastating. Whichever cattle lived had to be put down, anyway.

Q: How did that impact your family?

A: Well, at first we were all in shock, but we thought we'd recover, that the ranch would recover, but then we realized that the land was poisoned. This poison was in the groundwater according to everyone in town. It killed my father.

Q: Your father was poisoned by the same thing that the cattle ate?

A: Oh no, it was just the stress that he went through, realizing that this was gonna end our way of life. He accepted it by the end, though.

Q: What do you mean?

A: Well, at the hospital when things got bad. It was just like with that first cow, I knew he was about to die. Sometimes you just get a feeling. His last words were, "I'm glad those cows are gone. Everything has gone according to plan. Now you're free to live as I never did."

Q: What do you think he meant by that?

A: I think he meant that everything happens for a reason. I'm not super religious, and it's hard to have everything happen so suddenly, but now I do get to pursue my other interests. I'm not chained to the ranch. I live in the city now. I'm studying to be a writer. Writing is my true passion. I can be my own person now. But then again, maybe I just don't get to be who I used to be. It's all a matter of perspective.

Q: Thank you. I don't have any more questions for you, but Defense counsel may.

CROSS

Q: First of all, I am so sorry for the loss of your way of life. You're right that sudden changes can be so devastating.

A: Thanks.

Q: Tell me more about how you want to be a writer.

A: Well, it has been a while since Hemingway and Mark Twain. This nation needs another writing great. I know I'm not there yet, but they started somewhere, didn't they? I like to dream big, and writing is my biggest dream!

Q: I'd like to ask you about exhibit 8. [handing the witness exhibit 8]

A: Yes? This old pamphlet from our kitchen junk drawer?

Q: Yes. Do you recognize it?

A: I do. My father would take it out periodically to dream.

Q: Is it in the same condition as it was when it was in your drawer?

A: Yes. Identical. Why do you ask?

Q: Jay, I'll ask the questions now. If you could answer them, I'd appreciate it. Let's start with some basics about how you guys took care of your cattle. Just to be thorough.

A: Ok.

Q: How often did the animals receive medical treatment?

A: Whenever they needed it. We had regular events like giving them their shots, and then we'd call the vet when we needed to.

Q: Were you ever late on those shots?

A: No. Never. Not a single time.

Q: Would it surprise you to know that there are no records that this particular herd ever received that multivalent vaccine?

A: I guess not.

Q: Did the cows ever eat feed?

A: Occasionally if the grass wasn't growing too well. Ha, but obviously, we did not have that problem in April. The grass was growing so dang much. All the foliage was really. We were struggling to keep the place looking presentable.

Q: And did you check whether the feed was moldy or had been contaminated?

A: Of course.

Q: Did you check every day?

A: Well, no.

Q: Did you check that day?

A: Yes, definitely.

Q: But you did not mention that before.

A: Now you've got me confused.

Q: Well, did you check the feed that day?

A: I'm not sure.

Q: Ok, now I'm gonna switch gears and ask you about where the pond was, ok?

A: It was over on the edge of the property.

Q: Was it under the powerlines over there?

A: Yes, it was not directly under the power lines but close enough.

Q: What about Drew Martins? Do you know that individual?

A: Yup. Works for the power company. I heard Drew Martins has a crush on the RizkyBusinessRanch LLC's daughter.

Q: How do you know Martins?

A: Well, everyone around here knows each other. We all went to UPA together.

Q: The University of Paris. It's in Lone Star, just down the street.?

A: Yup.

Q: What's your impression of their relationship?

A: Well, it's none of my business, but I hear that Drew was obsessed with them, and when the relation ended, Drew was screaming and crying and carrying on at the steakhouse nearby. Drew sort of screeched in the restaurant, "Darling, please don't leave me! I'll do anything to make you love me again!!!"

Q: Does that anything include poisoning your land?

A: Well, Jefferson Fisher Ranch and RizkyBusiness have always been rival ranches, but it's not that sort of rivalry. Like my grandaddy used to say, "beef. It's what's for dinner." I don't think either ranch was really hurting for business, even with the vegans running around.

Q: Let me go back to the vegetation. Did you and your family ensure that the land around the powerlines was clear for the power company to maintain the lines?

A: Yes. Of course. It was a challenge to do it, but we had to make sure that the power company could use their easement or right of way, whatever you call it. It made us uncomfortable, them walking around like they owned the place, so we tried to keep that to a minimum.

Q: Are you sure that the vegetation was at the right height during that time?

A: No. I'm not sure. It's not like I had a measuring tape out there.

Q: Sorry to switch subjects so quickly, but do you ever watch anything on the internet?

A: Yes, of course. We actually cut the cord with the cable companies a few years ago, so to speak. But those subscription services get you every month. I swear if you do the math you pay more than you did to watch plain old cable. That's why I mostly just watch YouTube. They've democratized entertainment through that thing. It's great.

Q: Well, have you ever watched science videos on YouTube?

A: Yes. Of course, I have.

Q: What about a video of how to make sodium chlorate?

A: I can't be 100 percent, but I think probably.

Q: Would you recognize your view history and liked videos lists if I showed them to you?

A: Yes definitely. [handling exhibit 18]

Q: Is this yours?

A: Yes. This is my view history.

Q: How do you recognize it?

A: Well, I recognize a lot of those videos. I went through a science spell a while back.

Q: Around the time that you lost the herd?

A: Yes.

Q: Did you watch any videos about how to make sodium chlorate yourself?

A: No, absolutely not.

Q: Could you look at your liked video list there. [handling exhibit 26] Has it been altered in any way?

A: Not that I can tell.

Q: Does it accurately reflect the videos you watched and liked?

A: I imagine so.

Q: Well, using it to help you remember, did you watch any videos about how to make your own sodium chlorate?

A: Yes. Yes, I see it right there. I watched a lot of videos about homemade chemicals, including one about that.

Q: Let me show you this video to make sure. [witness watches video marked at exhibit 11]

A: Yes. I remember this video. There are more efficient ways to do that.

Q: Now, let's look at this receipt. [handling exhibit 13] Do you recognize it?

A: No.

Q: How about the signature at the bottom?

A: Yes.

Q: Whose is it?

A: Looks like mine.

Q: Does this receipt look to be fake at all?

A: I dunno. I'm not a photoshop expert, but it looks real to me. I routinely bought bleach.

Q: Why's that?

A: Ranches are dirty places. We used bleach as a cleaning tool all the time to keep things sanitary.

Q: Why'd you buy so much on that day?

A: I always buy in bulk. That way its cheaper by the ounce. You're not paying so much packaging.

Q: Let me ask you a few more questions.

A: Shoot.

Q: Where do you live now?

A: I live in Austin, Lone Star.

Q: That's a long way from Charlottesville and Armadillo.

A: I'm sorry; is that a question?

Q: When did you move?

A: After my father died, and we found out that the ranch died with him.

Q: How do you feel now that you know you're not going to get to carry on in your father's footsteps?

A: It's really difficult to understand how this could of [sic] happened. There have been generations of Fishers raising cattle on that land, feeding America. The idea that it could be over is almost too much to bear. It's like, you just don't realize what you have until its gone. What's hard about it too is that that chapter isn't just closed. It's slammed shut. There is no way anyone will want to eat anything from that poisoned land. And all of this because dang Drew Martins had a crush on somebody and had so much to prove, and the dang power company couldn't keep control of their employee. I don't know, maybe AMPLE even encouraged them to color outside the lines a bit. Everyone says so. It's just so frustrating. I don't even know how to begin to

describe how I feel. Basically no one could feel any worse than I do, but then no one could feel any better. It's a roller coaster. [crying]

Q: Thank you for sharing that with us. Very brave.

DIRECT

Q: State your name for the record.

A: Lee R. Jenkins. It's spelled J-E-N-K-I-N-S. Can I have some bottled water? My throat is dry. You lawyers make me nervous in your suits.

Q: Yes, of course.

A: Thanks. I never drink anything but bottled. The stuff you find in nature is nasty. I've seen some things, you know?

Q: Sure. What is your job title?

A: I am an environmental inspector and consultant. I love my job. I get paid to watch grass grow, in a way.

Q: Are you also being paid for your work on this case?

A: Yup.

Q: What's your hourly rate?

A: $5000 flat rate, plus expenses. It's a hobby.

Q: What percentage of your annual income is this case?

A: Less than two percent.

Q: Let's talk about your education.

A: Ok.

Q: Where did you go to school?

A: I started at the Mountaintop Montessori Elementary in Paris where all the diplomats' kids go. It was expensive.

Q: Paris, France?

A: No, Paris, Lone Star.

Q: Well, let's not go all the way back to elementary. What about college?

A: I went to Zoll University, and actually, I majored in bovine studies and veterinary science. Wanted to be a vet at the time. Not an Army vet, an animal doctor, you know? Graduated with honors, but I ended up the wrong kind of vet, ha! And it did not do me any good.

Q: What do you mean that the Army did you no good?

A: Ended up with some bogus non-judicial punishment. That's bad paper in my file. Ended my career practically before it started.

Q: Would you have a copy of that?

A: Sure I can get you one [provided and marked as exhibit 25]

Q: Did you get a graduate degree?

A: Yes, after the Army, I got a masters in micro-biology, minoring in toxicology from Auburn again. Do you want my resume?

Q: Yes. That would be nice. [later marked as exhibit 16] Did you graduate from that with honors too?

A: As a matter of fact, I did!

Q: During school did you get any practical experience?

A: Yes, I worked for Monsanto for one summer and Conagra for another. I know those organizations get a bad rap, but you have to join 'em to beat 'em.

Q: What did you do during those summers?

A: I worked in the lab, primarily processing samples by putting them through the mass spectrometry, and I was in charge of chain of custody documentation. I managed the filing systems for that. Super boring, but those papers are like 90 percent of what we do.

Q: So how did you find out about the situation on Jefferson Fisher Ranch?

A: I got a phone call from your law office to go check it out, but I'd already heard of it. Everyone in the environmental compliance business says the ranch is a superfund site now. We were all wondering who would get to check it out. I'm not in it for the glory, but you do get mad street cred for processing those kinds of scenes.

Q: Did you ever physically go there?

A: Yes, of course.

Q: What did you do when you got there?

A: Well, by the time I got there, the cows had been disposed of, so it smelled like burning hair and barbecue. I was escorted by that Fisher kid to where it happened.

Q: Did you bring anything with you?

A: Yes. I brought a water sampling kit. I had a plan to figure out what the cows were eating, so I had some maps. I had already talked to the vet to get a clue as to what to start sampling because you don't want to waste your time.

Q: Does this picture seem familiar? [handling exhibit 21]

A: Yup. That's a picture of the kit that I used. You'll notice the hydrochloric acid. We use that as a preservative when we are testing for organic compounds.

Q: Is it called hydrochloric because it has got chlorine in it?

A: Yes. That's what the Cl is for, Chlorine.

Q: It is possible the preservative could get into a different sample?

A: It is not. That is why there are so many different jars. So, if you were looking for something with chlorine in it, then you'd use something with sulfuric acid as the preservative.

Q: But what if someone makes a mistake?

A: Well, you run four different samples. Then there are two sets, so you'd run eight different

samples total. That way, if you have one outlier, you can see that it was a mistake. Also, you have the control sample to compare to.

Q: Is there any evidence in this case to support that the samples were contaminated when they were collected?

A: No, not that I can tell, but then again, I never make mistakes. I'm a bit of a compulsive sort of perfectionist.

Q: The report mentions sodium nitrate. [showing the witness exhibit 15]

A: It does.

Q: Are you sure that's right?

A: Yes. I'm always right.

Q: But the other documentation says sodium chlorate?

A: Oops. I guess someone made a mistake. But it wasn't me.

Q: So tell me about the process of taking samples.

A: I put on surgical gloves to prevent contamination from what could be on your hands. You'd use a sterilized dipping implement. I call it a cup on a stick, but some people call it a ladle.

Q: What else?

A: You'd fill each jar to the top leaving no air or headspace.

Q: Why don't you leave any air?

A: Because it could contaminate or dilute the samples. For example, when it comes to chlorine, the chlorine can go into the air, then you open the jar, and the air escapes before the sample is tested. Then you don't have an accurate reading on what was actually originally collected in the sample.

Q: What else did you do?

A: I then labeled each sample according to what test was done to it. Then I took it to the lab. I drove it myself. I talked to the lab tech. I transferred the chain of custody and then it's not my problem for a few days, usually.

Q: Do you remember what lab you sent this one to?

A: Yes. It was the Lone Star Analytical Labs. I think my buddy, Greg Thomlinson, is the one who processed it. Yup, it says that on the report [pointed to exhibit 15]

Q: Did you ever see the raw data in the case?

A: Yes.

Q: Are you able to interpret that data yourself?

A: Yes. There was your typical barnyard fecal material, unusually high amounts of sodium chlorate, and some sodium nitrate.

Q: Tell me about the sodium chlorate.

A: That's not something you typically find in drinking water. It's one of the chief ingredients in 2,4-D; it's a defoliant.

Q: So, is that a herbicide?

A: Yes, it is a herbicide. It was actually one of the ingredients in Agent Orange. It kills most broad leaf weeds. It works on kudzu, poison ivy, fence row clearing, like small trees. Some power companies use it.

Q: Is it a restricted use herbicide?

A: Yes and no. Federally, it's not a restricted use herbicide, but in the State of Lone Star, you have to have special training to use it. You know, since this is a cattle state. Don't want to be all hat and no cattle, know what I mean?

Q: No.

A: You don't want to drink sodium chlorate. It would kill a cow or a person, but that depends on how much you drank, the concentration of it, and then how much you weigh. I mean, a five to ten gram dose can be fatal to most adults. Two grams will kill a kid, a human one, not a goat.

Q: Is it your expert opinion that if this herbicide was used in the area, it would have killed the cows?

A: Yes, since they have no other water source. Cows be drinkin'.

Q: Is there anything else that could have caused their death?

A: Anthrax could have done it, but there would have had to be evidence if that were the case.

Q: Why couldn't it have been anthrax?

A: If it had been anthrax, they would have had similar symptoms, but it would have only taken two hours for them to die. So obviously they would not have been making any unusual noise in the night like that Fisher kid told me about.

Q: How long does it take with sodium chlorate?

A: It happens over the course of a few days. Long slow death of organ failure. At first it looks like dehydration, but then they just keel over suddenly. Terrible.

Q: Do you know how exactly sodium chlorate kills an animal at the molecular level?

A: Yes. I do.

Q: Could you enlighten us?

A: Sure. It has a lot of inherent volatility characteristics. It's got an acid on there on the chlorine which is a negative ion. That ion makes the product unstable. When it gets into the body, it can really harm the liver, the kidneys, the lungs. It causes this damage due to its structure. Choline is a similar product, and its way more stable. That would have been the better choice for this application. You only need 500 grams of this stuff to kill a cow. You know?

Q: Tell me more about how the structure of sodium chlorate harms the body.

A: Sodium chlorate is a strong oxidizing agent. In the body it basically messes with the iron in your blood, so it can really hurt you.

Q: And why is choline more stable, if you know?

A: Well, choline is way more stable because they use a chemical process to bond an extra molecule to the herbicide, so it doesn't become a mist in the air. This way you can use less of it because you don't have to worry about drift, so you save money that way, and you also don't have to worry about livestock because, again, the chemical is more stable.

Q: Is there any other chemical that would cause a long slow death like that?

A: Nitrate poisoning causes death within an hour, so that doesn't work. I did consider moldy feed, but the cows would have been acting funny for way longer. They would have been lying down and braying loudly. Someone would have noticed way sooner than what this case suggests and called the vet. Plus it was the spring, so they wouldn't have been eating the feed.

Q: Was there an autopsy?

A: No. It would be called a necropsy. The vet decided not to. They just burned the bodies in case it was a transmissible disease, sort of a shoot first and ask questions later policy there. Complicates things.

Q: Is there anything else you can add?

A: Nope.

Q: Ok, I don't have any more questions for you, but I'm sure my colleague on the other side does.

CROSS

Q: What day did the lab process the sample?

A: The thirty-first of May 2021, I believe.

Q: Was that not a few days after that hurricane hit?

A: Yes, it was.

Q: I'm sure you know what I'm getting at.

A: Yup. The hurricane caused massive power outages. If there was a power outage, then the samples may not have been stored at the right temperature.

Q: How does that effect their quality?

A: Well, high temperatures causes the water to hold less dissolved oxygen which can cause things to grow in the samples.

Q: Is that delay normal?

A: No, usually a sample is processed within 24-48 hours because sometimes the solvents will react with each other if you wait longer and that causes all sorts of problems. Also, sometimes quick changes in temperature will cause condensation which can cause labels to smudge. I usually use pencils to avoid that.

Q: Do you remember what used to write in this case?

A: No, but I sure hope I didn't use anything that would melt.

Q: Is there anything else that goes wrong sometimes?

A: Yes. Sometimes folks will use the wrong preservatives, but I never do.

Q: Not that you know of.

A: Exactly.

Q: I can't think of anything else I have to ask you.

A: Alrighty. I hope I helped.

DIRECT

Q: Martins, thank you so much for coming in. Go ahead and tell us your name and spell it. By the way, I hear congratulations are in order. You recently got married?

A: Yes. My dream come true. Never thought it would really work out, but sometimes miracles happen. Oh, and my name is Drew Martins.

Q: How do you spell that?

A: Name spells just like it sounds, M-A-R-T-I-N-S.

Q: Tell us about yourself. Where do you work?

A: I work at the power company here in town. Armadillo Modern Power Light and Electric. We call it AMPLE. It's the finest company in the word. We maintain the power grid for all of Lone Star. Can you imagine your life without power?

Q: I guess not.

A: Of course not. You'd be cold in the winter. You'd be too hot in the summer. You'd have to go to the library and use a candle to see and learn anything. People take their power for granted these days. There really is no more important job than mine. Folks who wear coveralls are more important than those who wear suits. That includes lawyers, no offense.

Q: None taken. So what do you do for the power company?

A: I am a lineman for the county, and I drive the main road. That means I am responsible for the installation, repair, and maintenance of overhead and underground electrical power lines and auxiliary equipment. Basically, I keep everything running nice and smooth. Especially when there is a storm.

Q: Oh, does your job change when there's a storm?

A: Well, the job itself doesn't change, but the public's attitude towards it does. I usually end up

joining the parade of lineman and get a hero's welcome. But when there are no storms or disasters, people just don't appreciate the importance of power until you can't just flip a switch, you know?

Q: What kind of education do you need in order to do your job?

A: Well, it depends.

Q: How do you mean?

A: So, if it's a great power company, they don't want just anybody off the street. They want someone with two years of verifiable work experience as a journeyman class 1 or class A level craft worker, a commercial driver's license, class A or you're smart enough to obtain one within six months, climbing skills, for obvious reasons, and you have to be able to pass a post-offer functional capacity evaluation. It's also nice for you to have certifications in bucket truck rescue, pole top rescue, and tower rescue. You're also gonna wanna be proficient with live line maintenance. Some folks call that gloving and using hot sticks for all voltages.

Q: How do you become a journeyman class 1 or class A level craft worker?

A: Well, you need at least two hundred and forty hours of formal vocational training, plus four years of experience as an apprentice to get there. You also have to take an E-L-E. That's an Electrician's Licensing Exam. Most of my education I got on the line. Schooling is just to show that you can sit still and pay attention to detail --that you actually want the job. The actual job is what teaches you how to do things.

Q: What do you mean by that?

A: Sometimes what folks write isn't actually the best way to do something. It's the on the job training that teaches you how to problem solve, how to be your own person, and how to make your own decisions. But I do have all those dang certifications.

Q: Do you also have to be familiar with the company's policies and restrictions?

A: Yes, absolutely. In fact, I am one of their best employees. I brought my last evaluation to show you! [handling exhibit 12]

Q: Is there a buddy system where you work?

A: Yes, for when you are up on the line, but if you're doing groundwork, like clearing brush, then you can do that work by yourself.

Q: Let's talk about the morning of the 28th of April 2021, do you remember where you were?

A: My mind doesn't work like that, but I'm assuming you're talking about the day I went over to Jefferson Fisher Ranch?

Q: Yup, that's it.

A: Yes, so I went there that day to clear some brush. Kudzu had gotten up on the lines, and they were threatening to ruin the power grid. So irresponsible. I mean look at this article I brought. It explains everything you need to know about how to farm safely. [handling exhibit 6] The Fishers could have done this.

Q: Set the scene. What did it look like when you got to the ranch?

A: Well, there were cows everywhere lying down. Those Fishers are really bad with their cows. They even had the SPCA on their backs. Give the whole profession a bad name. My spouse always says so anyway. Married into the Rizkybiz family, you know?

Q: Yes, I know. So tell me about the vegetation.

A: There was kudzu and thistles everywhere. Both invasive species, by the way, so I had to ensure that there was no vegetation above a certain height. You decide that based on the line sag. In this case it was high voltage transmission lines that operated above 200,000 volts. That's 200kV. This means that the NERC standards applied.

Q: What are the NERC standards? Can you show me on this? [handling exhibit 17]

A: The NERC is the North American Electric Reliability Corporation. They set standards for the bulk power system in this country. Basically, this assures that power is reliable because the grid is nice and secure. Random folks don't get to decide what's safe for the nation when they maintain their land. The NERC decides what's safe.

Q: So what is safe for the power lines on Jefferson Fisher Ranch?

A: Well, for a person, you have to keep your body at least 10 feet away from overhead powerlines if they are at anything higher than 50 kV. But I bet you're asking about plants. It's sort of the same for that. For vegetation, you want to make sure that there is at least a ten-foot clearance around the pole. Then you want to trim a tree from eight feet up the poll to the top of the power lines maintaining that ten-foot clearance. Does that make sense?

Q: No. Isn't it called a right of way at Jefferson Ranch? Let's keep to that.

A: Ok, so Jefferson Ranch has the privilege of maintaining an overhead power corridor of transmission lines. Transmission lines are not covered in an insulating sheath. We need to keep vegetation from coming too close to the powerlines because they are insulated by the surrounding air itself. I'm no scientist, but my understanding is that for that air to work, there needs to be a safe distance all around. Even if a tree or shrubbery or whatever doesn't actually touch the line, its presence can cause an electric arc.

Q: What's an electric arc?

A: It's kind of like lightning. The power will jump from the line down onto the foliage and potentially cause a fire. To ensure everyone is safe, nothing should come near these lines. The security of the entire state of Lone Star depends on it.

Q: So what are the rules for you if you see vegetation getting too close.

A: Well, my understanding is when the line runs on private property, the responsibility to initially create the right of way is the responsibility of our company, AMPLE, but then the landowner has to make sure that their plants don't start encroaching on it. If we see that there is gonna be a safety issue, then we are allowed to get out there and cut and spray away.

Q: So what were you doing on Jefferson Fisher Ranch that day?

A: I was protecting the power grid by making sure that the vegetation was clear. Basically, I was cuttin' and sprayin'.

Q: What were you spraying?

A: Company policy is to use all those herbicides that are safe for livestock.

Q: Did you use anything that could hurt cattle?

A: No, of course not. Well, not what was provided by the company.

Q: Was what you used provided by the company?

A: Yes and no.

Q: Does AMPLE have a policy?

A: Yes.

Q: Would you recognize it if you saw it?

A: Yes. Absolutely.

Q: Is this it? [handing the witness exhibit 10]

A: Yes, but there are some pages missing.

Q: Are the pages you see in front of you the same as the policy as you remember it when this happened?

A: Yes. They only changed one rule between when I started and now. We're not allowed to buy our own chemicals anymore. President Salek said that it was too much of a burden on the

worker, and I think he's right. Besides some herbicides are bad for the environment.

Q: Did you receive training on this updated policy at the time it was enacted?

A: I don't remember if I received training or whatever. I just know the policy now.

Q: Ah. So what herbicide did you use on the day in question?

A: I used Amine 400 at my own expense and then I used company water to mix it. Not sure what Amine 400 stands for.

Q: Isn't that the same as 2,4-D? 2,4-dichlorophenoxyacetic acid sound right?

A: No idea. I just know the bottle is kinda white, and you can get it at the Tractor Supply for $36.99. Sometimes they even have a buy one get one deal.

Q: Tell me more about this Amine 400. [handing witness exhibit 27]

A: Yup. This is actually an ad for it. So, it's an herbicide, and I'm pretty sure that it doesn't hurt livestock. I read that if you take horses away from a pasture, its safe for them to graze back in the sprayed area in 30 minutes if things dry out. I always mix it with sodium chlorate to make it more effective.

Q: Where did you learn to do that?

A: You learn a lot on the job.

Q: Did you learn to use sodium chlorate on the job?

A: Not explicitly.

Q: So, how do you use it?

A: Well, you mix it to a certain ratio. I've used it so many times, I just eyeball the right amounts. Then you spray it on along with sodium chlorate to make it more effective, like I said. I even take precautions.

Q: How do you mean?

A: I always follow what's on this [handling exhibit 5].

Q: Ok, but did you take precautions in your mixing.

A: Didn't need to. I do it perfectly every time.

Q: Did you do that on the day in question?

A: Uh huh. Just like I've done it many times before. But the reason those cattle died wasn't what I did. It was what the Fishers didn't do.

Q: How do you mean?

A: Everyone knows they don't take care of their cattle. They have such a bad reputation in the community. It's obvious when you compare their cattle to the Rizky ones. Can't compare at all. And I'm not just saying that now that I'm in the family, you know what I mean?

Q: I think so. Were there horses on the Jefferson Fisher Ranch?

A: No. Just cows.

Q: Did you remove the cows from the area?

A: No way. I just made sure to steer clear of their pond area. Ha, steer, get it? As in cattle. See what I did there?

Q: I appreciate the levity, but this is no joking matter. Did you take any other precautions?

A: I didn't need to.

Q: Did you take any other precautions?

A: No.

Q: Is it company policy for you to buy herbicides yourself?

A: No, but everyone did it. The company must have known.

Q: Was there anyone present to see whether you mixed this properly?

A: No, but I've never had any issues before, and we don't have a buddy system.

Q: If you saw the company's written policy would you recognize it?

A: Yes.

Q: Does this accurately depict the policy as it was on the day in question?

A: No. Actually, that bit about self-procured herbicides is new. They added it after the Jefferson Fisher disaster.

Q: Alright. Well, now it's time for you to answer questions from the other side.

CROSS EXAMINATION

Q: How many times have you been on Jefferson Ranch?

A: Just the once.

Q: Have you ever personally observed the cattle on Jefferson Ranch?

A: Yes.

Q: When? From the road?

A: No. I see them win the state fair every year in basically every category. Its rigged.

Q: Tell me about your current relationship.

A: What about it?

Q: When did you get married?

A: Two weeks ago.

Q: How long had you been dating?

A: Not very long at all.

Q: When did you start?

A: Well for real in early May of 2021.

Q: What do you mean "for real"?

A: I was always in love, but that love wasn't requited until May, around the time the cattle died

at Jefferson Fisher Ranch.

Q: I heard you had sort of a meltdown at the steakhouse about it once.

A: Yes. That's true. I embarrassed myself mightily.

Q: Do you remember what you said?

A: No way. I had way too much that night. I don't remember anything. Whatever everyone says I said, that's what I said.

Q: Did you ever text about that situation?

A: Probably.

Q: If you saw a screenshot of your messages, would you recognize them?

A: Yes.

Q: I am handing the witness Exhibit 23. Are these your messages?

A: Yes. And they are about how that's how strong my love is.

Q: What did you mean by "do anything?"

A: I meant what I said.

Q: Now to switch areas of discussion here, are you still a lineman?

A: No. I've got a desk job now. While all this blows over.

Q: What do you mean by "all this"?

A: Well, I could get fired if it turns out I hurt those cows. But obviously everything will be fine because I didn't. They were already acting funny before I got there.

Q: How do you mean?

A: The cows were all just skinny emaciated-looking, and they had patches of hair missing. It looked like they had not been eating right. They were in a bad way.

Q: Do you have anything else to add?

A: Yes, there was this weird powder on the ground.

Q: Do you recognize this?

A: Yes. It's a picture of the area that I took that day.

Q: Does this picture represent what you saw that day? [handling exhibit 9]

A: Yes.

Q: Has it been altered in any way?

A: No. It does have that sticker you put on there, but otherwise, that's exactly how the place looked that day.

Q: Did you visit any other areas that day?

A: No.

Q: Can you point to the powdery substance you just described?

A: No.

Q: Why not?

A: Well, it's not in this picture. It must have been in some other spots.

Q: Would you describe yourself as a rule-follower?

A: To a point. I'm sort of a sigma. Like I play the game. I could be in charge of the game, but I also sort of don't care to put in the effort.

Q: I don't understand.

A: Basically, I follow the rules that matter. I'm happy with my life.

Q: What about your job? How do you feel about those rules?

A: I'm not gonna get fired. I did nothing wrong. Everything I did, everyone else did. The company absolutely knew and endorsed what we did and do.

DIRECT

Q: Good Afternoon. Can you tell us your full name for the record, please?

A: My name is Dr. Morgan Ageladakis.

Q: Wow, that's quite the last name.

A: Yes, it's Greek. My great grandfather immigrated from Southern Greece at the turn of the century.

Q: Can you spell your last name for the record?

A: A-G-E-L-A-D-A-K-I-S. Pronounced "Ah-geh-lah-DAH-kiss."

Q: And where do you live currently?

A: I live in Nelsonville, Lone Star. It's a town about forty miles south of Charlottesville, Lone Star.

Q: And what do you do for a living?

A: I am a veterinarian.

Q: How long have you been working as a veterinarian?

A: In August, it will be twenty years.

Q: Do you have a particular specialty when it comes to treating animals?

A: I'm ABVP board-certified in equine and beef cattle medicine, but I typically treat far more cattle than I do horses.

Q: Ok. Now for a bit of context, can you please tell us about your professional qualifications? Education, degrees, licenses you may have, that sort of thing?

A: Certainly. I graduated in 1997 from Lone Star State University with a Bachelor of Science Degree in Animal Science. The program there focused on biology, animal husbandry, and the

prerequisites for applying to the doctorate program. I took two years off between undergrad and graduate school to work as a laboratory and research technician at Lone Star State, where I performed daily animal care and health observations in a laboratory research environment, performed standard laboratory procedures, such as maintaining cell cultures requiring the use of sterile technique, and contributed to a collaborative research project on toxicology in cattle. I graduated with a doctoral degree in veterinary medicine in 2002 from Lone Star State and went to work for my father at his veterinary practice in the Charlottesville, Lone Star area, almost exclusively treating large animals – equine, beef cattle, dairy cow cases. That's pretty typical of the region, which is mostly made up of ranches and farms. I started my work with my father as an assistant veterinarian, then I became a partner in the practice. All in all, I worked with my father for about 10 years, then he retired at the beginning of 2012 and I took over the practice myself. And as I mentioned, I'm board-certified by the American Board of Veterinary Practitioners in equine and beef cattle medicine.

Q: Are you familiar with Jay Fisher and the Jefferson Fisher Ranch?

A: I am. I've treated animals at the Jefferson Fisher Ranch since I began working for my father, and he served as the vet for Jefferson Fisher Ranch for several years before that. I don't remember how long the Fishers have been with us but definitely over 30 years. Since before the titular Jefferson Fisher owned it, and even before his father, David.

Q: Is this your resume, just to sum up? [handing the witness exhibit 24].

A: Yes. That's it. And, before you ask, yes, it is a complete and accurate representation of my career up to this point. Lawyers always ask that.

Q: Ok. Would you say that you've had enough experience with the Fishers to form an impression

of how they take care of their animals?

A: Yes, I would say so, sure.

Q: And what is that impression?

A: They're pretty typical when it comes to ranchers in the area. I've not been concerned about outright animal abuse, if that's what you're asking. But I also wouldn't say they are the model example when it comes to taking care of their livestock.

Q: Do you make visits to the ranch fairly regularly? Periodic wellness checks on the cattle, that sort of thing?

A: I come out there when I'm called. I can't remember right now off-hand the last time I conducted a regular vet visit prior to the incident last April.

Q: Ok. Prior to your testimony today, did you have an opportunity to read and familiarize yourself with the materials provided to you in the case file on the Fisher Ranch?

A: Yes, I have. I've reviewed every exhibit.

Q: Can you tell us about what happened on the 29th of April, 2021?

A: Sure. I got a call from Jay Fisher early that day, and the panic was palpable. Jay said that there was a problem with some of the cattle and asked me to come out to the ranch as soon as I could. Said they were acting strangely. Jay was worried it was potentially a serious situation.

Q: What do you mean by "the panic was palpable?"

A: Jay was very out of breath and loud. Spoke very quickly. The tone was one of pleading for me to hurry, begging really. Very loud, but intermittently child-like. Just what it sounds like when someone is in a state of extreme distress.

Q: Were you able to get out to the Fisher Ranch that day?

A: Yes, as I remember, I was at my home in Nelsonville when I received the call, and I was able to get into the car and travel to the ranch pretty soon after talking with Jay. It takes just under an hour to get there. I believe I was on site a little over an hour after getting the call. I listened to entire album of gospel music by Ashley Hymel, actually. I remember that specifically.

Q: And when you arrived, what did you find?

A: Well, Jay met me at the car and then directed me to a cow that was experiencing the most serious symptoms. It was square in the middle of this sprayed area map. [handling exhibit 2] which was in the center of the property if look at this aerial view [handling exhibit 7] in the upper left quadrant.

Q: Can you describe what you saw when you examined the animal in question?

A: Yes, as I approached the cow, I could tell immediately that she was in distress and that the situation was dire. In my professional opinion, she was definitely exhibiting symptoms of acute toxicosis, or poisoning.

Q: What specifically were those symptoms you were able to observe?

A: Let me check my report to make sure I get this right. [handling exhibit 20].

Q: Is that copy any different from when you initially wrote it?

A: No. It's just the same.

Q: Do you usually create reports like this?

A: Every time I see an animal, I generate documentation.

Q: How close in time do you write your report to the time you're seeing the animal.

A: The standard practice is to do the paperwork on the same day.

Q: Was that the case with this report?

A: Yes. I believe so.

Q: How do you know?

A: Because this is what I always do. I don't have a specific memory of doing the paperwork, but I don't have any reason to think I did any different in this case. Now where were we?

Q: I was asking about symptoms.

A: Ah yes. First of all, she was down on the ground and had removed herself far from the rest of the herd. She was exhibited symptoms of dyspnea and CNS - central nervous system - involvement: she was blinking very rapidly, her ears were twitching, and visibly panting for breath. As I got closer, I also observed that she had dilated pupils and thick white foam collecting at the corners of her mouth. She seemed confused, and she was being very vocal with her head lowered almost to the ground. She attempted to stand up at my approach, but her legs went rigid and then buckled, and she was unable to support herself. There was evidence of blood-stained discharge around the cow's rectum. She was afebrile, meaning not feverish.

Q: How did you reach the conclusion that these were signs that the cow had been poisoned?

A: Well, these were symptoms of toxicosis, but there are many different things that can cause such a reaction in these animals.

Q: Such as?

A: Sometimes a cow may become unable to process and filter toxins in its body due to a genetic defect, which may cause issues with kidney and liver function. This does not usually present with such an acute onset, and I knew that many other cattle on the ranch were also experiencing the same kind of symptoms, so I ruled this option out. Another source of toxicosis occurs when ranchers utilize a non-protein nitrogen, such as urea or ammonia, as an ecological supplement for

nitrogen in poor ruminant rations. These supplements are used sometimes, especially with dairy cows, in areas where the nutrition from natural plant and animal proteins is not sufficient to provide the nitrogen needed for the cows to produce ammonia, which they then combine with ketoacids to create amino acids. It's part of a ruminant's digestion, but sometimes the production of ammonia can exceed the animal's ability to convert it, and the detoxification system of the animal can be overwhelmed. For similar reasons, I dismissed this possibility. I knew that such NPN supplements were not used on the Fisher Ranch. So this led me to conclude that the source of the toxin was either naturally occurring, as happens sometimes with nearby plant life, or it was chemical in nature.

Q: Have you encountered chemical poisoning in cattle before?

A: Yes, although I will say that it's becoming rarer these days due to advances in formulations of herbicides used around livestock.

Q: Are you familiar with the chemical, sodium chlorate?

A: Yes, somewhat.

Q: What is your knowledge of it?

A: I know that it has been used for years as an herbicide to clear foliage and vegetation, but that it is typically not used around livestock because ingestion can make cattle very sick. Especially in the wrong concentrations. I know that a cow must ingest a lot of it to constitute a fatal dose, although I don't know the exact numbers on how much that would be. I have read in the clinical research that cows are at risk of consuming lethal quantities of the stuff because they're drawn to its salty taste. It basically acts as a lethal salt lick.

Q: What are the typical signs associated with poisoning from sodium chlorate?

A: There'd be outward signs of abdominal cramping, which could be surmised by observing the animal in distress and how she's positioning herself. There's hypersalivation, diarrhea, blood in the animal's stool and urine. The animal also becomes short of breath and disease, with poor muscle coordination. The animal may experience complications such as seizures.

Q: In consideration of these symptoms, did it occur to you that this cow was suffering from poisoning due to sodium chlorate consumption?

A: It was certainly a possibility; the symptoms were consistent with that. But there are other chemicals that may have similar toxic effects, so I needed more information to make a definite conclusion.

Q: How would sodium chlorate harm the cows, causing those symptoms?

A: Well, because sodium chlorate is a strong oxidizing agent, in the body it produces methemoglobin through a process involving conversion of the iron in the blood from its normal ferrous state, to the ferric state. In addition, the chlorate destroys red blood corpuscles, liberating hemoglobin and other proteins.

Q: What is methemoglobin?

A: It's a hemoglobin in the form of metalloprotein, in which the iron in the heme group is in the Fe3+ sate, not the Fe2+ of normal hemoglobin. This means it cannot carry oxygen.

Q: Why's that?

A: Basically, the negative ion on sodium chlorate wants to be neutral, so it steals an electron from the heme group, which changes its charge. In methemoglobinemia, tissues cannot get enough oxygen no matter how much the animal breathes, so their heart keeps pumping, and they keep breathing, but they're slowly asphyxiating. It's tragic to see.

Q: Would it help for you to use a model to demonstrate this?

A: Yes. [handling exhibit 4]

Q: Go ahead.

A: Sodium chlorate is made of three oxygen atoms, bonded to a chlorine, and a sodium. When something's bonded, that just means that they are sharing electrons, which have a negative charge, of course. The black ball represents the chlorine. [points to black ball] These are oxygen. [points to white balls] The oxygens with the shorter connections are covalently bonded, so they are neutral because they share more electrons. This makes them physically closer to the chlorine, but this one next to the sodium is not bonded the same way, so that has a negative charge that works with the positive charge of the Sodium ion, to balance it out. This causes a sort of structural weakness here, that is susceptible to snatching iron from hemoglobin. When your hemoglobin does not work, or more specifically when an animal's hemoglobin does not work, it wreaks havoc in the body.

Q: What did you do after observing this first cow?

A: Well, I explained to Jay Fisher that I would need to examine any other animals exhibiting symptoms. But first, I wanted to have a look around, to see if I could identify any environmental causes. Jay informed me that I should talk to the kitchen staff at the ranch, because they had complained of the cows making noise all night, so I went and talked to the kitchen manager first.

Q: Do you recall the name of the kitchen manager?

A: I do not.

Q: Ok. How did that discussion go?

A: It went pretty much as Jay said it would. The manager mentioned that the cows had been

making noises throughout the night and that it had been difficult for him to sleep as a result.

Q: Did he describe the noises to you?

A: Yes, he said that it sounded like the cattle were in pain, like they were moaning or crying. Like they were suffering.

Q: Ok, after you talked to the kitchen manager, then what did you do?

A: I wanted to eliminate the possibility that the cows were poisoned from something in the feed. Harmful chemicals can come from sources other than herbicides – sometimes there can be mold or even traces of arsenic in the feed, sometimes the feed can be stored improperly next to certain chemicals. It's important to rule out the food supply as a source as soon as you can in order to save as many livestock as possible from a similar fate.

Q: So you checked the feed?

A: Yes. Cows – really, all ruminants – do well on a forage diet of grass and hay in the pasture, but beef cattle won't grow as fast or get as big from grazing in the pasture. So like most ranchers in the beef business, the Fishers also provided their cattle with a substantial supply of grain. Mostly corn, with some barley and wheat. I checked the grain supply and how it was stored, and I also checked the feeding area.

Q: What specifically do you look for when checking the feed for safety concerns?

A: Principally, you want to check it for mold or fungal growths, both of which can be potentially deadly to a herd. Any kind of growth can have an adverse effect on the health and well-being of these animals, but the biggest danger are mycotoxins, which are mold poisons found in some growths. Other molds aren't necessarily dangerous per se, but they have a negative effect on the digestibility of the grain material, or the density of nutrients in the grain. And also, if the feed

tastes overwhelmingly like mold, a cow is not going to find that to be very pleasant and therefore won't eat as much, which will reduce feed intake and inhibit the animal's rate of growth.

Q: Did you discover anything concerning with the feed?

A: Well, it's important to note that feed is susceptible to mold contamination until it is consumed by the animal. Mold can grow on the feed prior to harvest, when it is still in the field, when it's in storage, and it can even begin growing while in the feeding area. Most stored livestock feed will contain mold spores.

Q: Did you see any concerning growths when you checked the feed?

A: I did see some mold growth which was quite concerning. That said, I did not see anything that wasn't typical of other feed stores I've observed at other ranches in the area, with our regional climate. If my memory serves, the feed could have been stored better – the way they had it, the grain was exposed to air and moisture, which can promote mold spore growth. But the grain itself did not seem to be a likely source of toxin.

Q: Ok. What did you do after checking the feed?

A: I told Jay I also wanted to inspect the foraging areas and the pond where the cattle drank.

Q: What were you able to observe?

A: I didn't note anything unusual with any of the grasses in the pasture, but when I got to the pond, I noticed a white powdery substance on the ground leading up to the water's edge. It was clear the area had been frequented by the cattle, because there were hoof prints in the mud all over where the white powder was.

Q: Were you able to identify the white powder?

A: I was not. But I was able to determine that it was not a naturally occurring organic substance,

and I suggested to Jay that someone should have the substance tested. I do not know if they did.

Q: What did you do after that?

A: It wasn't much longer after that that the cows started dying. Jay started panicking. I could tell that Jay was extremely upset, but I had a job to do, so I asked if I could possibly perform a necropsy or take some samples from the cows after they expired.

Q: Did Jay allow that?

A: Absolutely not. Jay told me to get off the property and shouted that they would burn them all.

Q: Do you remember the exact words?

A: Yes. I'll never forget. Jay screamed, "Get off my ranch! This is all your fault! It could be anything that killed these cows. Don't you try to pin the blame on me!"

Q: Did you renew your requests after that?

A: I tried to reason with Jay, but you know, Jay was right somewhat. At the time, there was no way to know with 100% certainty what caused the cows' death. Obviously, we know now.

Q: How do you mean?

A: Well, based on the quality of the feed, the single water source, it's clear that their poor animal husbandry caused them to lose their herd. It's bad for business to put blame on paying customers, but that's where it belongs.

Q: Are you sure of that to a reasonable degree of certainty in your field?

A: Yes. Absolutely.

Q: Thank you very much. I have no further question for you, but plaintiff's counsel will now ask you some things, ok?

A: Sure.

CROSS

Q: Good Afternoon, Dr. Ageladakis. Gosh, it's almost evening. Thank you so much for coming in today and answering these questions.

A: Of course.

Q: You mentioned earlier that the Fishers were typical for the area in terms of how they treated their livestock. What did you mean by that?

A: You know, I didn't see any outright signs of abuse, but they weren't the most conscientious cattle ranchers either.

Q: Can you give me a specific example of what you mean?

A: Well, as I said, I only came out to check on the animals when I was called to do so, but you would ideally want to get a vet out to look over the herd twice a year, or at least once a year. But I can't remember when the last time I was out at the ranch prior to all those cows dying in the Spring.

Q: What about vaccinations? Did the Fishers keep up with the required vaccinations?

A: Nope. But then again, almost no one in this area does.

Q: What is the recommendation for vaccinations for a herd like the one at Fisher Ranch?

A: Well, there are different vaccination schedules depending on the age and stage of life of the animal and the sex of the animal. In general, there are shots for a springtime among the calving members of the herd, then there's spring and fall worming shots. There are shots for cows 2-4 weeks before breeding, then there are shots they should get in the pre-calving stage to make sure the pregnancy is successful. Any replacement heifers need the same shots. The calves need shots at birth, then at the branding stage which usually occurs 2-4 months of age, then pre-weaning

shots and weaning shots. The bulls require annual vaccination and semi-annual deworming injections.

Q: When was the last time the Fishers got these shots for their cattle?

A: I don't know. I looked back at the last three years of records we have for them, and I could not find any record of administering shots. We updated our office computer system in 2018, and as a result, lost all of our records. It was very frustrating. But I can say they didn't get their shots from us in the last three years. They may have gotten them from another vet, I really couldn't say. But it's typical for the average cattle rancher in this area to be behind on that stuff. Maybe not three years behind.

Q: Do you usually manage the records there?

A: Yes. I do all my own paperwork.

Q: Do you routinely record when you provide care?

A: Yes, of course. I always record it just to manage the business, to bill properly, that sort of thing.

Q: To return to the day in question, at what point were you aware of the cattle actually dying?

A: I don't recall. I know that the first cow I examined died later that same day, and I want to say maybe a few others as well. I don't remember the time-table exactly, but the whole herd went quickly, maybe three or four days? I'd say less than a week for sure.

Q: Did you or anyone you know conduct a study of the carcasses to determine a more official cause of death?

A: No. My office does not manage necropsies of mass herd deaths, due to the sensitive nature and the risk of cross contamination to the other populations we serve. That is more of a Lone

Star governmental role. I'm not aware of any study done.

Q: So you could not say for sure that the cause of death was any particular chemical, or that it wasn't due to toxic mold in the grain?

A: Well, as I said, the grain could have been stored better. The symptoms I observed were more consistent with chemically-induced toxicosis. Besides, if sodium chlorate was the source of the poisoning, a necropsy might not have been completely dispositive.

Q: Why is that?

A: The chlorate ion decomposes very quickly following death. Post-mortem, chlorate toxicosis is difficult to distinguish from nitrate poisoning. But, where there is no discoverable source of nitrate poisoning, a diagnosis of chlorate poisoning is appropriate. A study of a carcass may help confirm the diagnosis if the examiner discovers extensive oxidative damage and discoloration to the soft tissues, inflammation and tissue damage to the gastrointestinal tract, and debris and tissue damage found in the kidneys with evidence of renal failure. Also, its important to remember that I treat cattle across the region, and many ranches include AMPLE Power Lines. If this was something AMPLE permitted or regularly used, I would see this a lot more often.

Q: Do you recall what you listed as the cause of death in the incident report you filed after your observations at the Fisher Ranch?

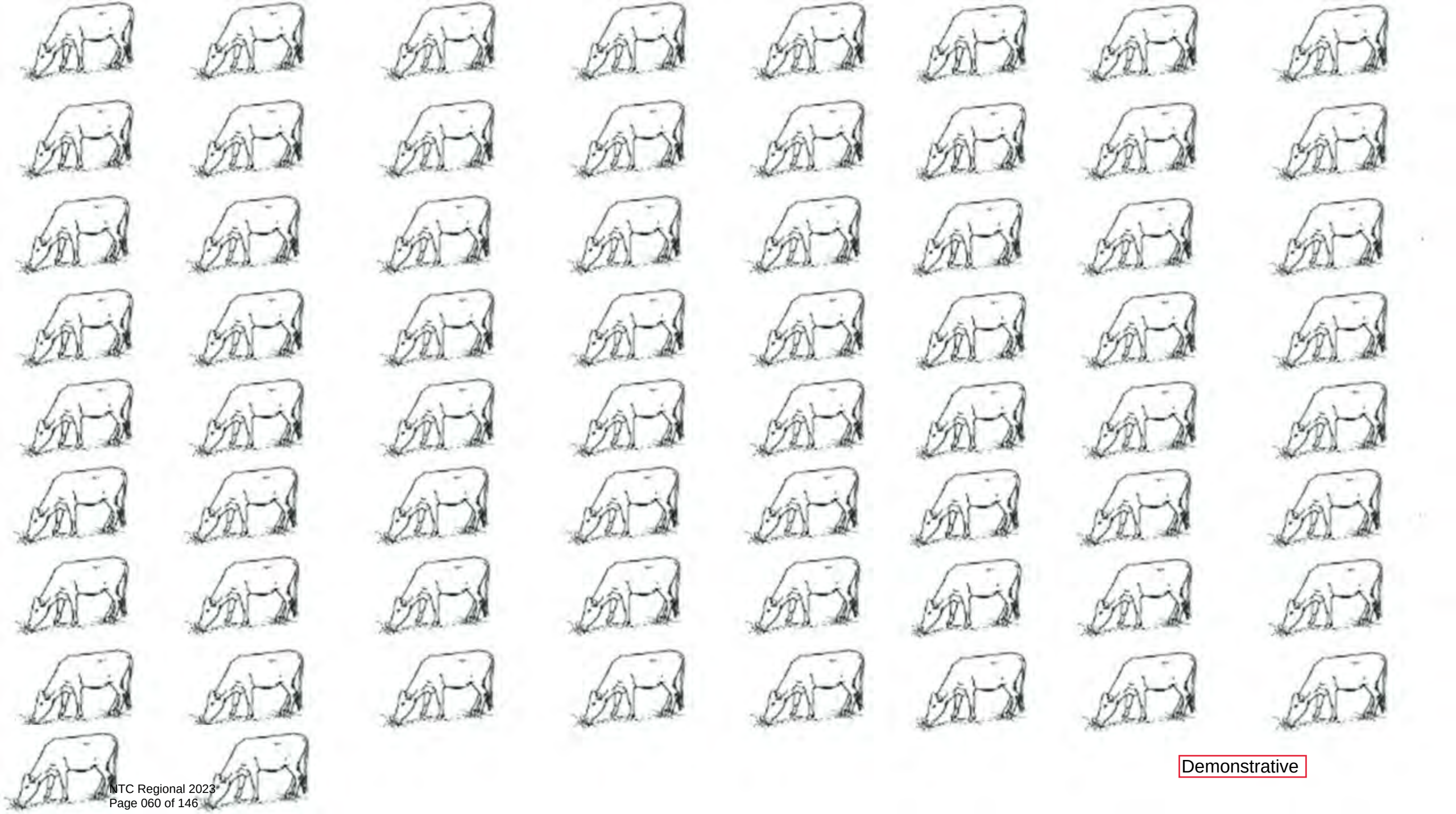
A: I do. I determined that animal neglect was the presumptive cause.

Q: And what led you to that determination?

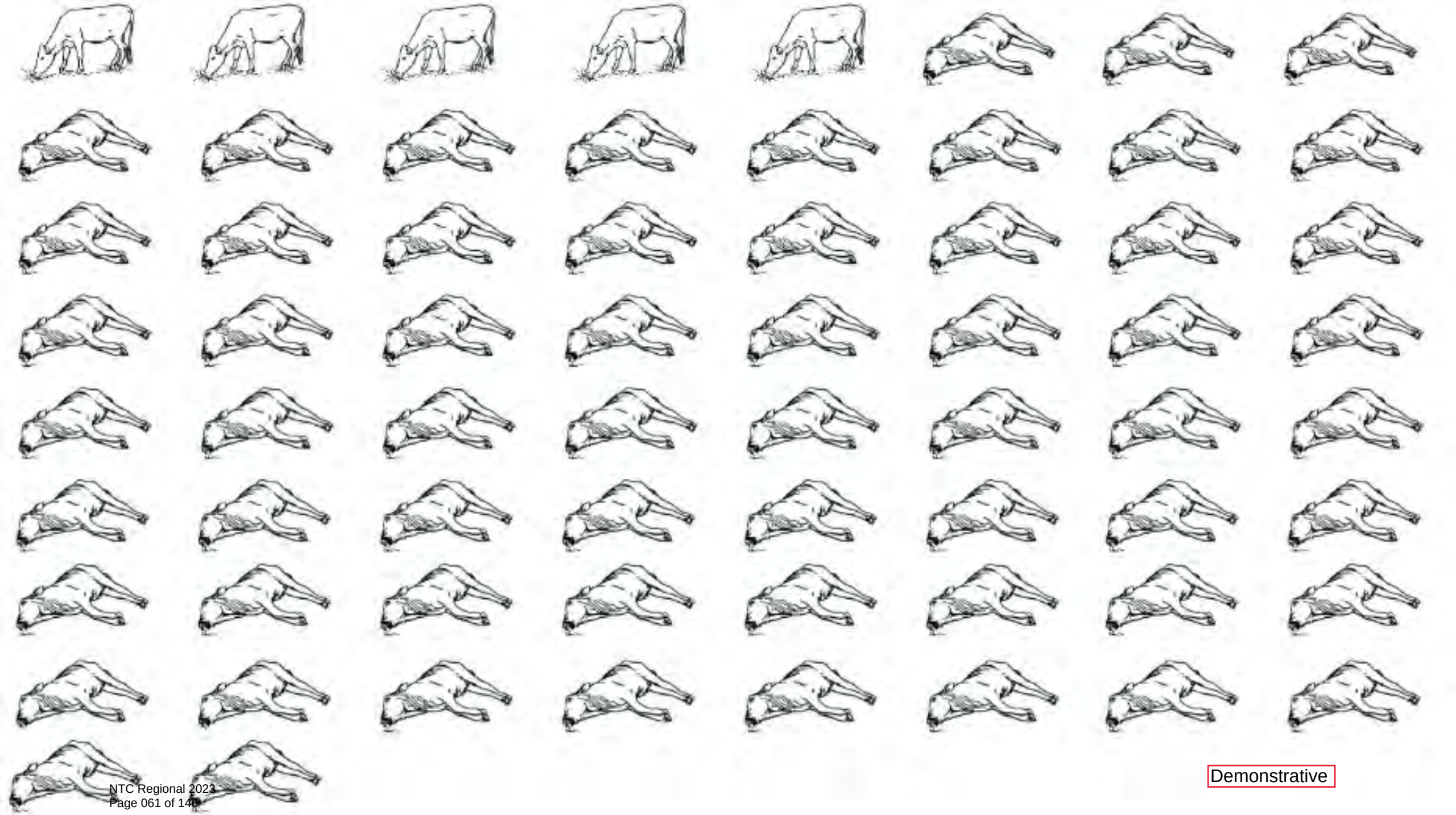
A: I concluded that the herd had been exposed to harmful chemicals on the Fisher land, and there were signs of white powder near the drinking water that seemed to be totally ignored. Any time there is substantial evidence that a group of animals was exposed to a toxic chemical in

quantities great enough to cause fatalities in those numbers, it indicates a degree of neglect on the owners.

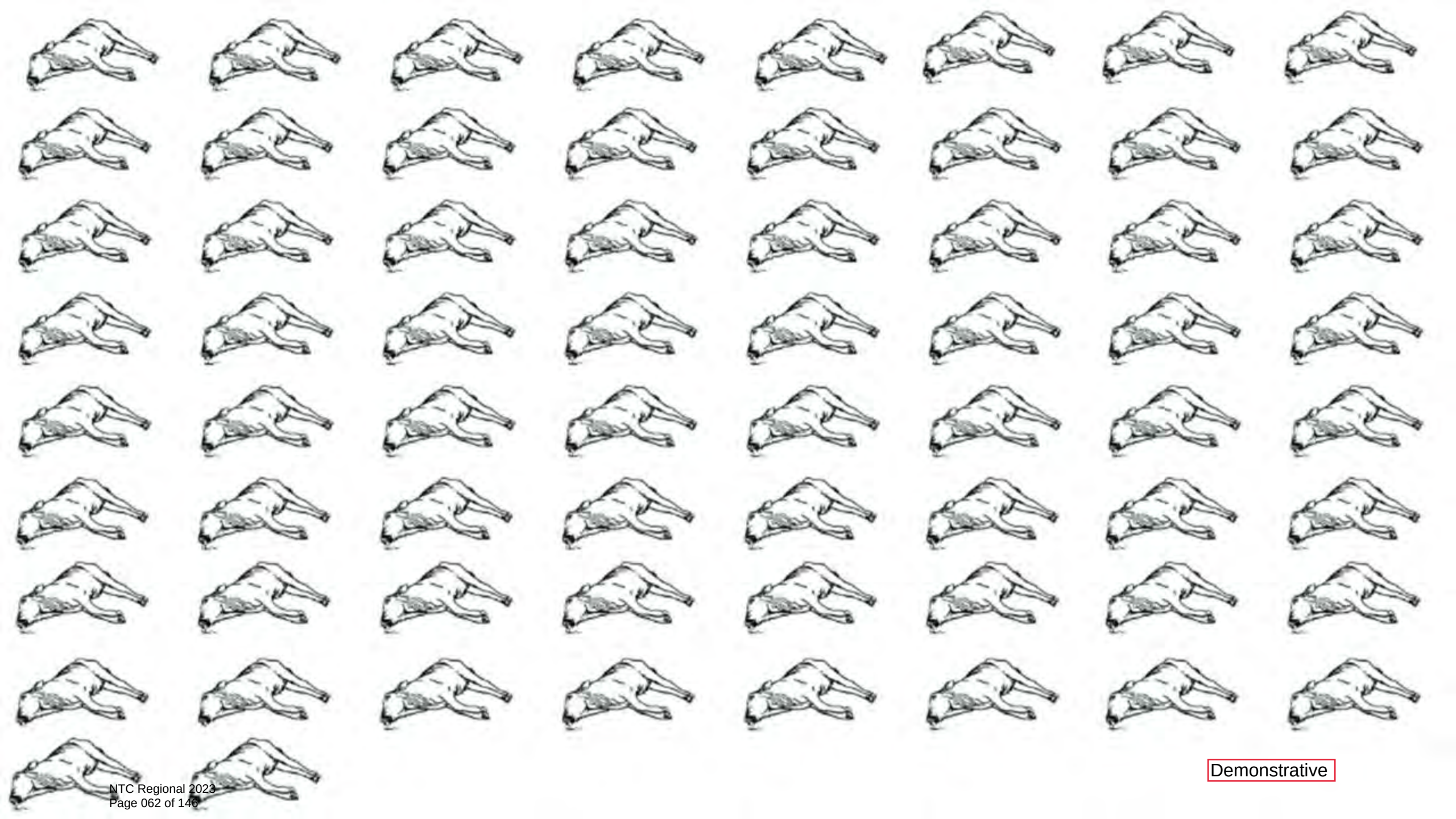
Q: Thank you, Dr. Ageladakis, I have no further questions.



Demonstrative



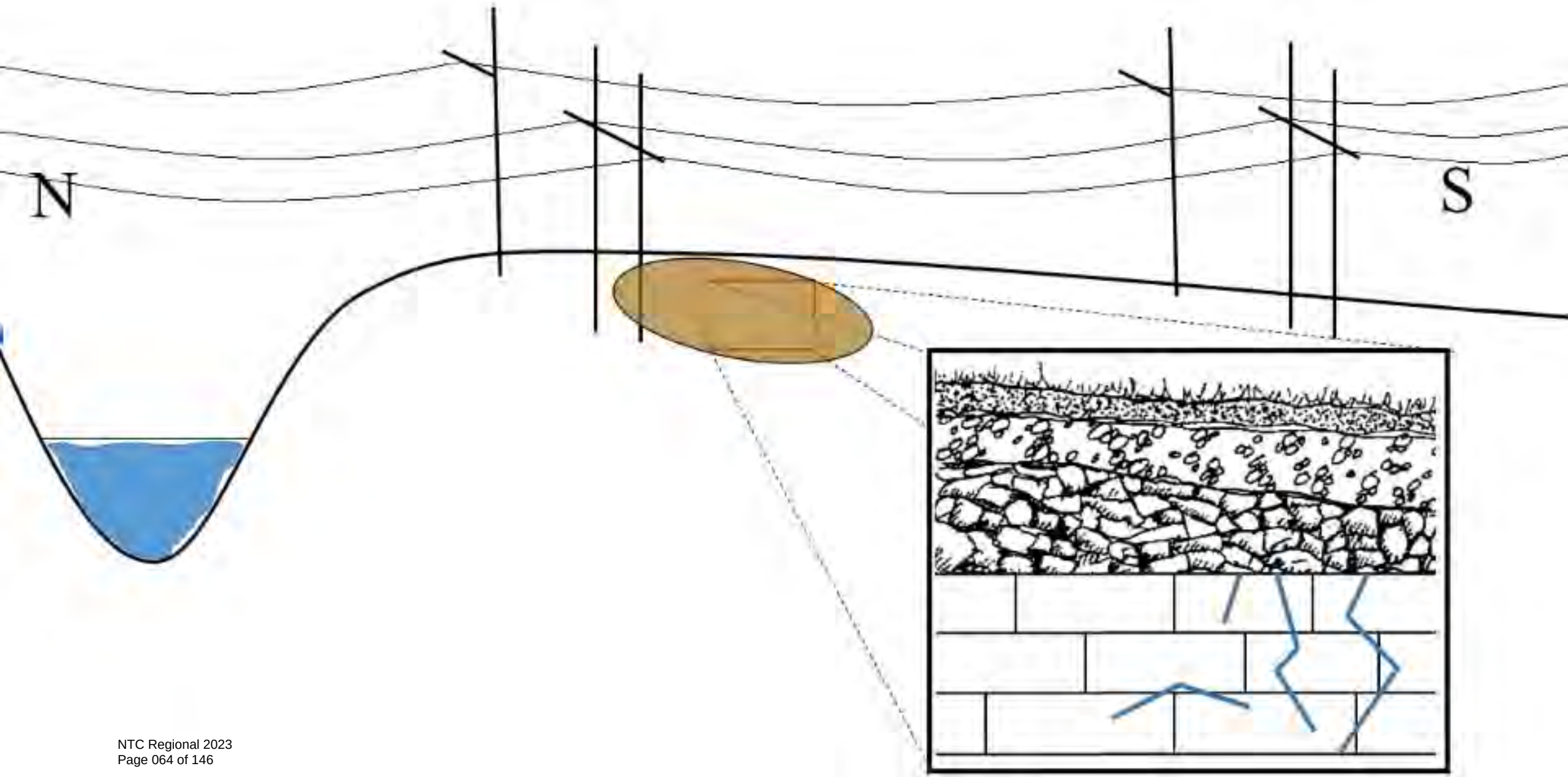
Demonstrative



Demonstrative

EXHIBIT 1

EXHIBIT 2



Lone Star Administrative Code

TITLE 4	AGRICULTURE
PART 1	LONE STAR DEPARTMENT OF AGRICULTURE
CHAPTER 7	PESTICIDES
SUBCHAPTER D	USE AND APPLICATION
RULE §7.30	Classification of Pesticides

(a) State-Limited-Use Pesticides Defined by Active Ingredient.

(1) Except as provided by paragraphs (3) - (4) of this subsection and because of their high potential to cause adverse effects to non-target sites a pesticide product containing an active ingredient in the following list is classified as a state-limited-use pesticide and subject to the restrictions listed in paragraph (5) of this subsection, as well as all other provisions of law generally applicable to state-limited-use pesticides.

(A) 2,4-Dichlorophenoxyacetic acid (2,4-D); including acid, amine, choline, ester and salt formulations;

(B) 2,4-Dichlorophenoxy butyric acid (2,4-DB);

(C) 2,4-Dichlorophenoxy propionic acid (2,4-DP);

(D) 2-Methyl-4-Chlorophenoxyacetic acid (MCPA);

(E) 3,6-Dichloro-o-anisic acid (dicamba); including dimethylamine salt (DMA), sodium salt, diglycoamine salt (DGA), isopropylamine salts (IPA), N, N-Bis-(3-aminopropyl) methylamine (BAPMA), and potassium salt;

(F) 3,4-Dichloropropionanilide (propanil);

(G) 5-bromo-3-sec-butyl-6-methyluracil (bromacil);

(H) 2,4-bis(isopropylamino)-6-methoxy-s-triazine (prometon);

(I) 3,7-dichloro-8-quinolinecarboxylic acid (quinclorac);

(J) Sodium flouoroacetate (Compound 1080); and

(K) Sodium cyanide (M44).

(2) Regulated Herbicides.

(A) 2,4-dichlorophenoxyacetic acid (2,4-D); including acid, amine, choline, ester and salt formulations;

(B) 2-methyl-4-chlorophenoxyacetic acid (MCPA);

(C) 3,6-dichloro-o-anisic acid (dicamba); including dimethylamine salt (DMA), sodium salt, diglycoamine salt (DGA), isopropylamine salts (IPA), N, N-Bis-(3-aminopropyl) methylamine (BAPMA), and potassium salt; and

(D) 3,7-dichloro-8-quinolinecarboxylic acid (quinclorac).

(3) Exceptions from Regulated Herbicide Classification.

(A) 2,4-dichlorophenoxyacetic acid (2,4-D) or 3,6-Dichloro-o-anisic acid dicamba when used in accordance with the approved product label for transgenic auxin herbicide tolerant crops; and

(B) applied by ground application equipment only; and

(C) applied when winds do not exceed 10 miles per hour.

(4) A pesticide product containing an active ingredient listed in this subsection is exempt from classification as a state-limited-use pesticide or a regulated herbicide under this subsection if the product:

(A) is distributed in a container with a capacity less than or equal to one quart for liquid products or less than or equal to two pounds for dry or solid products;

(B) is a specialty fertilizer mixture labeled for ornamental use and registered as a commercial fertilizer under Chapter 63 of the Agriculture Code;

EXHIBIT 3

(C) is ready for use, requires no further mixing or dilution before use, and is packaged in a container of one gallon or less for liquid products or four pounds or less for dry or solid products.

(5) The following are restrictions on use and distribution of State-Limited-Use pesticides and regulated herbicides:

(A) A person may not purchase a pesticide classified as a state-limited-use pesticide or as a regulated herbicide under this subsection unless the person is licensed as a pesticide applicator under either Chapter 76 of the Agriculture Code or Chapter 1951 of the Occupations Code or working under the direct supervision of a person so licensed.

(B) A person may not use a pesticide classified as a state-limited-use or as a regulated herbicide under this subsection unless the person is licensed as a pesticide applicator under either Chapter 76 of the Agriculture Code or Chapter 1951 of the Occupations Code or working under the direct supervision of a person so licensed.

(C) A person may not distribute a pesticide classified as state-limited-use or as a regulated herbicide under this subsection to a person not authorized by this section to purchase state-limited-use pesticide or a regulated herbicide.

(D) A person may not apply 2,4-dichlorophenoxyacetic acid (2,4-D) on a transgenic auxin herbicide tolerant crop unless the person has attended an auxin training course approved by the Department prior to application.

(i) One (1) 2,4-D continuing education unit (CEU) shall be required annually and is valid for one year from the date of course attendance.

(ii) Courses shall be approved by the Department and may not be less than 50 minutes in length for each active ingredient. No more than one (1) CEU will be assigned for any 50 minutes of actual instruction time in Laws and Regulations as described in §7.24 of this title, relating to applicator recertification.

(iii) Each course shall include topics on: application timing, nozzle requirements/selection, wind speed, ground speed, boom height, tank cleanout, sensitive crops and buffer zone requirements, weather conditions, and drift, volatility and inversion.

(E) A person may not apply 3,6-Dichloro-o-anisic acid (dicamba) on a transgenic auxin herbicide tolerant crop unless the person has attended an auxin training course approved by the Department prior to application.

(i) One (1) dicamba continuing education unit (CEU) shall be required annually and is valid for one year from the date of course attendance.

(ii) Courses shall be approved by the Department and may not be less than 50 minutes in length for each active ingredient. No more than one (1) CEU will be assigned for any 50 minutes of actual instruction time in Laws and Regulations as described in §7.24 of this title, relating to applicator recertification.

(iii) Each course shall include topics on: application timing, nozzle requirements/selection, wind speed, ground speed, boom height, tank cleanout, sensitive crops and buffer zone requirements, weather conditions, and drift, volatility and inversion.

(b) State-Limited-Use Pesticides Defined by Use.

(1) Due to the high potential for adverse effects to humans, animals, or the environment as the result of wide area public health pest control, a pesticide product otherwise classified as general use is classified as a state-limited-use pesticide when, and only when, applications are made by aerial application or with power-driven fogging equipment for the purpose of public health pest control.

(2) A person may not use a pesticide for public health pest control in methods identified in paragraph (1) of this subsection unless the person is licensed as a pesticide applicator under Chapter 76 of the Agriculture Code and certified in the public health pest control category or working under the direct supervision of a person so licensed and is employed either by a state, county, city, or other local governmental body or is a person authorized to perform public health pest control under a contract between a state, county, city or other local governmental body and the person or the person's employer.

(3) For purposes of this subsection, "public-health pest control" has the same meaning as provided in §7.21(a)(12) of this subchapter (relating to Applicator Certification).

(c) Prohibited Pesticides.

(1) Because of their persistence in the environment and bioaccumulative toxic effects, any product or substance in the following list or containing as an active ingredient a product or substance in the following list is a prohibited pesticide and subject to the prohibitions, restrictions, and requirements of paragraphs (2) and (3) of this subsection:

(A) Aldrin;

EXHIBIT 3

(B) Chlordane;

(C) DDT (dichlorodiphenyltrichloroethane);

(D) DDD (dichlorodiphenyldichloroethylene);

(E) Dieldrin;

(F) Hexachlorobenzene;

(G) All mercury-based pesticides;

(H) Mirex;

(I) Toxaphene;

(J) Heptachlor;

(K) 2,4,5-trichlorophenoxyacetic acid (2,4,5-T);

(L) 2,4,5-trichlorophenoxypropionic acid (2,4,5-TP (Silvex)).

(2) No person shall use a prohibited pesticide for any purpose.

(3) A person in possession of a prohibited pesticide shall by proper storage, care, handling, and transport prevent the release of the prohibited pesticide into the environment, and shall prevent exposure of human beings or other susceptible species to the prohibited pesticide, and shall dispose of the prohibited pesticide in accordance with all provisions of state and federal law.

Source Note: The provisions of this §7.30 adopted to be effective December 4, 1997, 22 LSReg 11652; amended to be effective July 4, 2001, 26 LSReg 4866; amended to be effective February 17, 2015, 40 LSReg 687; amended to be effective December 21, 2015, 40 LSReg 9115; amended to be effective March 24, 2019, 44 LSReg 1437

EXHIBIT 3

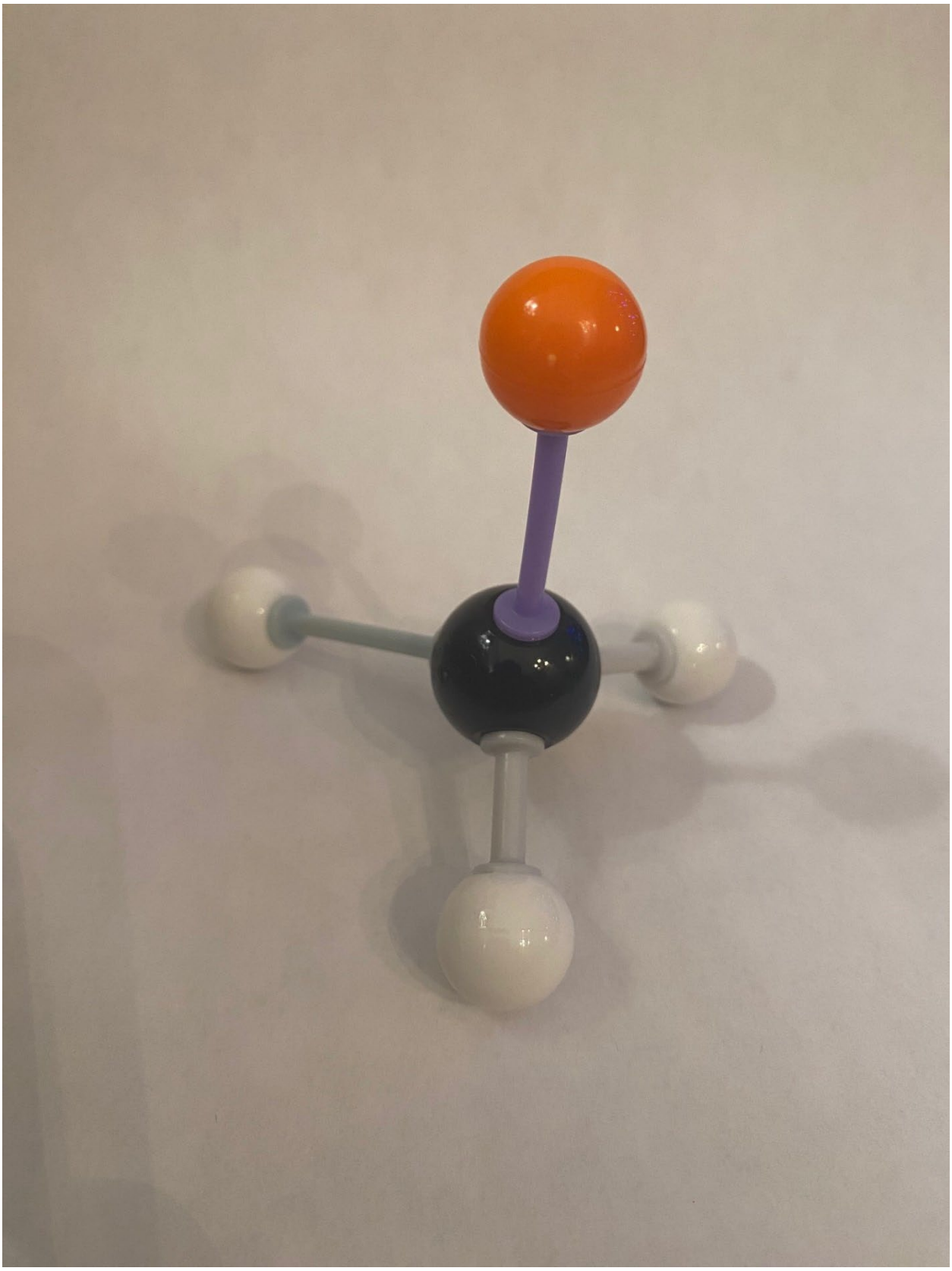


EXHIBIT 4

AVOID PESTICIDE EXPOSURE WITH PROTECTIVE CLOTHING

Even a "natural" or low toxicity product can cause harm if a person is exposed to it. Minimize your risk by using personal protective equipment (PPE). Different products may need different PPE. Always read and understand the label before using pesticides.

- Always wear long sleeves and pants
- Wash contaminated clothing separate from other clothes
- Wear hats or bandanas for more skin coverage

- Use safety glasses or goggles
- Store eye protection out of the sun
- Clean contaminated eyewear immediately

- Check the label for extra instructions
- Inspect regularly for holes or tears
- Different gloves provide different levels of protection
- Discard disposable gloves after every application or use

- Wear closed-toe shoes with socks
- Easy-to-clean shoes can limit residue transfer

KEY POINTS

- Always follow the label
- Do not store PPE with personal clothing
- Do not store PPE and chemicals together
- Wash protective clothing separately from other laundry

npic
NATIONAL PESTICIDE INFORMATION CENTER

Contact us: 800-858-7378
8-12 PST M-F
npic.orst.edu
npic@ace.orst.edu

EXHIBIT 5

Power lines and crops can be good neighbors

August 2010

Two of the Pacific Northwest's greatest economic assets are its wealth of agriculture and its clean and reliable electricity fueled largely by hydropower.

Sometimes the two intersect. Transmission lines carrying electricity to the region's farms, businesses and homes must, of necessity, span large areas where people grow crops and orchards. To ensure a safe and reliable flow of electricity across these expanses, trees and other vegetation must be managed to certain standards.

At the same time, the Bonneville Power Administration — which owns and operates three-quarters of the region's high-voltage transmission — recognizes the importance of our region's agricultural bounty. We are committed to working with individuals and agricultural communities to facilitate ongoing land-use activities in transmission rights-of-way as long as those uses are compatible with transmission safety and reliability standards.

Our goal with vegetation management is to keep you and your property safe while protecting the reliability of our region's electricity system. By working together, BPA and landowners can protect the system and public safety.

What's changed

Following two major blackouts, Congress passed legislation requiring more stringent reliability standards to prevent such widespread blackouts in the future. These standards apply to all transmission owners and operators, including BPA.

To ensure that the reliability standards are met, the North American Electric Reliability Corp. (a national regulatory body that oversees reliability of the U.S. power grids) issued new, more rigorous vegetation management requirements for electric transmission lines. BPA and other utilities must comply or face the possibility of severe sanctions. The costs of these sanctions would be borne by electricity consumers.

Under the new requirements, BPA (and all transmission owner/operators) must have a Vegetation Management Plan. Our plan serves as the operative standard for clearing all of BPA's right-of-ways of potentially hazardous vegetation, including those with agricultural trees. Any vegetation clearing is subject to the terms and conditions of the transmission line easements and, if applicable, any vegetation agreements — for example, the right to grow Christmas trees to a certain height.

What does this mean for agriculture

Agriculture and associated activities such as irrigation systems, support structures, etc., and many other land-use activities may be allowed within transmission

EXHIBIT 6

rights-of-way as long as they are compatible with BPA's safety and reliability standards.

Because these standards have recently been revised, BPA must review all existing and new land-use activities on its rights-of-way to ensure that they meet these new regulatory requirements. BPA is working with individual landowners on a case-by-case basis to ensure a fair, reasonable, balanced and flexible decision-making process.

What are BPA's authorities

The terms and conditions may vary on a case-by-case basis, but generally BPA has the right to keep its rights-of-way clear. Implementation of BPA's Vegetation Management Plan will be consistent with our easement documents and vegetation agreements.

Our Vegetation Management Plan applies to the entire 15,000 circuit miles of BPA's transmission rights-of-way, including those areas where maintenance of some lines has been assigned to other utilities by lease or other contract. BPA does not intend to revise the existing easement documents which cover the 15,000 circuit miles.

If BPA determines that it needs to acquire additional land rights to control vegetation, we will work with landowners to come to an agreement. If negotiations fail to produce one, BPA may seek alternative means to acquire necessary rights-of-way rights. This could involve an eminent domain action. However, BPA views condemnation as a method of last resort and uses its condemnation authority reluctantly.

It's best to stop potential power line problems before they start. If your property borders a transmission corridor, avoid planting new trees directly beneath power lines or too close to electrical equipment.

Why the concern about vegetation

Vegetation growing near high-voltage lines is hazardous in two respects — safety and reliability. Trees, crops and other vegetation can conduct electricity, posing a threat to people, pets, livestock, wildlife and property.

If electricity flows through vegetation to the ground, that vegetation and the nearby ground essentially become "electrified," and anyone who touches it can be seriously injured or even killed. Another danger is that electricity from the line can set vegetation on fire, threatening homes in residential neighborhoods and sparking wildfires in rural areas.

It just takes one tree ...

It may surprise many, but even one tree can create widespread problems. It happened in the Pacific Northwest in August 1996 in a filbert orchard that had not been managed. One of the trees grew into a transmission line's normal operating space. As a result, the transmission line flashed over to the tree. This triggered a number of events, which culminated in a black-out that affected nine Western states and nearly 7.5 million customers.

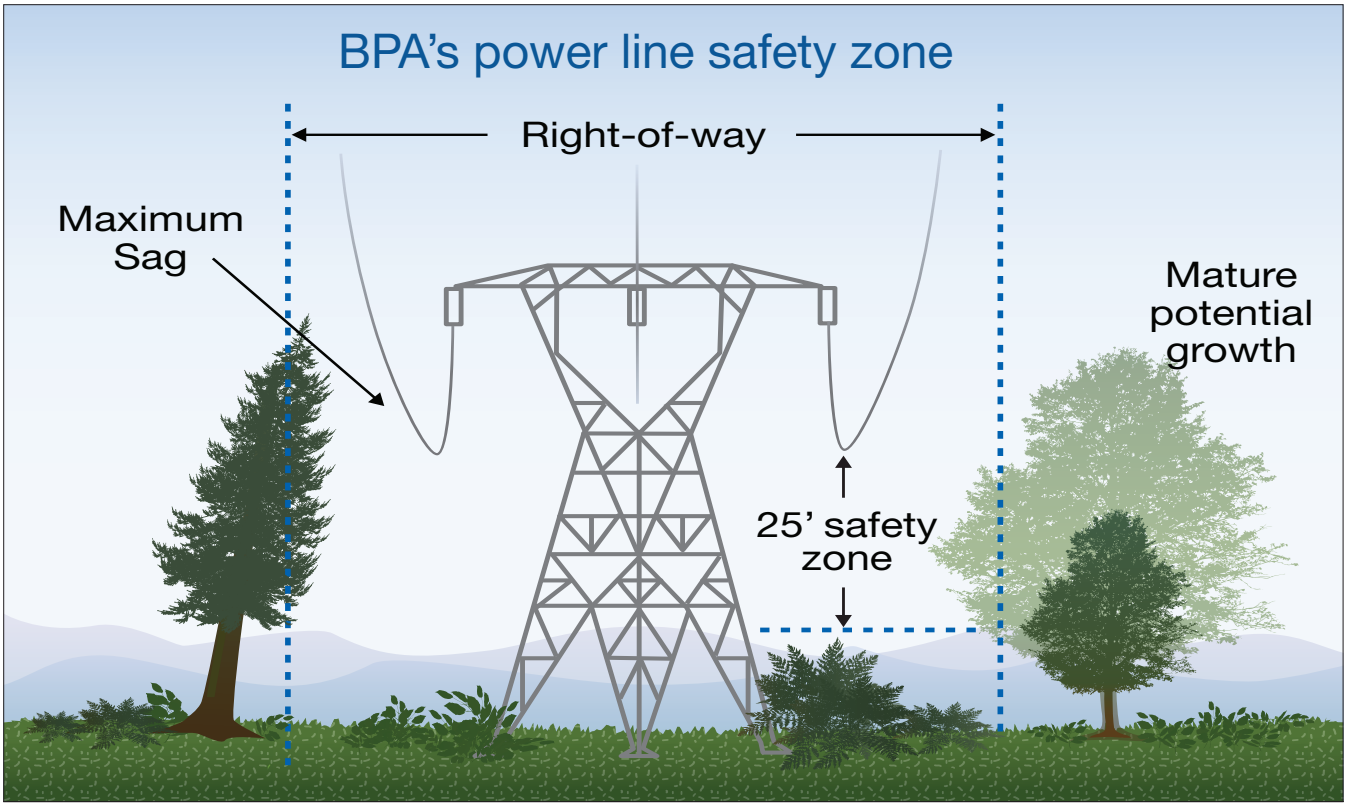
The scenario was repeated on a larger scale in another part of the United States in August 2003, when three transmission lines in Ohio failed due to contacts with trees. This kicked off a cascade of events that led to a massive power outage affecting eight Northeast states and Ontario, Canada. Over 50 million people were without power.

Reliability comes into play when trees or tall brush come into contact with a transmission line or grow too near a line. Such vegetation can shut down that line and disrupt the flow of electricity. Because a single line in BPA's system serves thousands of homes and businesses — and operates in a coordinated and interdependent fashion with other lines — just one tree incident can trigger outages affecting large areas and sometimes several states.

Vegetation doesn't even have to touch power lines to be dangerous. In the case of high-voltage transmission lines, under certain circumstances electricity can jump or arc several feet across the space between wires and vegetation or between wires and other objects connected to the ground.

The position of a transmission line within its normal operating space varies dramatically with atmospheric and operational conditions. For example, when transmission lines carry more electric load, they heat up,

EXHIBIT 6



BPA crews will maintain a 25-foot safety zone between the highest point the vegetation will potentially grow and the lowest point the power line will sag under extreme conditions. Sometimes, even though a tree is outside the right-of-way boundary, BPA crews will remove any growth that comes within the 25-foot clearance zone or remove the tree if it's unstable and likely to topple over on the power line.

which causes the wire to expand and sag. On hot summer days, when demand for electricity is great, lines can sag several feet.

The voltage carried by BPA's transmission lines ranges from 69,000 to 500,000 volts. That can be more than 100 times the voltage of the distribution lines that bring power to your home. Higher voltage lines require greater clearances than power lines serving homes and businesses. That's why BPA's transmission lines are supported by taller towers and why we must maintain a greater distance between the lines and other potential "conductors" such as trees.

What are the new regulations

At the time the new standards went into place, BPA had thousands of agreements with landowners, many of which would have resulted in vegetation growth that is not allowed under the new standards.

As part of the revised standards for transmission safety and reliability, BPA is reviewing all land uses in our transmission rights-of-way and making changes necessary to ensure safe distances between vegetation (crops, trees, brush, etc.) and our transmission lines. These changes may affect a significant number of agricultural activities in our rights-of-way.

Under the new standards, BPA must keep a 25-foot safety zone between high-voltage transmission conductors and vegetation beneath and around them. The 25-foot safety zone considers two key factors — the potential height of the mature vegetation and the maximum distance the power line can sag.

Taking these two factors together means that vegetation must be removed if it can grow tall enough or wide enough for a transmission line to sag within 25 feet of its closest branches.

EXHIBIT 6

What about respecting private property

BPA respects property rights, and that is why we strive to keep landowners informed and work toward mutually satisfactory solutions. However, we need to ensure reasonable access to our transmission facilities to perform necessary maintenance and repair and to make sure vegetation or structures do not pose a safety or electric outage threat.

Before starting vegetation management activities, BPA makes every effort to contact landowners and residents near the project area to inform them about the work to be done. We also listen to citizen concerns and work hard to find reasonable solutions. We let the local community know when we will be in the area.

When it's necessary to remove vegetation near power lines, BPA notifies landowners prior to any scheduled clearing. The only exception is if vegetation poses an imminent threat. BPA must remove the vegetation but will try to contact the landowner before or shortly after such vegetation is cut. Our crews will work with landowners to minimize the impacts to property.

What can landowners grow

Generally, smaller-scale native or ornamental shrubs, ferns and grasses are permissible in a right-of-way. However, before you plant any vegetation on BPA rights-of-way, be sure to coordinate with us by filling out one of our Land Use Applications. This will enable us to clarify our requirements to maintain a safe distance between the vegetation and our power lines and ensure that the vegetation will not block access to the lines, towers or poles.

BPA may permit vegetation agreements within its transmission line right-of-way whether we own the land in fee or only have an easement. The application should be submitted to Real Property Services at BPA. A realty specialist will be assigned to process the application. He or she will coordinate with the landowner if additional information is needed to process the application.

An application for the proposed use of a right-of-way is available at *www.transmission.bpa.gov/NewsEv/documents/Application_for_use_of_BPA_Right.doc*

Why not cutback instead of remove

The combination of fast-growing trees and BPA's multi-year cyclical maintenance program means that removal, rather than cutback, of tall-growing trees is the best way to ensure the new safety standards are met.

For example, if we discover a 10-foot Douglas fir tree under a line, we don't just cut it back to the proper clearance. Instead, we remove it because, at mature height, the tree will eventually violate the 25-foot clearance limit. Also, trimming trees repeatedly unnecessarily increases BPA's expenses, which runs contrary to our duty to ensure low electrical rates and to protect the financial interests of our ratepayers.

A word about safety

Routine maintenance and ongoing agricultural activities can be dangerous unless appropriate safety measures are taken. BPA wants to ensure safe practices around power lines. We are working with individuals and agricultural communities to raise awareness and educate about working safely in and around transmission corridors and electrical infrastructure.

For your own safety, it's important that you never attempt to trim or remove a tree near a transmission line because working around energized power lines is extremely hazardous. Instead, call BPA and our specially trained crews will take care of it.

For safety tips, link to the booklet "Living and Working Safely Around High-Voltage Power Lines" *www.bpa.gov/corporate/pubs/Public_Service/LivingAndWorking.pdf* or order a copy by calling toll free 800-622-4520.

For more information

If you have questions about our vegetation management program or would like to request a BPA Land Use Application, call us at 800-836-6619.

For more details on BPA rights-of-way and how to stay safe around high-voltage power lines, visit our website at *www.bpa.gov/corporate/pubs*. You can also obtain a copy of BPA's Land Use Application from the website.

EXHIBIT 6

EXHIBIT 7

Ranchers all across Lone Star are talking about what terrific deals they're getting from Buy My Ranch! Our offers are almost "too good to be true"!

What will you do with all your free time and money once you've sold your ranch?

You deserve a fresh start, a life without worrying about the headaches of fluctuating prices and the ups and downs of a fickle market.

- Get a job earning a more stable income, one not so dependent on luck and chance!
- Invest the generous income you'll receive from the sale of your property and let your money work for you, like the wealthy elites in the big cities do!
- Go on vacation! Travel and see the world! All without worrying about the state of things back home!

Who We Are

About Us

We are a group of investors based in Armadillo, LS, who realize how difficult it can be making your living off the land, subject to the whims of climate, natural disasters, and diseases of crops and animals. We want to help you begin living your best life now.

Contact Us

Phone: 1 (555) 555-5555
Email: 2good2b_tru@buymyranch.net
Web: www.buymyranch.net

FREE ESTIMATES!

BUY MY RANCH, LLC

BUY MY RANCH, LLC
A Wholly-Owned Subsidiary of SketchCorp, Inc.
517 E. Proffit Blvd, Ste 237
Armadillo, LS 75251

Sick and tired of losing your money?

Frustrated with empty pockets and the headaches of the rancher lifestyle?

~BUY MY RANCH~

We have the simple solution you've been looking for!

EXHIBIT 8

We've helped countless ranchers just like you to leave behind the stress and headaches of ranch life and begin living a better, more profitable life!

"My father was a rancher, and his father before him, and his father before him. But it just wasn't for me, and never was. BUY MY RANCH allowed me to get out from under that shadow and start living my own life. Now I own a successful microbrewery in Armadillo, and life is terrific!"

- Bree Trevino, former horse breeder and rancher

"When I first heard of BUY MY RANCH, I was very skeptical. But after asking around, I found out that not only were they legit, but also the most trusted name in this business. After talking with their representatives, I couldn't wait to sign on the dotted line! I haven't looked back since!"

- Michael Ritter, former beef cattle rancher

"After 25 years of trying to make money from the land, I was fed up. BUY MY RANCH gave me peace of mind and enough money to start a REAL business as a social media influencer!"

– Johnathan Stone, former beef cattle rancher

Have concerns about your land or livestock?

- Contaminated land?
- Potential disease exposures?
- Cloud on title/Encumbered title?
- Law enforcement worries – federal/local?

We don't care, we'll buy!

Our team includes some of the best attorneys licensed to practice in the great state of Lone Star. We will cut through the legal red tape so you have nothing to worry about, and you don't have to spend a dime to find your own lawyer! We've got you covered!

** Actual value paid for real property, chattel, and livestock subject to the recommendations of our expert team of surveyors and assessors! BUY MY RANCH, LLC and SketchCorp, Inc. disclaim all liability for undervaluation.*

Don't be fooled by other companies offering to buy land and livestock! We've been in business for 17 years, and have made a name for ourselves in Lone Star as THE most trusted name in ranch and farmland acquisition!

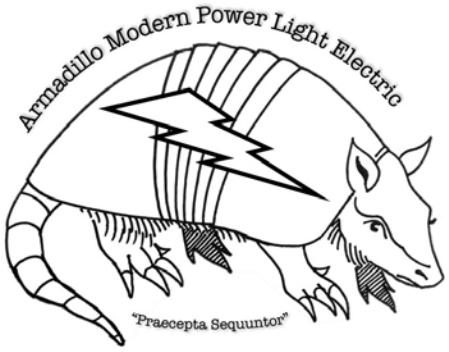
We pay fair value!

After an initial consultation visit to your land, our expert team of land surveyors and property assessors will calculate a fair price for you within one business week, for one lump-sum cash payment!

We also employ a wide range of animal experts and veterinarians who can evaluate and negotiate payment for any marketable animals on your property – horses, beef cattle, dairy cows, pigs, goats, and even chickens!

EXHIBIT 8

EXHIBIT 9



WELCOME to Armadillo Modern Power Light Electric. We are pleased to have you as a part of our team. We believe that our company is only as strong as the people who work for it.

We realize that in order to have a successful company, we must listen to your suggestions as well as make you aware of what we expect from you. We must see to it that you understand that real opportunities for advancement are available if you are willing to work hard and take on added responsibilities. Your Supervisor is aware of our company's philosophy regarding advancement.

It is important to us that you feel a part of the company. Please take the time to read this booklet and acquaint yourself with Armadillo Modern Power Light Electric or AMPLE as we like to call it, because here, the power is AMPLE! Should you have any comments or suggestions regarding the company, please feel free to write them down and send them to my attention at the address shown on this booklet cover.

Armin Salek
President

EXHIBIT 10

INTRODUCTORY STATEMENT

The employee handbook is intended to generally describe the policies, procedures, and benefits of AMPLE. This handbook is not an employment contract and is not intended to create a contractual obligation of any kind.

No employee handbook can anticipate every circumstance or question about a policy. The need may arise to change policies described in the handbook. AMPLE reserves the right to revise, supplement, or rescind any policy or portion of the handbook from time to time as it deems appropriate, in its sole discretion. Nothing in this handbook should be considered a guarantee of continued benefits or employment.

The only recognized deviations from the stated policies are those authorized by the President of AMPLE.

EXHIBIT 10

EMPLOYEE ACKNOWLEDGEMENT FORM

The employee handbook describes important information about AMPLE. I understand that I should consult the President if I have any questions that are not answered in the handbook.

I became an employee at AMPLE voluntarily. I understand and acknowledge that there is no specified length to my employment at AMPLE and that my employment is at will. I understand and acknowledge that "at will" means that I may terminate my employment at any time, with or without cause or advance notice. I also understand and acknowledge that "at will" means that AMPLE may terminate my employment at any time, with or without cause or advance notice, as long as they do not violate federal or Lone Star laws.

I understand and acknowledge that there may be changes to the information, policies, and benefits in the handbook and that I will be informed of these changes verbally and in writing. The only exception is that AMPLE will not change or cancel its employment-at-will policy. I understand that AMPLE may add new policies to the handbook as well as replace, change, or cancel existing policies. I understand that I will be told about any handbook changes and I understand that handbook changes can only authorized by the chief executive officer of AMPLE.

I understand and acknowledge that this handbook is not a contract of employment or a legal document. I have received the handbook and I understand that it is my responsibility to read and follow the policies contained in this handbook and any changes made to it.

EMPLOYEE'S NAME (printed):
_____

EMPLOYEE'S SIGNATURE:
_____

DATE: _____

EXHIBIT 10

Customer Relations

Our customers are very important to us. Every employee represents AMPLE to customers and the public. Our customers judge all of us by how we treat them. One of the highest priorities at AMPLE is to help any customer or potential customer. Nothing is more important than being courteous, friendly, prompt, and helpful to customers.

Your contacts with the public, your telephone manners, and any communications you send to customers reflect not just on you but also on the professionalism of AMPLE. Good customer relations can build greater customer loyalty and increased profits.

Employee Orientation

All new employees will be provided with an orientation briefing, which will be held within the first week of employment with the Company.

The employee orientation goals are as follows:

1. To establish good employee-employer communication.
2. To reduce the anxieties of a new environment and new responsibilities.
3. To build teamwork spirit.
4. To inform the employee of the Company's vision, mission and achievements.
5. To provide the employee with information about the Company's benefit package and explain the participation eligibility dates for various plans available.
6. To review with the employee the Company procedures and review the operations, general personnel, and paperwork manuals.
7. Although it should not need saying, to help employees remember to always work conscientiously and behave well within the bounds of the law.

EXHIBIT 10

101 Nature of Employment

Effective Date: 06/02/2016

This handbook gives a general understanding of the personnel policies of AMPLE. It should help answer many common questions. You should review all the policies in the handbook and become familiar with them.

However, this handbook cannot cover every situation or answer every question about employment at AMPLE. This handbook is also not an employment contract and is not intended to create contractual obligations of any kind.

You became an employee at AMPLE voluntarily and your employment is at will. "At will" means that you may terminate your employment at any time, with or without cause or advance notice. Likewise, "at will" means that AMPLE may terminate your employment at will at any time, with or without cause or advance notice, as long as we do not violate federal or Lone Star laws.

Sometimes we may need to change, add, or cancel policies or benefits. We want you to know that this could happen and that AMPLE has the right to make changes. The only exception is that we will not change our employment-at-will policy. The only official changes to this handbook are changes that are authorized and signed by the President of AMPLE.

102 Employee Relations

Effective Date: 06/02/2016

We believe that the work conditions, wages, and benefits we offer to AMPLE employees are competitive with those offered by other employers in this area and in this industry. If you have concerns about work conditions or compensation, we strongly encourage you to express these concerns openly and directly to your supervisor.

Our experience has shown that when employees deal openly and directly with management, the work environment can be excellent, communications can be clear, and attitudes can be positive. We believe that AMPLE fully demonstrates its commitment to employees by responding effectively to employee concerns.

If and when employees examine the option of representation by individuals outside AMPLE, however, we strongly encourage you carefully consider related issues such as regular deductions from your paycheck for representation fees, the potential for outside interference with supervisory relationships, and the commitment for you to comply with directions from third parties.

In an effort to protect and maintain direct employer/employee communications, we will resist organization, within the limits allowed by law, and protect your right to speak for yourself.

103 Equal Employment Opportunity

Effective Date: 06/02/2016

To give equal employment and advancement opportunities to all people, we make employment decisions at AMPLE based on each person's performance, qualifications, and abilities. AMPLE does not discriminate in employment opportunities or practices on the basis of race, color, religion, sex,

EXHIBIT 10

national origin, age, disability, or any other characteristic protected by law.

We will make reasonable accommodations for qualified individuals with known disabilities unless making the reasonable accommodation would result in an undue hardship to AMPLE.

Our Equal Employment Opportunity policy covers all employment practices, including selection, job assignment, compensation, discipline, termination, and access to benefits and training.

If you have a question about any type of discrimination at work, talk with your immediate supervisor. You will not be punished for asking questions about this. Also, if we find out that anyone was illegally discriminating, that person will be subject to disciplinary action, up to and including termination of employment.

104 Business Ethics and Conduct

Effective Date: 06/02/2016

We expect AMPLE employees to be ethical in their conduct. It affects our reputation and success. AMPLE requires employees to carefully follow all laws and regulations, and have the highest standards of conduct and personal integrity.

Our continued success depends on our customers' trust. Employees owe a duty to AMPLE, and our customers to act in ways that will earn the continued trust and confidence of the public, always behaving within the bounds of the law. We should always act in a manner that is not just consistent with legal boundaries, but also within ethical boundaries.

As an organization, AMPLE will comply with all applicable laws and regulations. We expect all directors, officers, and employees to conduct business in accordance with the letter, spirit, and intent of all relevant laws and to not do anything that is illegal, dishonest, or unethical.

If you use good judgment and follow high ethical principles, you will make the right decisions. However, if you are not sure if an action is ethical or proper, you should discuss the matter openly with your supervisor. If necessary, you may also contact the President for advice and consultation.

It is the responsibility of every AMPLE employee to comply with our policy of business ethics and conduct. Employees who ignore or do not comply with this standard of business ethics and conduct may be subject to disciplinary action, up to and including possible termination of employment.

110 Outside Employment

Effective Date: 06/02/2016

You may hold an outside job as long as you can satisfactorily perform your AMPLE job and the job does not interfere with our scheduling demands.

We hold all employees to the same performance standards and scheduling expectations regardless if they have other jobs. In order to remain employed at AMPLE, we will ask you to terminate an outside job if we determine that it is impacting your performance or your ability to meet our requirements, which may change over time.

You may not have an outside job that is a conflict of interest with AMPLE. Also, you may not get paid or get anything in return from a person outside AMPLE in exchange for something you produce or a service you provide as part of your AMPLE job.

114 Disability Accommodation

Effective Date: 06/02/2016

AMPLE is committed to complying fully with the Americans with Disabilities Act (ADA) and all federal standards. We are also committed to ensuring equal opportunity in employment for qualified persons with disabilities. We conduct all our employment practices and activities on a non-discriminatory basis.

Our hiring procedures have been reviewed and they provide meaningful employment opportunities for persons with disabilities. We only make pre-

EXHIBIT 10

employment inquiries regarding an applicant's ability to perform the duties of the job.

Qualified individuals with disabilities are entitled to equal pay and other forms of compensation (or changes in compensation) as well as job assignments, classifications, organizational structures, position descriptions, lines of progression, and seniority lists. We make all types of leaves of absence available to all employees on an equal basis.

AMPLE is also committed to not discriminating against any qualified employee or applicant because the person is related to or employed with a person with a disability. AMPLE will follow any state or local law that gives more protection to a person with a disability than the ADA gives.

AMPLE is committed to taking all other actions that are necessary to ensure equal employment opportunity for persons with disabilities in accordance with the ADA and any other applicable federal, state, and local laws.

EXHIBIT 10

205 Introductory Period

Effective Date: 06/02/2016

AMPLE has an introductory period for new employees. During the introductory period, we will evaluate your work habits and abilities to make sure that you can perform your job satisfactorily. The introductory period also gives you time to decide if the new job meets your expectations.

The introductory period for all new and rehired employees is the first 90 calendar days after their hire date.

If you are absent for a significant amount of time during your introductory period, the length of the absence will automatically extend the introductory period. We may also extend the introductory period if we decide it was not long enough to evaluate your performance. This could happen either during or at the end of the introductory period.

When employees satisfactorily complete the introductory period, they are assigned to the "regular" employment classification.

During the introductory period, new employees are eligible for those benefits that are required by law, such as Social Security and workers' compensation insurance. After becoming regular employees, they may also be eligible for other AMPLE benefit programs, subject to the terms and conditions of each benefit program. Be sure to review the information for each benefits program to see the exact requirements.

208 Employment Applications

Effective Date: 06/02/2016

We rely on the accuracy of the information you put on your employment application. We also expect that you and your references give accurate and true information during the hiring process and employment. If we find that any information is misleading, false, or was left out on purpose, we may reject an applicant from further consideration. If the person was already hired, it could result in termination of employment.

209 Performance Evaluation

Effective Date: 06/02/2016

We encourage you and your supervisor to discuss job performance and goals on an informal, day-to-day basis. In addition, you and your supervisor will have formal performance evaluations to discuss your work and goals, to identify and correct weaknesses, and to encourage and recognize your strengths.

212 Salary Administration

Effective Date: 06/02/2016

We have a salary administration program at AMPLE. The salary administration program helps us have consistent pay practices, comply with federal and Lone Star laws, support our commitment to Equal Employment Opportunity, and offer competitive salaries within our labor market.

We are committed to paying equitable wages that are based on the requirements and responsibilities of each job. We also try to pay wages that are comparable to the wages paid to employees in similar jobs in other organizations in the area.

Compensation for each job is based on several factors. The factors include the essential duties and responsibilities of the job, and salary.

EXHIBIT 10

301 Employee Benefits

Effective Date: 06/02/2016

AMPLE gives eligible employees many benefits. Some benefits are required by law and cover all employees. The legally required benefits include Social Security, workers' compensation, state disability, and unemployment insurance.

There are several factors that decide if you are eligible for a benefit. One important factor is your employment classification. See your supervisor to find out which benefit programs you are eligible for.

This employee handbook contains policies describing many of the benefit programs. Sometimes a policy will tell you that there is more information in another place such as the Summary Plan Document.

The following benefit programs are available to eligible employees:

* 401(k) Savings Plan
* Auto, Employer-Owned Car
* Benefit Conversion at Termination
* Bereavement Leave
* Family Leave
* Holidays
* Jury Duty Leave
* Major Medical Insurance
* Life Insurance
* Medical Leave
* Military Leave
* Uniform and Uniform Maintenance
* Vacation Benefits

You may have to pay part or all of the cost for some benefits but AMPLE fully pays for many of them.

303 Vacation Benefits

Effective Date: 06/02/2016

AMPLE offers vacation time off with pay to eligible employees. Employees in the following employment classifications are eligible for paid vacation time:

* Regular full-time employees

The amount of paid vacation time you receive each year depends on how long you have been working. This is the schedule for accruing vacation:

*Upon being hired as a full-time continuous employee, you will be eligible to accrue vacation at a rate of .096 days per week once have completed six months of service. The maximum amount of days that can be accrued is 5 days.

*After 1 year of service the full-time employee will be eligible for 5 vacation days each year, accrued weekly at the rate of 0.096 days.

*After 3 years of eligible service the employee is entitled to 6 vacation days each year, accrued weekly at the rate of 0.115 days.

*After 4 years of eligible service the employee is entitled to 7 vacation days each year, accrued weekly at the rate of 0.135 days.

*After 5 years of eligible service the employee is entitled to 8 vacation days each year, accrued weekly at the rate of 0.154 days.

*After 6 years of eligible service the employee is entitled to 9 vacation days each year, accrued weekly at the rate of 0.173 days.

*After 7 years of eligible service the employee is entitled to 10 vacation days each year, accrued weekly at the rate of 0.192 days.

We calculate the length of your eligible service on the basis of a "benefit year." A "benefit year" is the 12-month period that begins when you start earning vacation time. Your benefit year may be extended for any significant leave of absence except military leave of absence. (Military leaves do not affect the benefit year calculation.) See the leave of absence policies in this handbook for information on how each type of leave affects vacation accruals.

EXHIBIT 10

Once you are hired as a full-time employee and you have completed six months of continuous service, you will begin to earn paid vacation time according to the schedule in this policy. Years of eligible service are determined for each employee every December 31st. Employees with less than one year of service begin accruing vacation once they have completed six months of service. For example, if an employee is hired on May 1st, 2009 they will accrue .096 vacation days per week beginning November 1st. Since there are nine weeks from November 1st to December 31st, that employee would have earned 7 hours of vacation time. (9 weeks times .096 days per week equals .86 days of vacation times 8 hours in a day which equals 6.88 hours of earned vacation time, rounded up to 7 hours)

You may not take less than four hours of vacation at a time. To schedule your vacation time, you should first ask for advance approval from your supervisor. Each request will be reviewed based on a number of factors, including our business needs and staffing requirements. Department managers will retain final authority as to the vacation schedules in their department. If there is a conflict, the President of the company will make the final decision. Employees requesting a single day of vacation must make that request 48 hours in advance of the requested date. For multiple days, employees must request time off two (2) weeks prior to the requested days.

You will be paid for vacation time off at your base pay rate as of the time of the vacation. Vacation pay does not include overtime or any special forms of compensation such as incentives, commissions, bonuses, or shift differentials.

We encourage you to use your available paid vacation time for rest and relaxation. If you do not use your available vacation by the end of a benefit year, you may request a check for the unused vacation time. Vacation time will not carry over from one benefit year to the next.

Certain rules apply and conditions must be met to receive pay at termination for current year accrued vacation time.

a. **Voluntary Resignation.** You must give at least a two week advance notice of your intent to resign to be eligible for accrued vacation. Employees who quit without sufficient written notice will not be eligible for or paid accrued vacation at the time of their termination.
b. **Work During Notice Period.** Vacation cannot be used during the notice period given by an employee prior to termination.
c. **Termination For Cause.** If your employment is involuntary terminated by the Company because of action or inaction on your part, any accrued vacation time will be forfeited.
d. **Layoff.** Accrued vacation time will be paid to employees at the time of any layoff.

314 Training

Effective Date: 06/02/2016

AMPLE wishes to encourage training for its employees which will lead to further personal development in job related areas. Based on prior written approval in each case by your supervisor, the Company will reimburse the employee for a percentage of the cost (determined before employee attends training) of such courses after the training is satisfactorily completed and passed, with reimbursement being paid over a period of one year.

AMPLE will make certain investments to have some training courses at the field offices during the year. Any mandatory training will be paid at normal hourly rates. Any voluntary training will be treated as non-compensatory time.

The AMPLE will not pay any employee's cost of dues or subscriptions for any organization.

316 Health Insurance

Effective Date: 06/02/2016

Our health insurance plan offers medical benefits to eligible employees and their dependents. Employees in the following employment classifications are eligible to enroll in the health

EXHIBIT 10

insurance plan:

* Regular full-time employees

Employees may participate in the health insurance plan on the first of the month following their first 90 days of full-time employment at no cost to the employee for their coverage. Dependent coverage is available for the employee at full cost to the employee. New employees may elect to participate in the health insurance program prior to completing their first 90 days at full cost to the employee for both the employee and dependent coverage. New employees interested in signing up for this coverage must do so within the first 30 days of employment.

If you are enrolled in the health insurance plan and change to an employment classification that would make you no longer eligible, you may be able to continue your health care benefits under the Consolidated Omnibus Budget Reconciliation Act (COBRA). See the Benefits Continuation (COBRA) Policy in this handbook for more information.

There are more details about our health insurance plan in the Summary Plan Description (SPD). When you become eligible for health insurance, you will receive an SPD and rate information. If you have questions about our health insurance plan, contact the Human Resources Office for more information.

317 Life Insurance

Effective Date: 06/02/2016

AMPLE offers a basic life insurance plan for eligible employees who have enrolled in our major medical insurance plan.

Employees in the following employment classifications are eligible to enroll in the life insurance plan:

* Regular full-time employees

The eligible employees may participate in the life insurance plan subject being enrolled in our major medical insurance and to the terms and conditions of the agreement between AMPLE and its insurance carrier.

There are more details about our basic life insurance plan in the Summary Plan Description. If you have questions about our life insurance plan, contact the Human Resources Office for more information.

320 401(k) Savings Plan

Effective Date: 06/02/2016

AMPLE offers a 401(k) savings plan to help eligible employees save for the future and their retirement years.

To be eligible to join our 401(k) savings plan, you must have completed three (3) months of service and be 21 years of age or older. You may join the plan only during open enrollment periods. When you are eligible, you may participate in the 401(k) plan subject to all the terms and conditions of the plan.

You choose how much salary you wish to contribute to the 401(k) plan. The plan allows you to save from 1% to 15% of your wages. You also will choose how your plan account should be invested.

Your 401(k) contribution is taken from your pay before the federal and state taxes are calculated for your paycheck. That means that you will pay lower taxes now while you are contributing the 401(k) plan. Your 401(k) account will be taxed when you take money out of it in the future but at that time it is possible that you will pay taxes at a lower rate.

AMPLE may also contribute a lump sum amount per year, to be determined by the Company on an annual basis. The following vesting schedule applies to the employer contribution:

2 years of employment from hire date
20% vested
3 years of employment from hire date
40% vested
4 years of employment from hire date

EXHIBIT 10

60% vested
5 years of employment from hire date
80% vested
6 years of employment from hire date
100% vested

Any employee contribution will become immediately vested.

There are more details about our 401(k) savings plan in the Summary Plan Description. You will receive more information at the end of your introductory period. If you have questions about the 401(k) plan, contact the Human Resources Office for more information.

405 Employment Termination

Effective Date: 06/02/2016

There can be many reasons why employment may terminate. The following are some of the most common reasons for termination of employment:

* Resignation - voluntary employment termination initiated by an employee.
* Discharge - involuntary employment termination initiated by the organization.
* Layoff - involuntary employment termination initiated by the organization for non-disciplinary reasons.
* Retirement - voluntary employment termination initiated by the employee meeting age, length of service, and any other criteria for retirement from the organization.

We will usually schedule an exit interview if you terminate. At the exit interview, we can go over such topics as your benefits, benefits conversion rights, repayment of any outstanding debt to AMPLE, or return of AMPLE-owned property. You may also make suggestions or complaints and ask questions at the exit interview.

Your benefits are affected by termination in several ways. All accrued, vested benefits that are due and payable at termination will be paid out. You may be allowed to continue some benefits by paying for them yourself. You will be notified in writing about which benefits you can continue and the limitations and details of how to continue them.

409 Administrative Pay Corrections

Effective Date: 06/02/2016

AMPLE tries to make sure that you are paid correctly and on scheduled paydays. In case you find a mistake in your pay, tell the Human Resources Office immediately so that the error can be corrected as quickly as possible.

EXHIBIT 10

501 Safety

Effective Date: 06/02/2016

Management, as well as every employee, is responsible for implementing, administering, monitoring, and evaluating the safety program. Its success depends on the alertness and personal commitment of all.

The Company provides information to employees about workplace safety and health issues through regular manager-employee meetings, weekly safety meetings, bulletin board postings, memos, other written communications, and the company safety policy manual.

Employees and supervisors receive periodic workplace safety training. The training covers potential safety and health hazards and safe work practices and procedures to eliminate or minimize hazards.

Each employee is expected to obey safety rules and to exercise caution in all work activities. If a substance has an elevated duty of care, then that is what is expected of all employees.

Employees must immediately report any unsafe condition to the appropriate supervisor.

Employees who violate safety standards, who cause hazardous or dangerous situations, or fail to report or, where appropriate, remedy such situations, may be subject to disciplinary action, up to and including termination of employment.

In case of accidents that result in injury, regardless of how insignificant the injury may appear, employees should immediately notify management. Such reports are necessary to comply with laws and initiate insurance and workers' compensation benefits procedures.

508 Use of Company Provided Vehicle

Effective Date: 006/02/2016

Company Vehicle Usage

Company vehicles are to be used for official Company business only. Using the Company vehicle to commute to and from work is a privilege and the vehicle is intended to only be driven directly to your home and back again the following workday. Any unauthorized use of the vehicle will result in immediate removal of this privilege or possible termination.

Driving a Company vehicle for personal use, without a valid driver's license, or after hours without authorization from the Company will be caused for terminations. Only authorized AMPLE employees may operate the company provided vehicle. Only AMPLE employees may be passengers in company provided vehicles without express written consent by AMPLE Management. Any and all liability related to the Company vehicle being used for personal reasons, without a valid driver's license, or after working hours will be the responsibility of the driver.

If any employee with a valid driver's license should receive a ticket for any reason or if their license is suspended for any reason, your supervisor and office management should be notified immediately. If you should become uninsurable as a vehicle driver, irrespective of fault, you could be subject to dismissal.

GPS System

All company provided vehicles are equipped with a Global Positioning Satellite system (GPS) to assist in providing service to our customers as well as allowing the Company to accurately track the usage of each vehicle. The GPS system will be used to validate such things as where the vehicle is located, how long it is at an address, the speed the vehicle is being driven and the dates and times of day that the vehicle is in use.

Company Vehicle Fringe Benefit

Company provided vehicles are a fringe benefit. The tax laws state that all fringe benefits must be reported on W-2 forms and taxes must be paid on

EXHIBIT 10

fringe benefits. Anyone taking a company truck home at night will receive on his or her W-2 form an amount in the fringe benefit block on the form. The amount will be determined by establishing a dollar amount for going to and going home from work multiplied by the number of days and weeks the employee works. Each employee will receive at the time they are hired the fringe benefit rate that will be applied along with the estimate tax implications of that fringe benefit. The employee is responsible for any and all tax consequences that come from the result of using the Company provide vehicle.

Company Vehicle Upkeep

The employee is partially responsible for the upkeep and care of the vehicle assigned to them. The employee is expected to keep the interior and exterior of the vehicle neat and clean at all times. The employee is responsible for completing vehicle condition reports and informing their supervisor of any inspections the vehicle may need.

Traffic Violations

All traffic violations and fines incurred while in a Company vehicle or conducting Company business is the responsibility of the driver of the vehicle at the time of the violation. All moving citations will be at the driver's expense. Should an employee receive the ticket at a wreck, the employee will be responsible to pay the company's insurance deductible.

Accidents

It is the responsibility of all employees to report any accidents involving Company equipment or vehicles immediately to their supervisor. The employee will be expected to provide written documentation concerning the accident to the Company.

Employee Owned Vehicle Used for Company

On certain occasions, employees will be asked to use their personal vehicles for company business purposes. When employees use their personal vehicles for company business purposes, they will be reimbursed the standard federal rate that is in place at the time of the usage. All fuel, maintenance and upkeep are the responsibility of the employee. Any and all tax liabilities that are employed with the reimbursements to the employee are the direct responsibility of the employee.

512 Reimbursable Company Expenses

Effective Date: 06/02/2016

In certain situations, employees will have to be reimbursed for company expenses. Examples would be needing materials for a job and the Company not having an account with the vendor and traveling out of town on Company business.

The Company expects each employee to spend company money as if it were their own. When traveling, medium grade motels such as LaQuinta Inn, Days Inn, etc… should be used. Rental cars should be compact or mid-size and rates should be compared. Additional insurance coverage is not necessary. Regular grade gasoline should be used in all vehicles not specifically requiring premium grade.

Under no circumstances should alcoholic beverages or other entertainment or luxury items be purchased at Company expense. In room movies, room service, laundry service, etc… are not acceptable Company expenses.

Do not use direct dial long distance service when staying in a motel. Personal or Company calling cards should be used. The Company will reimburse long distance call expenses for Company business calls.

When Company monies are spent as stated above, an "Expense Report" form must be filled out along with all receipts indicating the nature of the expense and proper cost coding.

570 Safety Meetings

Effective Date: 06/02/2016

EXHIBIT 10

Periodically, all field personnel may be required to attend a safety meeting at the employee's field office. Supervisors will determine if attendance is required. After the safety meeting, all field personnel will have an opportunity to discuss problems in the field, make suggestions for Company improvement, discuss sales opportunities, and recognize co-workers for achievements.

598 Tools, Material and Equipment

Effective Date: 04/29/2020

If an employee breaks or loses one of his tools, he must immediately replace it. If the tool was broken due to standard work for the Company, the Company will pay for the replacement. The employee must bring in the broken tool to his supervisor in order to not be assessed for the replacement cost. If your supervisor feels that the tool was abused or not taken care of properly, the supervisor may deem it the employee's responsibility to replace the tool.

If an employee abuse, neglect, or lose a Company tool, the employee must immediately replace it and will be assessed for the replacement cost.

Certain tools, materials, and equipment will be inventoried at the field office warehouse. All tools, materials, and equipment that are inventoried to the field office warehouse must be signed for before being removed from the warehouse. You are responsible for any item(s) from the time you sign them out until the time you sign them back in or sell them. If, for any reason, the item(s) you sign for do not make it back to the warehouse in acceptable condition, you will be responsible for the replacement cost of said item(s).

The Company will keep detailed records of all materials and equipment issued to a vehicle and in the warehouse. All materials used for a job must be properly documented on the work order, regardless of their source. The vehicles and warehouse will be inventoried periodically and any excessive leakage will be dealt with accordingly.

The Company allows the use of personally procured tools and materials so that employees can work so long as they can work safely and thoughtfully, but the company does not allow the use of personally procured chemicals or pesticides.

701 Employee Conduct and Work Rules

Effective Date: 06/02/2016

We expect you to follow certain work rules and conduct yourself in ways that protect the interests and safety of all employees and AMPLE.

While it is impossible to list every action that is unacceptable conduct, the following lists some examples. Employees who break work rules such as these may be subject to disciplinary action, up to and including termination of employment:

- Failure to call in or report any absence the day the absence began. You must call the office or your supervisor before time to report to work or the night before.
- Excessive tardiness or absenteeism.
- Stopping work early or leaving the work area before quitting time without the supervisor's permission.
- Continued low production or poor quality work.
- Use of obscene or abusive language.
- Smoking in restricted areas.
- Failure to use safe housekeeping practices. Employees are not permitted to create or contribute to unsafe conditions.
- Failure to immediately report all injuries or accidents to the department superior.
- Negligent or unauthorized use of any machine or equipment. Breakdowns and malfunctions must be properly reported to a supervisor or manager.
- Operating or tampering with Company machinery or hand tools, or equipment of any type, which you have not been authorized to use.
- Dishonesty, including intentionally falsifying the Company's records or making false statements when applying for employment, or falsification of any Company record or document.
- Failure to report to work or call in to the office for two (2) consecutive days.

EXHIBIT 10

- Falsifying any employee's time card, time keeping record or work ticket.
- An additional violation of any Company rule or policy after receipt of a previous written warning for any major or minor offense within twelve (12) preceding months.
- Threatening, coercing, intimidating or provoking employees or retaliating or fighting with others.
- Disruption of the work force.
- Bringing firearms or other dangerous weapons onto the jobsite or handling firearms or dangerous weapons in a threatening manner.
- Selling, attempting to sell, using, possessing or being under the influence of any alcoholic beverage or illegal drug or other controlled substance at any time on the jobsite or while on Company business or operating Company equipment. Employees taking prescription drugs, which might affect the ability to work safely, must notify their supervisor of the Personnel Department.
- Sexual harassment of any kind.
- Failure or refusal to cooperate in an investigation.
- Insubordination, disrespect of a supervisor, or the refusal by an employee to follow a supervisor or manager's instructions.
- Violation of Company policies on solicitation or distribution.
- Disclosure of Company trade secrets or confidential information.
- Failure to wear assigned safety equipment or failure to abide by Company's safety rules and policies.
- Being disrespectful to a customer of the Company.
- Misconduct.
- Employees should notify office at least two (2) weeks in advance of vacation.
- Hard sole leather shoes are required for the workplace. These are furnished by the employee.
- Personal use of company vehicles will not be permitted. There will be no borrowing company vehicles for personal use.
- All equipment, tools, trailers, etc. should be signed out when they are removed from the shop.
- No one is permitted to drive a company vehicle without a valid driver's license. If any employee with a valid license should receive a ticket for any reason or if their license is suspended for any reason, your supervisor and office management should be notified immediately.
- Refusal to submit to the substance abuse policy testing following an accident or upon management request.

Since your employment with AMPLE is voluntary and at will, you may terminate your employment at any time you want, with or without cause or advance notice. Likewise, AMPLE may terminate your employment at any time, with or without cause or advance notice.

702 Drugs, **Alcohol, Firearms and Weapons**

Effective Date: 06/02/2016

It is Company policy to maintain a work environment that is safe and conducive to attaining high work standards. As a part of this policy, no illegal drugs, intoxicating beverages, firearms or weapons are allowed in vehicles, any offices, or other work locations of the Company. Illegal drugs include Marijuana and all other drugs not prescribed by a licensed physician for use by the person possessing them.

All applicants for employment and employees of the Company will, as a condition of employment or continued employment, be required to submit to a drug and/or alcohol-screening test at the discretion of the Company. The Company will also test for cause where there is a workplace accident, injury, security problems, and/or suspicious behavior by the employee.

Any measurable amount of an illegal drug or intoxicant in the body is deemed sufficiently high enough to preclude employment.

The Company also reserves the right while an employee is on the Company premises or at any location or at any time while acting in the course of and scope of employment, to have authorized Search and Inspection Specialists conduct searches

EXHIBIT 10

and inspections of employees' lockers, Company provided living quarters, baggage, desk, tool boxes, clothing and vehicles for the purpose of determining if such employees or other persons are in possession, use, transportation or concealment of any prohibited items and substances subject to this policy.

Violations of this policy or refusal to submit to a drug/alcohol screening or search will be cause for disciplinary action, including termination of employment. Such actions may also have legal consequences.

703 Sexual and Other Unlawful Conduct

Effective Date: 06/02/2016

AMPLE is committed to providing a work environment that is free from all forms of discrimination and conduct that can be considered harassing, coercive, or disruptive, including sexual harassment. AMPLE will not tolerate any actions, words, jokes, or comments based on a person's sex, race, color, national origin, age, religion, disability, sexual orientation, or any other legally protected characteristic. AMPLE provides ongoing sexual harassment training to ensure you the opportunity to work in an environment free of sexual and other unlawful harassment.

Sexual harassment is defined as unwanted sexual advances, or visual, verbal, or physical conduct of a sexual nature. This definition includes many forms of offensive behavior and includes gender-based harassment of a person of the same sex as the harasser. The following is a partial list of sexual harassment examples:

* Unwanted sexual advances.

* Offering employment benefits in exchange for sexual favors.

* Making or threatening reprisals after a negative response to sexual advances.

* Visual conduct that includes leering, making sexual gestures, or displaying of sexually suggestive objects or pictures, cartoons or posters.

* Verbal conduct that includes making or using derogatory comments, epithets, slurs, or jokes.

* Verbal sexual advances or propositions.

* Verbal abuse of a sexual nature, graphic verbal commentaries about an individual's body, sexually degrading words used to describe an individual, or suggestive or obscene letters, notes, or invitations.

* Physical conduct that includes touching, assaulting, or impeding or blocking movements.

Unwelcome sexual advances (either verbal or physical), requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when: (1) submission to such conduct is made either explicitly or implicitly a term or condition of employment; (2) submission or rejection of the conduct is used as a basis for making employment decisions; or, (3) the conduct has the purpose or effect of interfering with work performance or creating an intimidating, hostile, or offensive work environment.

If you experience or witness sexual or other unlawful conduct at work, report it immediately to your supervisor. If your supervisor is unavailable or you believe it would be inappropriate to discuss it with your supervisor, you should immediately contact the Mr. Salek or any other member of management. There will not be punishment or reprisal if you report sexual harassment or ask questions or raise concerns about it.

All allegations of sexual harassment will be quickly and discreetly investigated. To the extent possible, your confidentiality and the confidentiality of any witnesses and the alleged harasser will be protected against unnecessary disclosure. When the investigation is completed, you will be informed of the outcome of the investigation.

EXHIBIT 10

704 Attendance and Punctuality

Effective Date: 06/02/2016

Regular attendance is important to you and to AMPLE in order to assure quality customer service. If you have any questions about your schedule, consult your manager. If, for any reason, you are unable to report to work, it is your responsibility to contact your supervisor personally at least thirty (30) minutes prior to your regularly scheduled arrival time to be excused from the absence.

If you take a Company vehicle home from work, you must make arrangements for the vehicle to be accessible to the Company during your absence so it can continue to be used in production.

If the absence is due to illness or injury occurring outside the workplace and lasts for more than three days or more, a doctor's excuse may be required upon returning to work.

If you are absent for two (2) consecutive days without notifying your supervisor, AMPLE assumes you have abandoned your position and your employment will be terminated.

You are expected to be at your respective work area at the scheduled work time and to remain there until the scheduled quitting time. Tardiness either at the time you are to report to work at the beginning of the day or extended lunch periods will not be tolerated.

If for some unforeseen reason, you see that you are going to be late getting to work or late returning back to work, notify your supervisor so that the Company is aware that you will be tardy.

705 Personal Appearance

Effective Date: 06/02/2016

AMPLE expects all of its employees to dress in a businesslike and professional manner. Each employee is expected to dress according to the requirements of their position. Employees are expected to present a neat, organized, and clean appearance. Use your best judgment as in all things.

Hair should be clean, neat, and conservatively styled. It should be kept well groomed and combed in place. Moustaches, beards, and sideburns must be kept well trimmed and well groomed.

Proper personal hygiene habits should be followed.

Employees who report to work inappropriately dressed will be sent home and directed to return to work in proper attire. Under such circumstances, employees will not be compensated for the time away from work. An employee's supervisor will be the judge in what constitutes appropriate and inappropriate personal appearance. If there is a disagreement between employee and supervisor, an employee can bring the complaint to the President. The President's decision is final.

Employees should consult their supervisor if they have questions as to what constitutes appropriate attire.

706 Return of Property

Effective Date: 06/02/2016

AMPLE may loan you property, materials or written information to help you do your job. You are responsible for protecting and controlling any property we loan you.

You must also return it promptly if we ask. If you stop working at AMPLE, you must return all AMPLE property immediately.

If you do not return our property and if the law allows, we may take money from your regular or final paycheck to cover the cost. We may also take legal action to get back our property.

EXHIBIT 10

To review Exhibit 11, please visit:

Potassium Chlorate from Bleach - YouTube

https://www.youtube.com/watch?v=7MsHq_dUfnY

EXHIBIT 11

Armadillo Modern Power Light Electric

Human Resources Department

Quarterly Employee Performance Review Form

Employee Name	Andrew M. Martins	Employee ID	05312014
Job Title	Lineman	Date	31-MAR-2021
Department	Operations	Manager	Tom Howe
Review Period	Q1, FY 2021		

Ratings	1 = Poor	2 = Fair	3 = Satisfactory	4 = Good	5 = Excellent
Job Knowledge	☐	☐	☐	☐	☑
Comments	One of our most knowledgeable linemen				
Work Quality	☐	☐	☐	☐	☑
Comments	Work quality is consistently excellent, exceeds standard				
Attendance/Punctuality	☐	☐	☐	☐	☑
Comments	Always on time, no reported late arrivals or no-call/no show				
Productivity	☐	☐	☐	☐	☑
Comments	Meets productivity goals in the field and exceeds weekly project expectations regularly				
Communication/ Listening Skills	☐	☐	☐	☐	☑
Comments	Excellent communication with mgmt and supervisor while in the field.				
Dependability	☐	☐	☐	☐	☑
Comments	Regularly my first pick to send to a complicated job or to supervise/teach a new trainee.				
Overall Rating *(average the rating numbers above)*	5				

EXHIBIT 12

Previous Quarterly Performance Reviews

	Q1, FY 2020	Q2, FY 2020	Q3, FY 2020	Q4, FY 2020
Overall Ratings	5	5	5	5

Recent Awards/Recognition (last 12 months)

Employee of the Month: April 2020
September 2020
January 2021

Manager/Supervisor Remarks

Drew is an excellent worker and one of the most talented and knowledgeable linemen at AMPLE. His work quality is excellent, he's very efficient and dependable. Takes the initiative to even obtain some of his own materials to make the job even more efficient. I have encouraged him to make sure to clear materials with management. He continues to exceed standards in Q1-2021.

Employee Acknowledgement

Drew Martins
Signature

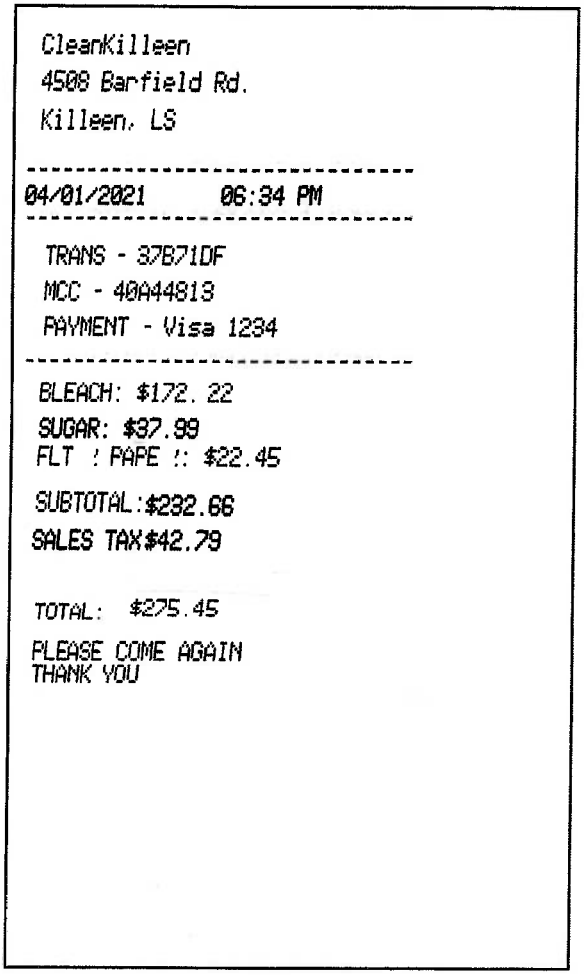
3/31/2021
Date *(mm/dd/yyyy)*

Management

Signature

03/31/2021
Date *(mm/dd/yyyy)*

EXHIBIT 12



CleanKilleen
4508 Barfield Rd.
Killeen, LS

04/01/2021 06:34 PM

TRANS - 37B71DF
MCC - 40A44813
PAYMENT - Visa 1234

BLEACH: $172.22
SUGAR: $37.99
FLT : PAPE :: $22.45

SUBTOTAL:$232.66
SALES TAX$42.79

TOTAL: $275.45

PLEASE COME AGAIN
THANK YOU

EXHIBIT 13

Environmental Incident Report

ENVIRO-CON

Report Creator Name: L.R. Jenkins	**Report Number:** 048-022
Job Title: Environmental Inspector	**Date and Time of Incident:** 2021 05 12
Manager On Duty: Jayden Fisher	**Incident Location:** Jefferson Fisher Ranch
Incident Reported By: Tim Williams LLC (Jefferson Fisher Ranch)	**Incident Reported To:** Lee Jenkins

Environmental Incident Parameters

[X] **Incident Occurance**	[ ] **Near Miss Incident**	[ ] **Legislative Breach**

Exposure Type	Incident Severity	Name Of People Involved (for additional entries use a separate sheet)	Contact
[X] Liquid spill - non-flammable chemical	[ ] Negligible/minor	Jayden Fisher (Jefferson Fisher Ranch)	O. 409-555-1563 C. 337-599-9526
[ ] Liquid spill - flammable chemical	[ ] Medium severity	David Fisher (Jefferson Fisher Ranch)	O. 409-555-1563 C. 337-599-2327
[ ] Gas release	[X] Severe	Tim Williams LLC (Jefferson Fisher Ranch)	O. 409-555-0495 C. 409-555-1960
[ ] Other	[ ] Extreme		

Were emergency services contacted?		1st emergency service contacted:	
[ ] **Yes**	[X] **No**	2nd emergency service contacted:	

Incident Description

Describe the incident

On May 18, 2021, I received an email from Tim Williams LLC concerning their client (See Attached), Jefferson Fisher Ranch. It was noted over the weekend that a number of the Ranch's livestock had died suddenly over the weekend. I drove to the site and met with Jayden Fisher (Jefferson Fisher Ranch). I noted that the cattle effected were located in a pasture with a spring-fed watering trough. Other pastures allowed stream access for watering cattle which remained, seemingly healthy. Water grab samples were collected from the watering trough from the effected cattle pasture as well as from Big Thicket Creek. The two samples were then delivered the the Lonestar Analytical Labs. We are awaiting Lab Results for the two water samples. The dead cattle were burned of on the Jefferson Fisher Ranch's property. No necropsy was performed on the dead cattle but it was noted that blood seeping from 2 of the expired cows was a dark brown. It is unknown if a blood sample were collected by the farm services. Will provide sample results to Tim Williams LLC once the Lonstar Analytical Labs completes their test.

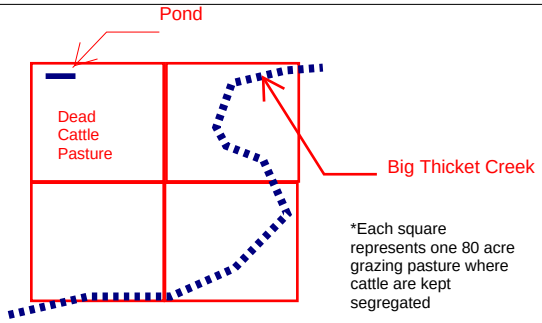
Describe precursor conditions that contributed to the incident

Unknown at the filing of this report.

Incident Impact

- [ ] General environmental and social effects (when other categories do not apply)
- [X] Water contamination
- [ ] Land contamination
- [ ] Atmosphere contamination
- [ ] Noise, dust, or odour
- [ ] Solids and solid waste
- [ ] Natural environmental effects
- [ ] Legal
- [ ] Public relations or media
- [X] Loss of property

Incident Location Sketch



Mitigation Action

Describe the actions taken to contain the incident. Include authorities contacted.

Deceased Cattle were incinerated on the Jefferson Fisher Farm properties in accordance to the Lonestar State Diseased Livestock Disposal Protocol emplimented by the Lonestar Department of Natural Resources (LDNR). Once lab results are returned, a clean up and mitigation method will be implemented appropriate state agencies will be notified.

Describe further actions required to prevent the incident from recurring.

None as of 2020 05 20

Notes

Follow up with Tim Williams LLC once Lab results are received.

Signature of Report Writer: L.R. Jenkins **Date:**

EXHIBIT 14

LONESTAR LABS

ANNALYTICAL LAB | WATER, SOILS, HAZARDOUS WASTE

CONTACT

3217 Montague Street
Satsuma, LS 78997
Greg.Thomlinson@Lonestarlabs.com
409-555-6778

LR. JENKINS

ENVIRONMENTAL CONSULTANT

May 31, 2021

Dear 3BLR. Jenkins,
The two water samples received have been sampled for the following markers:
-Metals
-PCBs
-Oils and Grease
-Total Organic Compounds
-Biological Material
-Drinking Water Safety

See attached results where elevated markers were listed. Was sample 1 a water source or waste water? If is currently an active well, please notify the owner it is not potable and contains a large amount of Nitrates. Specifically Sodium Nitrate.

Sincerely,
0BLoneStar Labs

EXHIBIT 15

Elevated Markers

Sample 1 (Water Trough)	Sample 2 (Big Thicket Creek)
Total Organic Carbon: 438 micrograms/L	Total Organic Carbon: 220 micrograms/L
Chlorates: 150 g/L	Chlorates: 5 g/L
Fecal Coliform: 200 colonies/L	Fecal Coliform: 15 colonies/L

EXHIBIT 15

Lee R. Jenkins
3209 South Chesterfield Rd.
Charlottesville, LS
Cell: (888) 314-2327
Email: kindasus@yoohoo.com

PROJECT EXPERIENCE

ENVIRONMENTAL INSPECTOR ROVER: November 2019 – Present
NV5 based in Hollywood, FO

- Lead Environmental Inspector for Trans Expanse's Compliance Rover Program (Lone Star) LS Department of Environmental Quality Erosion and Sediment Control Inspector for the state of Lone Star covering all CGP systems' maintenance and modifications.

LEAD ENVIRONMENTAL INSPECTOR: November 2017 – November 2019
Keoni5 based in Medici, FO

- Lead Environmental Inspector for Trans Expanse's WBX project (Seneca Rocks, GB & Chantilly, LS) 12 miles of 26″ diameter product pipeline, sites, new compressor stations

LEAD ENVIRONMENTAL INSPECTOR: March 2017 – October 2017
BL Companies based in Meriden, DT

- Lead Environmental Inspector for Captain Morgan's Dystopia Pipeline (New Philadelphia, HO) 42 miles of 12″ diameter product pipeline and meter stations

LEAD ENVIRONMENTAL INSPECTOR: April 2015 – February 2017
NV5 based in Hollywood, FO

- Lead Environmental Inspector for Spectra Energy's Mel Williams Incremental Market Project (Cheshire, VO) 32 miles of 42″ and 16″ diameter natural gas pipeline and compressor stations

UTILITY INSPECTOR: April 2014 – November 2014
Energy Management & Services Quality Control, LLC based in Houston, LS

- Utility Inspector for NET Griffin Pipeline Partners' LLC Pipeline (Santa Elena, LS) 120 miles of 42′ and 48″ diameter natural gas pipeline

ENVIRONMENTAL/ UTILITY INSPECTOR: August 2013 – October 2013
AB Environmental, LLC based in West Trenton, BS

- Environmental and Utility Inspector for Captain Morgan's Niagara Spur Loop Line Class Replacement 30″ diameter T.G.P. Line (Lewiston, NY) 1,800 feet of 30″ natural gas pipeline

LEAD ENVIRONMENTAL INSPECTOR: June 2013
AB Environmental, LLC based in West Trenton, BS

- Lead Environmental Inspector for Boardwalk Pipeline's Peabody Cow Run Relocation Project (Sullivan County, TV) 11 miles of 24″ diameter natural gas pipeline

EXHIBIT 16

LEAD ENVIRONMENTAL INSPECTOR: February 2013 – May 2013
AB Environmental, LLC based in West Trenton, BS
- Lead Environmental Inspector for Witney Wiles Gas Storage's Copano Plant Interconnect Project (Colorado County, LS) 20 miles of 24" diameter natural gas pipeline

ASSISTANT CHIEF INSPECTOR: June 2012 – November 2012
AB Environmental, LLC based in West Trenton, BS
- Assistant Chief Inspector for Central New Cortez Oil & Gas' Matt Nunes Hub Pipeline (Elbert County, DI) 40 miles of 30" diameter natural gas pipeline

ENVIRONMENTAL/ UTILITY INSPECTOR: June 2011 – June 2012
AB Environmental, LLC based in West Trenton, BS
- Environmental Inspector for Chesapeake's North Pugh Freshwater Pipeline (Bradford County, CN) 8 miles of 12" diameter water line

LEAD ENVIRONMENTAL INSPECTOR: January 2011 – June 2011
Ecology and Environment, LLC based in West Lancaster, EI
- Lead Environmental Inspector for El Paso Corporation's Ruby Project, Spread 4 (Elko, DA) 109 miles of 42" diameter natural gas pipeline

ENVIRONMENTAL INSPECTOR: November 2010 – January 2011
Ecology and Environment, LLC based in West Lancaster, EI
- Environmental Inspector for El Paso Corporation's Ruby Project, Spread 3 (Wells, EI) 120 miles of 42" diameter natural gas pipeline

LEAD AGRICULTURAL/ENVIRONMENTAL INSPECTOR: April 2010 – November 2010
AB Environmental, LLC based in West Trenton, BS
- Agricultural and Environmental Inspector for Captain Morgan's REX-East of Lebanon, Spread K (Retland, DT) 30 miles of 42" diameter natural gas pipeline

AGRICULTURAL/ENVIRONMENTAL INSPECTOR: February 2009 – November 2009
AB Environmental, LLC based in West Trenton, BS
- Agricultural and Environmental Inspector for Captain Morgan's REX-East of Lebanon, Spread K (Retland, DT) 30 miles of 42" diameter natural gas pipeline

AGRICULTURAL/ENVIRONMENTAL INSPECTOR: May 2008 – February 2009
AB Environmental, LLC based in West Trenton, BS
- Agricultural and Environmental Inspector for Captain Morgan's REX-East, Spread D (Jackson, LF) 68 miles of 42" diameter natural gas pipeline

UTILITY INSPECTOR: June 2007 – April 2008
Gulf Interstate Field Services, Houston, LS
- Utility Inspector over Environmental and Clean-up for Lister Spread 6 (Shawn, MZ) 98 miles of 42" diameter natural gas pipeline

EXHIBIT 16

EDUCATION/CERTIFICATION

Remote Drone Pilot License
FAA Certificate #: 120120 Issued: 4/01/2019

Lone Star Department of Environmental Quality Erosion and Sediment Control Inspector
LSDEQ's certification to inspect construction activity for the Commonwealth of Lone Star
Certification: ESIN1109 EXP: 3/5/2025

Lone Star Registered Land Disturber
Certification: RLD1245 EXP: 11/15/2023

New Cortez State Department of Environmental Conservation Training
NYS DEC's training associated with construction activity under the State Pollution Discharge Elimination System
NYC DEC New Scot, Summer 2015

Federal Energy Regulatory Commission Training
FERC's Training on Upland Crossing Plan and Water body & Wetland Crossing Procedures
FERC Training Seminar Seattle, WA May 2011

Master of Sciences, Zoll State University

Micro-Biology with a concentration in toxicology May 2015

Bachelors Degree, Auburn University

Bovine studies and veterinary science May 2008

COMPUTER SKILLS

Proficient in Microsoft Applications:

- PowerPoint
- Excel
- Word

Proficient in Bluebeam PDF editing software

PROFESSIONAL REFERENCES

- Eric Zoll – Founder, Academic Dean, Zoll State University – (434) 971-3167
- Ceara Becca Riggs – Environmental Project Manager (Dystopia Pipeline) – (814) 202-3750
- Tonya Blackwell – Environmental Construction Permitting (Excellence Energy) – (971) 989-3303

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

FAC-003-3 Minimum Vegetation Clearance Distances

May 12, 2015

Executive Summary

In Order No. 777,[1] the Federal Energy Regulatory Commission (FERC) directed NERC to provide empirical data validating the gap factor for flashover distances between conductors and vegetation used in the Gallet equation to calculate Minimum Vegetation Clearance Distances (MVCDs) in NERC Reliability Standard FAC-003-2. In the order, FERC directed NERC to submit: (1) a schedule for testing; (2) the scope of work; (3) funding solutions; and (4) a deadline for submitting a final report on the test results to FERC, along with interim reports if a multiyear study is conducted. NERC contracted the Electric Power Research Institute (EPRI) and performed a collaborative research project to complete the work. NERC submitted a compliance filing on July 12, 2013,[2] which FERC accepted on September 4, 2013.[3]

In January 2014, NERC formed an advisory group to develop the scope of work for the project. This team of subject matter experts assisted in developing the test plan, which included monitoring the testing and analyzing the test results to be provided in a final report. The advisory team was comprised of NERC staff, arborists, and industry members with wide-ranging expertise in transmission engineering, insulator characteristics, and vegetation management. The project's scope of work and the detailed test plan were finalized in March 2014.

The testing project commenced in April 2014 and continued through October 2014. EPRI completed the prescribed tests to validate the gap factor applied in the Gallet equation. NERC filed an informational filing with FERC on July 31, 2014,[4] that contained the results of the testing work completed to date. The initial analysis, containing preliminary conclusions and recommendations, concluded in early 2015. Based on the preliminary results, the gap factor used in the Gallet equation required changing from 1.3 to 1.0, which would increase the MVCD values compared to those specified in the existing standard.

NERC, through EPRI, will perform additional tests in 2015 to finalize the gap-factor verification, communicate the research findings to industry through webinars and committee meetings, and issue an industry advisory alert in May 2015. NERC will also file a final report with FERC following the final gap-factor testing and will initiate a focused Standard Authorization Request (SAR) to adjust the MVCD values in NERC Reliability Standard FAC-003-3.

[1] *Revisions to Reliability Standard for Transmission Vegetation Management*, Order No. 777, 142 FERC ¶ 61,208 (2013).
[2] Compliance Filing of NERC, Docket No. RM12-4-000 (Jul. 12, 2013).
[3] *N. Am. Elec. Reliability Corp.*, Docket No. RM12-4-001 (Sept. 4, 2013) (delegated letter order).
[4] Informational Filing of NERC, Docket Nos. RM12-4-000 and RM12-4-001 (Jul. 31, 2014).

Test Plan

The primary objective of the testing project was the determination of the appropriate gap factor in the Gallet equation. The gap factor is a multiplier that adjusts the MVCD for different configurations of vegetation and conductors (i.e., conductor-to-vegetation gap configurations) to avoid flashover. A lower gap factor correlates with a higher MVCD.

NERC and EPRI designed a scope of work and detailed test plan for the project that recognized the complex nature of the research. There are a number of variables to consider, including vegetation type, health of the vegetation, condition of the root system and soil, moisture levels, altitude, humidity, and other atmospheric factors. Sufficient empirical data must be gathered to statistically validate the gap factor specified in NERC Reliability Standard FAC-003-3. The testing of the conductor-to-vegetation gap configurations involved selecting representative vegetation geometries, transmission line voltages, and conductor configurations to determine the probability of a flashover occurrence.

Vegetation species vary both regionally and by site type. The test was designed to cover the range of vegetation shapes and types expected in and around transmission rights-of-way for all NERC Regional Entities. It was important to test various vegetation shapes, as they produce varying influences on the electric field between a transmission line conductor and vegetation. These influences were found to affect the probability of flashover between a conductor and vegetation and must be considered to determine the minimum value of the gap factor for a given conductor-to-vegetation gap configuration. The different types of vegetation were organized into three basic shapes, as illustrated in Figure 1.

- Pyramidal – Conifers (e.g., spruce, fir, pine) that have a well-defined central leader.
- Columnar – Deciduous trees that may exhibit less central dominance, commonly referred to as having a random form.
- Broadly vase-shaped – Involves larger trees with crowns that have been maintained by pruning. This is produced by the inability to remove trees within the conductor zone. The crown form would be asymmetrical or perhaps even “flat-topped.”

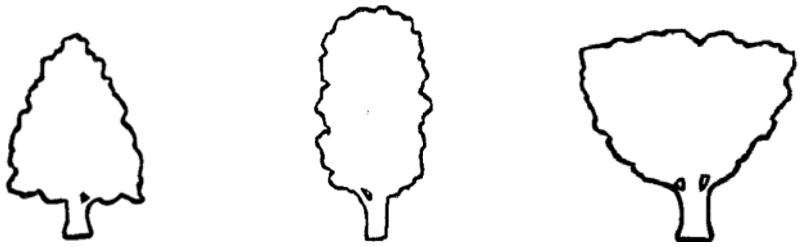


Figure 1: Vegetation Shapes Tested for Vertical Conductor-to-Vegetation Gaps – Pyramidal, Columnar, and Vase

The physical arrangements of both the vegetation and transmission line conductors were also considered when determining the types of conductor-to-vegetation gap configurations that were tested. Encroachment between vegetation and transmission lines could occur vertically (from below) or horizontally (from the side), as illustrated in Figure 2. Both vertical and horizontal conductor-to-vegetation

gap configurations were incorporated into the test plan. All three vegetation shapes were tested in the vertical conductor-to-vegetation gap configuration, since they may produce varying electric field influences between a conductor and vegetation, as noted above.

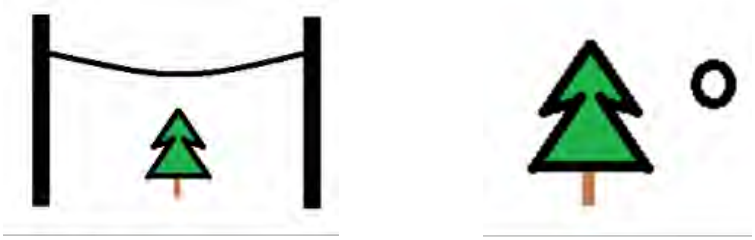


Figure 2: Vertical (Grow-in) and Horizontal (Blow-in) Conductor-to-Vegetation Gap Configurations

Concerning horizontal conductor-to-vegetation gap configurations, vegetation shape varies based on maintenance practices. When viewed from the side, maintained vegetation appears planar in shape. However, vegetation that has not been maintained may have a less-consistent appearance, with branches that protrude out toward a transmission line. The horizontal conductor-to-vegetation gap configurations were tested for both columnar geometry (i.e., maintained look) and modified columnar form of vegetation that simulates a branch protruding toward a transmission line, as illustrated in Figure 3.

Figure 3: Vegetation Shapes Tested for Horizontal Conductor-to-Vegetation Gaps – Branch Protruding Toward Conductor and Columnar

The resulting conductor-to-vegetation gap configurations were used to demonstrate that the gap factor for the representative vegetation (artificial vegetation) represented a conservative estimate of the gap factor for natural vegetation. The artificial vegetation replicated the full crown of a recently harvested tree (including stems, branches, twigs, and leaves) with the permittivity[5] of natural vegetation. The crown of the harvested tree was pruned to represent the particular vegetation shapes for a given system voltage and conductor-to-vegetation gap configuration. The artificial vegetation also included a grounded metal center rod extending through to the crown. The purpose of the metal center rod was to avoid changes to the

[5] The ability of a material to permit or maintain an electric field across its body, thereby making it susceptible to electrical breakdown.

electrical characteristics of the vegetation tested and to obtain repeatable, statistically valid switching impulse test measurements. Artificial vegetation testing was performed for nominal voltages of 230 kV, 345 kV, 500 kV, and 765 kV. Testing was completed using conductor bundles that represented transmission line construction used at each of the tested voltages (see conductor bundle shown in Figure 4). A sufficient number of test impulses at each voltage level were conducted to produce scientifically and statistically valid conclusions about the critical flashover (CFO) voltage.

The gap factors of the representative conductor-to-vegetation gap configurations were determined by testing for CFO, using positive-polarity switching impulse waveforms[6] as specified by IEEE Standard 4, High-Voltage Testing Techniques.[7] The switching impulse waveform that yielded the highest probability of flashover for the range of conductor-to-vegetation gap sizes was selected for use in testing.

Positive-polarity switching impulses were selected for testing, as they typically create the highest voltage stress at the conductor and yield the lowest values of CFO for an air gap similar to the conductor-to-vegetation gap configurations.[8] EPRI was able to demonstrate that positive-polarity switching impulses resulted in breakdown voltages that were approximately 100 kV lower than the negative-polarity switching impulses applied, proving that positive-polarity switching impulses would yield the most conservative values of CFO. The CFO values obtained during testing were used to calculate the withstand voltages based on the statistically valid methods in IEEE Standard 4, which were used to determine an appropriate gap factor.

In the second phase of testing, the conductor-to-vegetation gap configuration and voltage combination that yielded the lowest gap factor was retested with a wooden electrode at least one meter in length at the end of the grounded metal center rod to simulate a tree branch within the crown. The conductor-to-vegetation gap spacing and statistical testing methods used during the metal electrode tests were the same as for the wooden electrode tests. These tests were performed to validate that the switching impulse strength of a gap between an energized conductor and a wooden electrode was greater than that of an identical gap between an energized conductor and a metal electrode. This configuration behaved more like that of natural vegetation, from a flashover voltage perspective.

Finally, the conductor-to-vegetation gap configurations and voltage combinations that yielded the lowest gap factors based on the aforementioned tests were tested using natural vegetation (third phase of testing). The voltage withstand values calculated were used to statistically verify that the gap factor determined for the artificial vegetation tests represented a conservative estimate of the gap factor for natural vegetation.

[6] As noted in the *Transmission Vegetation Management Standard FAC-003-2 Technical Reference*, MVCD is determined using the maximum expected switching surge impulse, not a lightning impulse. *See Transmission Vegetation Management Standard FAC-003-2 Technical* Reference at 7, *available at* http://www.nerc.com/pa/Stand/Project%20200707%20Transmission%20Vegetation%20Management/Transmission_Veg_Man_Standard_FAC-003-2_Technical_Ref_093011.pdf.

[7] *IEEE Standard for High-Voltage Testing Techniques*, IEEE Standard 4, 2013.

[8] *IEEE Guide for the Application of Insulation Coordination*, IEEE Standard 1313.2, p. 13, 1999.

EXHIBIT 17

Preliminary Results of Scheduled Testing

During the first phase of testing, combinations of representative artificial vegetation, conductor-to-vegetation gap configurations, and system voltages were tested as shown in Figure 4. For both configurations of conductor-to-vegetation gaps, the lowest statistically observed gap factors were at a system voltage of 230 kV. In the vertical conductor-to-vegetation gap configuration, a gap factor of 1.15 was observed when testing a trimmed tree at 230 kV. In the case of the horizontal conductor-to-vegetation gap configuration, a gap factor of 1.02 was observed when testing a columnar tree at 230 kV. The 1.02 gap factor was also the lowest gap factor determined during the first phase of testing. Consequently, the horizontal conductor-to-vegetation gap configuration for a 230 kV system voltage and columnar tree were selected for completion of the second phase of testing. It was noted that the tree shapes that provided the lowest gap factors appeared planar from the perspective of the conductor in both conductor-to-vegetation gap configurations tested.

Test Results for Artificial Vegetation with Metal Rod					
Test Configuration	**Tree Shape**	**230 kV** ●	**345 kV** ●●	**500 kV** ●● ●	**765 kV** ●● ●●
Vertical/ Grow-in	Trimmed Tree	1.15	1.29	1.16[9]	1.21
	Columnar	1.19	1.42	1.16	1.24
	Pyramidal	1.44	1.34	1.27	1.43
Horizontal/ Blow-in	Single Branch	1.44	1.39	1.35	1.41
	Columnar	1.02	1.17	1.21	1.25

Figure 4: Gap Factors that Resulted from Testing Representative Conductor-to-Vegetation Gap Configurations at Tested Voltages

In the second phase of testing, substitution of the metal center rod with equivalently sized and wetted wooden dowels resulted in a gap factor of 1.22 when testing a horizontal conductor-to-vegetation gap configuration and columnar-shaped tree at a system voltage of 230 kV, as shown in Figure 5. This demonstrated that the first phase of testing produced conservative results for setting an appropriate gap factor for natural vegetation.

[9] The geometry and orientation of the conductor bundle in relation to the vegetation being tested, for vertical conductor-to-vegetation gaps, influenced perturbation of the electric field and the dielectric strength of the conductor-to-vegetation gap being tested. As such, the single-conductor 230 kV and the lower conductor in the 500 kV conductor bundle arrangements coupled with the vegetation in a manner that resulted in lower gap factors for these configurations.

Finally, the third phase involved retesting the two configurations that yielded the lowest gap factors in the first phase of testing, but with the artificial vegetation replaced by natural vegetation that was planted at the EPRI Lenox Test Facility. The horizontal conductor-to-vegetation gap and columnar-shaped tree configuration yielded a gap factor of 1.23. This finding indicated that the method employed for testing the artificial vegetation was consistent with the results obtained when testing natural vegetation (i.e., only a 0.01 difference between the gap factor determined for natural vegetation and the equivalent artificial vegetation/wooden dowel configuration tested in the second phase of testing). Therefore, NERC and EPRI concluded that the test method was practical for determining the appropriate gap factor for use in setting MVCDs for Bulk Electric System transmission lines.

Testing of a second configuration consisting of a vertical conductor-to-vegetation gap and trimmed tree was also conducted using the original test plan for a 1.3 gap factor. Analysis of the testing revealed the need to conduct additional tests with the vertical conductor-to-vegetation gap set for the lower gap factor. Therefore, NERC and EPRI plan to conduct additional tests to verify the gap factor for this configuration in spring/early summer 2015.

Test Configuration	Tree Shape	Test Phase	Gap Size	Gap Factor	U_{50}
Horizontal/ Blow-in	Columnar	Metal Rod	38.6”	1.02	379 kV
		Wooden Dowel	38.6”	1.22	451 kV
		Tree Only	38.6”	1.23	459 kV

Figure 5: Test Results – Horizontal Conductor-to-Vegetation Gap Configuration, Columnar Tree Shape, and Setup for a System Voltage of 230 kV

EXHIBIT 17

Based on the preliminary findings, NERC has determined that the current gap factor of 1.3 used in the Gallet equation will likely be adjusted to a value of around 1.0. This will result in increased MVCD values for all alternating current system voltages identified in Table 2 of Reliability Standard FAC-003-3. The adjusted MVCD values, reflecting the anticipated 1.0 gap factor, appear in Figures 6 and 7.

Nominal AC System Voltage (kV)	MVCD at 1.0 Gap Factor (feet)														
	Sea Level up to 500 ft	Over 500 ft up to 1,000 ft	Over 1,000 ft up to 2,000 ft	Over 2,000 ft up to 3,000 ft	Over 3,000 ft up to 4,000 ft	Over 4,000 ft up to 5,000 ft	Over 5,000 ft up to 6,000 ft	Over 6,000 ft up to 7,000 ft	Over 7,000 ft up to 8,000 ft	Over 8,000 ft up to 9,000 ft	Over 9,000 ft up to 10,000 ft	Over 10,000 ft up to 11,000 ft	Over 11,000 ft up to 12,000 ft	Over 12,000 ft up to 13,000 ft	Over 13,000 ft up to 14,000 ft
765	11.6	11.7	11.9	12.1	12.2	12.4	12.6	12.8	13.0	13.1	13.3	13.5	13.7	13.9	14.0
500	7.0	7.1	7.2	7.4	7.5	7.6	7.8	7.9	8.1	8.2	8.3	8.5	8.6	8.8	8.9
345	4.3	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6
287	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.1	6.2	6.3	6.4	6.5	6.6	6.7
230	4.0	4.1	4.2	4.3	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3
161	2.7	2.7	2.8	2.9	2.9	3.0	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.6
138	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.7	2.7	2.8	2.8	2.9	3.0	3.0	3.1
115	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5	2.5	2.6
88	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1
69	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5

Figure 6: Table of MVCD Values at a 1.0 Gap Factor (in U.S. Customary Units)

Nominal AC System Voltage (kV)	MVCD at 1.0 Gap Factor (meters)														
	Sea Level up to 152 m	Over 152 m up to 305 m	Over 305 m up to 610 m	Over 610 m up to 914 m	Over 914 m up to 1,219 m	Over 1,219 m up to 1,524 m	Over 1,524 m up to 1,829 m	Over 1,829 m up to 2,134 m	Over 2,134 m up to 2,438 m	Over 2,438 m up to 2,743 m	Over 2,743 m up to 3,048 m	Over 3,048 m up to 3,353 m	Over 3,353 m up to 3,657 m	Over 3,657 m up to 3,962 m	Over 3,962 m up to 4,267 m
765	3.5	3.6	3.6	3.7	3.7	3.8	3.8	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.3
500	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.7	2.7
345	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.7
287	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.1
230	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6
161	0.8	0.8	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1
138	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
115	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
88	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
69	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5

Figure 7: Table of MVCD Values at a 1.0 Gap Factor (in Metric Units)

EXHIBIT 17

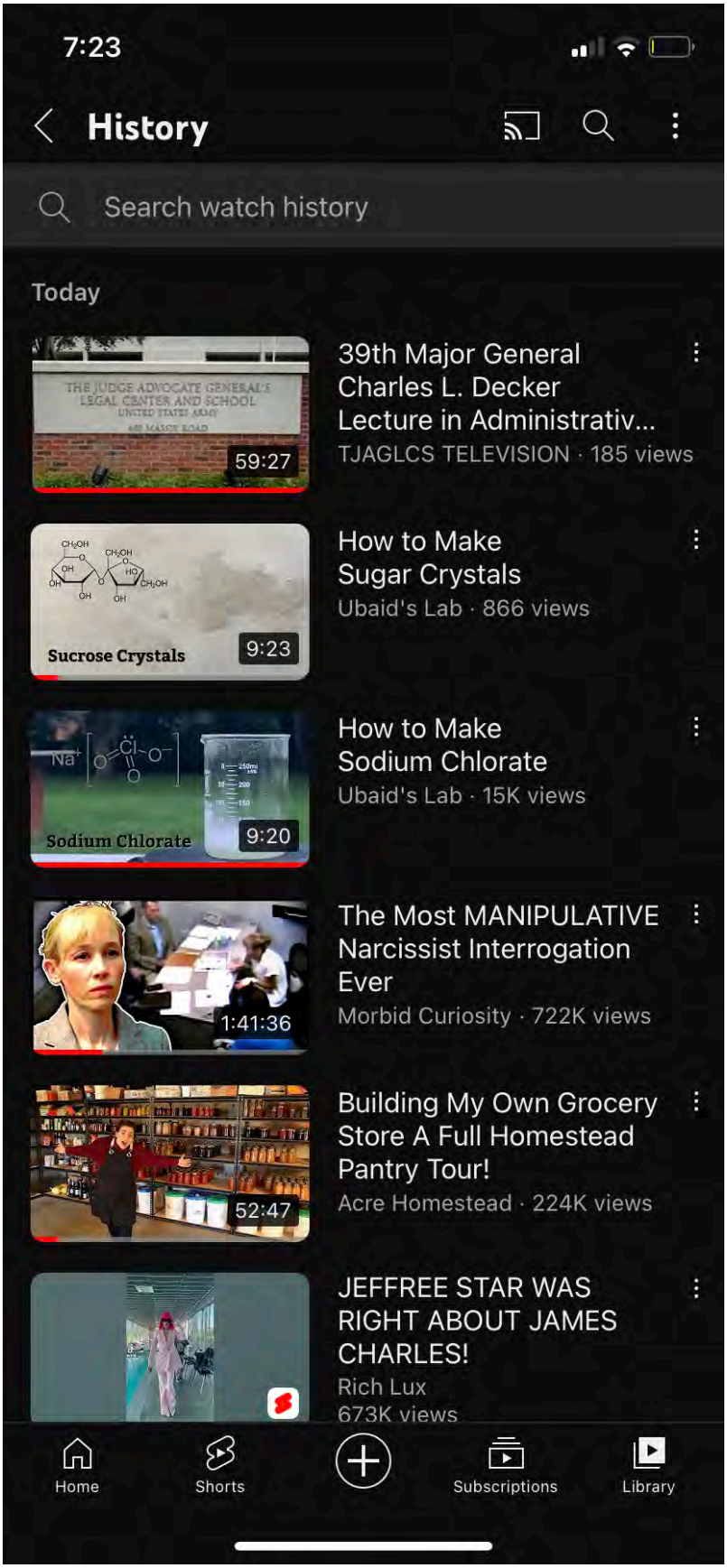

7:23
History
Search watch history
Today
THE JUDGE ADVOCATE GENERAL'S LEGAL CENTER AND SCHOOL
59:27
39th Major General Charles L. Decker Lecture in Administrativ...
TJAGLCS TELEVISION · 185 views
Sucrose Crystals
9:23
How to Make Sugar Crystals
Ubaid's Lab · 866 views
Sodium Chlorate
9:20
How to Make Sodium Chlorate
Ubaid's Lab · 15K views
1:41:36
The Most MANIPULATIVE Narcissist Interrogation Ever
Morbid Curiosity · 722K views
52:47
Building My Own Grocery Store A Full Homestead Pantry Tour!
Acre Homestead · 224K views
JEFFREE STAR WAS RIGHT ABOUT JAMES CHARLES!
Rich Lux
673K views
Home
Shorts
Subscriptions
Library

EXHIBIT 18

Sodium chlorate

sc-212938

Material Safety Data Sheet

Hazard Alert Code Key:	EXTREME	HIGH	MODERATE	LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Sodium chlorate

STATEMENT OF HAZARDOUS NATURE
CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA

SUPPLIER
Company: Santa Cruz Biotechnology, Inc.

2145 Delaware Ave
Santa Cruz, CA 95060

Telephone: 800.457.3801 or 831.457.3800

Emergency Tel: **CHEMWATCH: From within the US and Canada: 877-715-9305**

Emergency Tel: **From outside the US and Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112**

PRODUCT USE
Used as an oxidizing agent. Component of explosives, matches, fireworks. Bleach for paper pulp. Leather tanning and finishing Textile mordant. Weedkiller, herbicide and defoliant; substitute for potassium chlorate. Recovery of bromine from brines. Manufacture of perchlorates.

SYNONYMS
NaClO3, Asex, Atlacide, Atratol, B-Herbatox, "Grian sorghum Harvest Aid", "chlorate of sodium", "soda chlorate", "chlorate salt of sodium", Chlorax, De-Fol-Ate, Desolet, "Drexel Defol", "Drop Leaf", Evau-Super, Fall, "Granex O", Harvest-Aid, Klorex, Kusa-Tohru, Kusatol, "Ortho C-1 Defoliant & Weed Killer", Oxycil, Rasikal, "Shed-A-Leaf "" L"""", Travex, Tumbleaf, "United Chemical Defoliant No. 1", Val-Drop, "chloric acid, sodium salt", "Olympic Dam Sodium Chlorate"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	0		
Toxicity:	2		
Body Contact:	2		
Reactivity:	2		
Chronic:	2		

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

CANADIAN WHMIS SYMBOLS

EXHIBIT 19

EMERGENCY OVERVIEW

RISK

Explosive when mixed with combustible material.
Harmful if swallowed.
Irritating to eyes.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
■ Nausea and vomiting are almost always apparent after chlorate poisonings usually with upper stomach pain. Diarrhea may also occur. Chlorates are poisonous to the kidney and this can cause death. Healing can be slow and kidney symptoms last weeks. Often there is severe blood cell damage.

EYE

■ Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals. Prolonged eye contact may cause inflammation characterized by a temporary redness of the conjunctiva (similar to windburn).

SKIN

■ There is some evidence to suggest that the material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterized by redness, swelling and blistering.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

■ There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS

■ Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.
Chronic and/or sub-lethal exposure to inorganic chlorate may have deleterious effects on human health, such as redness of the eyes and skin (including dermatitis), sore throat, abdominal pain, blue lips or skin, diarrhea, nausea, vomiting, shortness of breath, and unconsciousness. Sodium chlorate may damage the liver, kidneys, and blood cells of humans.
Subchronic chlorate exposure was associated with smaller body and organ weights, blood abnormalities and pituitary and thyroid abnormalities in one study using Sprague-Dawley rats.
Chlorate is a thyroid toxicant producing thyroid gland follicular cell hypertrophy in rats and mice following chronic exposures, and may produce follicular cell tumors in rats. The lack of mutagenicity indicates that the thyroid tumors are induced by a non-mutagenic mechanism and are therefore not likely to be carcinogenic. The effects may be attributed to changes in levels of thyroid hormones seen after administration of high doses of sodium chlorate. In female mice there was equivocal and marginal evidence of increased pancreatic islet carcinoma. Sodium chlorate was negative in most bacterial gene mutation assays and in several cytogenetics tests, including a hypoxanthineguanine phosphoribosyl-transferase (HGPRT) assay in Chinese hamster ovaries and a micronucleus assay.
Intramuscular administration of potassium chlorate to pregnant rats resulted in a prolonged gestation period in most cases, and reduced neonatal weight relative to the controls. According to the author, newborn rats also showed a "marked" increase of haematopoietic residue and lipid deposit over controls, and occasionally, exposure resulted in the appearance of hyaline droplets and casts in newborn kidneys . The number of animals per treatment group/number affected, duration of exposure, and information on dose levels was not available.
African green monkeys (five males and seven females) were used to study the thyroid effects of sodium chlorate when administered for 30-60 days as chlorate at concentrations of 4, 7.5, 15, 30 or 58.4 mg/kg bw per day. Chlorate did not induce thyroid depression. Chlorate did not induce a dose-dependent oxidative stress, as was observed in the case of chlorite.
Female rats were exposed to 1 or 10 mg chlorate/L in their drinking water for ten weeks. Fetuses were taken on the 20th day of gestation and examined for external, visceral and skeletal malformations. No significant adverse findings were reported.
No chromosomal abnormalities were seen in either the micronucleus test or a cytogenetic assay in mouse bone marrow cells following gavage dosing with chlorate.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium chlorate	7775-09-9	>99

EXHIBIT 19

Section 4 - FIRST AID MEASURES

SWALLOWED

■

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:
- For advice, contact a Poisons Information Center or a doctor.
- Urgent hospital treatment is likely to be needed.
- If conscious, give water to drink.
- INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

- In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
- If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.
- If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.

EYE

■ If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

■ If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

■

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

■ For severe intoxication: Empty the stomach by lavage and aspiration or by emesis, give demulcents or sweetened drinks and maintain respiration. Pethidine may be given if required. A 1% solution of sodium thiosulfate may be used for lavage and may also be given by intravenous infusion. Hemodialysis, peritoneal dialysis or exchange perfusions may be of value in removing chlorate from the blood. Forced diuresis should not be attempted if there is inadequate urine input.

MARTINDALE: The Extra Pharmacopoeia, 27th Edition

Treatment regime for bromates may also act as a guide for chlorate poisonings.

- Syrup of Ipecac or gastric lavage with tap water or perhaps a 1% solution of sodium thiosulfate
- Administer a demulcent and an analgesic like meperidine (Demerol). Avoid morphine.
- If readily available, the prompt use of hemodialysis or peritoneal lavage may serve to remove absorbed but unreacted chlorate in significant amounts.
- Administer oxygen. If methemoglobinemia becomes severe a replacement transfusion with whole blood may become necessary.
- DO NOT attempt to correct methemoglobinemia with methylene blue as the dye may enhance the toxicity.
- Sodium thiosulfate solution (100 to 500 ml of 1%) by intravenous drip has been recommended by some authors.
- Correct dehydration by infusing intravenously a glucose solution (5% in water). Avoid electrolytes (except as above) unless acid-base imbalance or shock becomes severe.
- Supportive treatment of acute renal failure. [GOSSELIN et al, Clinical Toxicology of Commercial Products, Fifth Edition]

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Not applicable
Upper Explosive Limit (%):	Not applicable
Specific Gravity (water=1):	2.5 @ 15 C
Lower Explosive Limit (%):	Not applicable

EXTINGUISHING MEDIA

■ FOR SMALL FIRE:

- USE FLOODING QUANTITIES OF WATER.
- DO NOT use dry chemicals, CO2 or foam.

FOR LARGE FIRE:

EXHIBIT 19

- Flood fire area with water from a protected position.

FIRE FIGHTING

■

- Alert Emergency Responders and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course. Consider evacuation.
- Fight fire from a safe distance, with adequate cover.
- Extinguishers should be used only by trained personnel.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- If fire gets out of control withdraw personnel and warn against entry.
- Equipment should be thoroughly decontaminated after use.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

■

- Will not burn but increases intensity of fire.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- Heat affected containers remain hazardous.
- Contact with combustibles such as wood, paper, oil or finely divided metal may cause ignition, combustion or violent decomposition.
- May emit irritating, poisonous or corrosive fumes.

Decomposition may produce toxic fumes of: hydrogen chloride, metal oxides.

FIRE INCOMPATIBILITY

■ Avoid storage with reducing agents.

- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous

PERSONAL PROTECTION

Glasses:
Safety Glasses.
Full face- shield.
Gloves:
Respirator:
Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

■

- Clean up all spills immediately.
- No smoking, naked lights, ignition sources.
- Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials; as ignition may result.
- Avoid breathing dust or vapors and all contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with dry sand, earth, inert material or vermiculite
- DO NOT use sawdust as fire may result.
- Scoop up solid residues and seal in labeled drums for disposal.
- Neutralize/decontaminate area.

MAJOR SPILLS

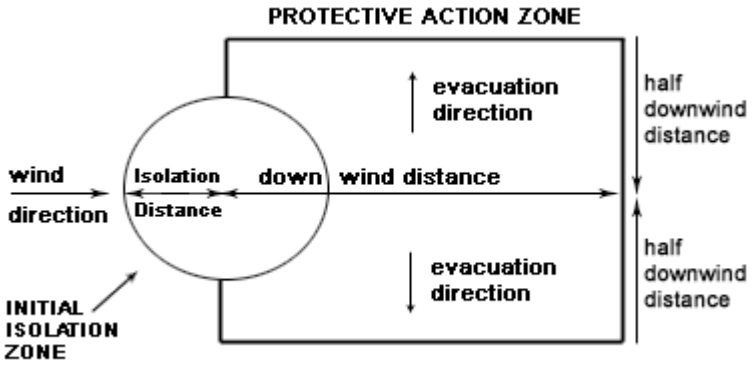
■

- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Consider evacuation.
- No smoking, flames or ignition sources.
- Increase ventilation.
- Contain spill with sand, earth or other clean, inert materials.
- NEVER use organic absorbents such as sawdust, paper or cloth.
- Use spark-free and explosion-proof equipment.
- Collect any recoverable product into labeled containers for possible recycling.
- Avoid contamination with organic matter to prevent subsequent fire and explosion.
- DO NOT mix fresh with recovered material.
- Collect residues and seal in labeled drums for disposal.
- Wash area and prevent runoff into drains.

EXHIBIT 19

- Decontaminate equipment and launder all protective clothing before storage and re-use.
- If contamination of drains or waterways occurs advise emergency services.

PROTECTIVE ACTIONS FOR SPILL



From US Emergency Response Guide 2000 Guide 140

From IERG (Canada/Australia)	
Isolation Distance	25 meters
Downwind Protection Distance	100 meters

FOOTNOTES

1 PROTECTIVE ACTION ZONE is defined as the area in which people are at risk of harmful exposure. This zone assumes that random changes in wind direction confines the vapour plume to an area within 30 degrees on either side of the predominant wind direction, resulting in a crosswind protective action distance equal to the downwind protective action distance.
2 PROTECTIVE ACTIONS should be initiated to the extent possible, beginning with those closest to the spill and working away from the site in the downwind direction. Within the protective action zone a level of vapour concentration may exist resulting in nearly all unprotected persons becoming incapacitated and unable to take protective action and/or incurring serious or irreversible health effects.
3 INITIAL ISOLATION ZONE is determined as an area, including upwind of the incident, within which a high probability of localised wind reversal may expose nearly all persons without appropriate protection to life-threatening concentrations of the material.
4 SMALL SPILLS involve a leaking package of 200 litres (55 US gallons) or less, such as a drum (jerrican or box with inner containers). Larger packages leaking less than 200 litres and compressed gas leaking from a small cylinder are also considered "small spills". LARGE SPILLS involve many small leaking packages or a leaking package of greater than 200 litres, such as a cargo tank, portable tank or a "one-tonne" compressed gas cylinder.
5 Guide 140 is taken from the US DOT emergency response guide book.
6 IERG information is derived from CANUTEC - Transport Canada.

ACUTE EXPOSURE GUIDELINE LEVELS (AEGL) (in ppm)

AEGL 1: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.
AEGL 2: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.
AEGL 3: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening health effects or death.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

■

- Avoid personal contact and inhalation of dust, mist or vapors.
- Provide adequate ventilation.
- Always wear protective equipment and wash off any spillage from clothing.
- Keep material away from light, heat, flammables or combustibles.
- Keep cool, dry and away from incompatible materials.
- Avoid physical damage to containers.
- DO NOT repack or return unused portions to original containers.
- Withdraw only sufficient amounts for immediate use.
- Contamination can lead to decomposition leading to possible intense heat and fire.
- When handling NEVER smoke, eat or drink.
- Always wash hands with soap and water after handling.
- Use only good occupational work practice.
- Observe manufacturer's storing and handling directions.

RECOMMENDED STORAGE METHODS

EXHIBIT 19

■ DO NOT use aluminum or galvanized containers.
- DO NOT repack. Use containers supplied by manufacturer only.

For low viscosity materials
- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure.

For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids:
- Removable head packaging and
- cans with friction closures may be used.

- Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages * . - In addition, where inner packagings are glass and contain liquids of packing group I and II there must be sufficient inert absorbent to absorb any spillage *. - * unless the outer packaging is a close fitting molded plastic box and the substances are not incompatible with the plastic.

STORAGE REQUIREMENTS

■ In addition, Goods of Class 5.1, packing group II should be:
- stored in piles so that
- the height of the pile does not exceed 1 metre
- the maximum quantity in a pile or building does not exceed 1000 tonnes unless the area is provided with automatic fire extinguishers
- the maximum height of a pile does not exceed 3 metres where the room is provided with automatic fire extinguishers or 2 meters if not.
- the minimum distance between piles is not less than 2 metres where the room is provided with automatic fire extinguishers or 3 meters if not.
- the minimum distance to walls is not less than 1 metre.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

X X X X X 0

X: Must not be stored together
O: May be stored together with specific preventions
+: May be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
US - Oregon Permissible Exposure Limits (Z-3)	sodium chlorate (Inert or Nuisance Dust: Total dust)		10						(d)
US OSHA Permissible Exposure Levels (PELs) - Table Z3	sodium chlorate (Inert or Nuisance Dust: (d) Respirable fraction)		5						
US OSHA Permissible Exposure Levels (PELs) - Table Z3	sodium chlorate (Inert or Nuisance Dust: (d) Total dust)		15						
US - Hawaii Air Contaminant Limits	sodium chlorate (Particulates not other wise regulated - Total dust)		10						
US - Hawaii Air Contaminant Limits	sodium chlorate (Particulates not other wise regulated - Respirable fraction)		5						
US - Oregon Permissible Exposure Limits (Z-3)	sodium chlorate (Inert or Nuisance Dust: Respirable fraction)		5						(d)
US ACGIH Threshold Limit Values (TLV)	sodium chlorate (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)		10						See Appendix B current TLV/BEI Book
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	sodium chlorate (Particulates not otherwise regulated Respirable fraction)		5						

EXHIBIT 19

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	sodium chlorate (Particulates not otherwise regulated (PNOR)(f)- Respirable fraction)	5	
US - Michigan Exposure Limits for Air Contaminants	sodium chlorate (Particulates not otherwise regulated, Respirable dust)	5	
Canada - Prince Edward Island Occupational Exposure Limits	sodium chlorate (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)	10	See Appendix B current TLV/BEI Book

MATERIAL DATA

SODIUM CHLORATE:

■ It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

PERSONAL PROTECTION

Consult your EHS staff for recommendations

EYE

■

- Chemical goggles.
- Full face shield.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

HANDS/FEET

■ Wear chemical protective gloves, eg. PVC.

Wear safety footwear or safety gumboots, eg. Rubber.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

- DO NOT wear cotton or cotton-backed gloves.
- DO NOT wear leather gloves.
- Promptly hose all spills off leather shoes or boots or ensure that such footwear is protected with PVC over-shoes.

EXHIBIT 19

OTHER

■

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Ensure there is ready access to a safety shower.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

■

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory . These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- Try to avoid creating dust conditions.

RESPIRATOR

■

Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10 x PEL	P1	-	PAPR-P1
	Air-line*	-	-
50 x PEL	Air-line**	P2	PAPR-P2
100 x PEL	-	P3	-
		Air-line*	-
100+ x PEL	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow
Explanation of Respirator Codes:
Class 1 low to medium absorption capacity filters.
Class 2 medium absorption capacity filters.
Class 3 high absorption capacity filters.
PAPR Powered Air Purifying Respirator (positive pressure) cartridge.
Type A for use against certain organic gases and vapors.
Type AX for use against low boiling point organic compounds (less than 65ºC).
Type B for use against certain inorganic gases and other acid gases and vapors.
Type E for use against sulfur dioxide and other acid gases and vapors.
Type K for use against ammonia and organic ammonia derivatives
Class P1 intended for use against mechanically generated particulates of sizes most commonly encountered in industry, e.g. asbestos, silica.
Class P2 intended for use against both mechanically and thermally generated particulates, e.g. metal fume.
Class P3 intended for use against all particulates containing highly toxic materials, e.g. beryllium.
The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.
Use appropriate NIOSH-certified respirator based on informed professional judgement. In conditions where no reasonable estimate of exposure can be made, assume the exposure is in a concentration IDLH and use NIOSH-certified full face pressure demand SCBA with a minimum service life of 30 minutes, or a combination full facepiece pressure demand SAR with auxiliary self-contained air supply. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

ENGINEERING CONTROLS

■ Local exhaust ventilation usually required. If risk of overexposure exists, wear an approved respirator. Correct fit is essential to obtain adequate protection an approved self contained breathing apparatus (SCBA) may be required in some situations. Provide adequate ventilation in warehouse or closed storage area.
Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapors, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

EXHIBIT 19

grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favorable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.
Mixes with water.

State	Divided solid	Molecular Weight	106.44
Melting Range (°F)	478.4- 501.8	Viscosity	Not Applicable
Boiling Range (°F)	Decomposes	Solubility in water (g/L)	Miscible
Flash Point (°F)	Not Applicable	pH (1% solution)	7
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available.	Vapour Pressure (mmHG)	Not applicable
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	2.5 @ 15 C
Lower Explosive Limit (%)	Not applicable	Relative Vapor Density (air=1)	Not applicable
Volatile Component (%vol)	Not applicable.	Evaporation Rate	Not applicable

APPEARANCE

Colourless, odourless, deliquescent crystals. Soluble in water and alcohol. Solubility in water is decreased by salt, sodium chloride. CARE: Strong oxidising agent.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

■

- Presence of incompatible materials.
- Product is considered stable under normal handling conditions.
- Prolonged exposure to heat.
- Hazardous polymerization will not occur.
- Presence of elevated temperatures.
- Presence of incompatible materials

STORAGE INCOMPATIBILITY

■

- Contact with acids produces toxic fumes

Metals and their oxides or salts may react violently with chlorine trifluoride. Chlorine trifluoride is a hypergolic oxidizer. It ignites on contact (without external source of heat or ignition) with recognized fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition. The state of subdivision may affect the results.

- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous
- Segregate chlorates from organic matter, acids, poisonous gases, flammables, corrosives, aluminium and ammonium salts and any other combustible material.
- Mixtures of chlorates with fibrous and absorbent organic materials such as wood, paper, leather, flour, sawdust, sugar, shellac, may be ignited or caused to explode by static sparks, friction or shock.
- The extreme hazardous nature of mixtures of metal chlorates with phosphorus or sulfur, apart from being powerful explosives, are dangerously sensitive to friction or shock; spontaneous ignition occasionally occurs.
- Mixtures with sucrose, lactose, chromium, sulfur dioxide, sodium amide, zirconium, germanium and titanium explode on heating.
- Forms incompatible sometimes explosive mixtures with thorium dicarbide, strontium hydride, hydrogen iodide, fluorine, cyanoguanidine, cyanides, dinickel trioxide, powdered carbon, aqua regia and ruthenium, nitric acid, manganese dioxide and potassium hydroxide or

EXHIBIT 19

boron.

- Chlorates should not be allowed to come into contact with ammonium salts, aluminium and other powdered metals, phosphorous, silicon, sulfur, sulfides, sulfuric acid, nitrobenzene, iodides and tartaric acid
- Mixtures with hydrocarbons, metal phosphides (Zn, Ag, Al, Cu, Hg, Mg, etc), metal thiocyanates, metal sulfides, arsenic, carbon, phosphorous, sulfur, ammonium salts, powdered metals, arsenic trioxide, phosphorous, silicon, sulfur, sulfides, sulfites and hyposulfites are easily ignited (by friction impact or heat) and are potentially explosive.
- Metal chlorates in contact with strong acids liberate explosive chlorine dioxide gas. With concentrated sulfuric acid a violent explosion can occur unless effective cooling is used. Mixing potassium chlorate and concentrated sulfuric acid results in an explosion with optimum temperature range being 120-130. Heating a moist mixture of metal chlorate and a dibasic organic acid (tartaric or citric acid) liberates chlorine dioxide diluted with carbon dioxide.
- Fusion of chlorates with metal cyanides may lead to an explosion.
- Chlorates containing 1-2% bromate or sulfur are liable to spontaneous explosion.
- Chlorates releases oxygen, chlorine and chlorine dioxide when heated above 300 deg. C..
- In presence of moisture may release oxygen and ozone
- Intimate mixtures of chlorates, bromates or iodates of barium, cadmium, calcium, magnesium, potassium, sodium or zinc, with finely divided aluminium, arsenic, copper, carbon, phosphorus, sulfur, hydrides of alkali- and alkaline earth-metals; sulfides of antimony, arsenic, copper or tin; metal cyanides, thiocyanates; or impure manganese dioxide may react explosively or violently, either spontaneously (especially in the presence of moisture) or on initiation by heat, impact or friction, sparks or addition of sulfuric acid.

BRETHERICKS HANDBOOK OF REACTIVE CHEMICAL HAZARDS, 4th Edition.

- Inorganic oxidising agents can react with reducing agents to generate heat and products that may be gaseous (causing pressurization of closed containers). The products may themselves be capable of further reactions (such as combustion in the air).
- Organic compounds in general have some reducing power and can in principle react with compounds in this class. Actual reactivity varies greatly with the identity of the organic compound.
- Inorganic oxidising agents can react violently with active metals, cyanides, esters, and thiocyanates.
- Inorganic reducing agents react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive. Their reactions with oxidizing agents may be violent.
- Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions.

Avoid storage with reducing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

sodium chlorate

TOXICITY AND IRRITATION

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (man) TDLo: 286 mg/kg	Skin (rabbit): 500 mg/24h - Mild
Oral (rat) LD50: 1200 mg/kg	Eye (rabbit): 10 mg - Mild

■ The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

SODIUM CHLORATE:

■ Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

■ Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

■ Chlorate is highly soluble in water (95.7 g/100 ml at 20 deg. C) and will therefore be uniformly distributed in groundwater or surface waters and be readily presented to aquatic organisms.

- The high solubility of chlorate implies that it does not easily adsorb to particulates nor bioaccumulate in biota.
- The chlorate anion is chemically stable under environmental conditions.
- Chlorate is a nitrate analogue, i.e., once chlorate is in the marine environment, it can be taken up by microalgae and macroalgae using the same mechanism as nitrate

The above combination of chlorate solubility, stability, and mobility creates the potential for both localised and area-wide potential effects of ecotoxicological interest.

Chlorate can easily be removed under anoxic conditions by mixed microbial cultures. There are numerous strains of micro-organisms capable of reducing both chlorate and perchlorate under anoxic conditions. Chlorate is non-toxic to wastewater bacterial assemblages at concentrations <1,000 mg/L. Due to the low oxygen concentration in anoxic selector basins, facultative anaerobic bacteria use the oxygen bound in chlorate for respiration, and reduce chlorate in the process. Under anaerobic conditions, chlorate (ClO_3^-) is first converted to chlorite (ClO_2^-) by the enzyme chlorate reductase, which is present in perchlorate- and chlorate-reducing bacteria. In the second step, chlorite is disproportionated to chloride (Cl^-) and molecular oxygen (O_2) by the non-respiratory enzyme chlorite dismutase, which catalyses the reaction. The presence of chlorite dismutase is a prerequisite for the growth of perchlorate- and chlorate reducing bacteria as chlorite is

EXHIBIT 19

toxic due to its high reactivity. The chlorite dismutase enzyme is present in all dissimilatory perchlorate- and chlorate reducing bacteria
In the environment, because chlorate is a strong oxidizing agent (oxidation state V), it gets reduced to chlorine species in lower oxidation states, such as the oxyanions chlorite (ClO_2^- -oxidation state III) and hypochlorite (ClO^-, oxidation state I), chlorine dioxide (oxidation state IV), and chloride (oxidation state -I). Thus, at least some, and possibly a substantial, reduction of the chlorate resulting from the application of chlorate is likely to occur in the field prior to any runoff to surface water. Under environmental (terrestrial field) redox conditions, and based on chemical equilibria alone, the thermodynamically favored, end reduction product of chlorate in soil and in water is the chloride anion. Any intermediate chlorine dioxide that may form under environmental conditions will undergo photochemical reactions when exposed to sunlight. The chlorine oxyanions, chlorite and hypochlorite (other possible more reduced intermediates in the ultimate reduction of chlorate to chloride), are strong oxidizers in themselves; thus, they are also reduced and/or undergo disproportionation reactions. Although reduction reactions of chlorate, chlorite, and hypochlorite are said to occur very fast, how fast they occur is not known (i.e., the actual rate constants in the environment are not known). Therefore, at any given time the distribution of reduced species (type and concentration) cannot be estimated. However, it is unlikely that a single reduced species would be present for any length of time.
Dietary exposure (food only) to inorganic chlorates as the chlorate ion (ClO_3^-) may be expected from the from translocation of very small amounts of chlorate ion by plants (translocation of significant amounts would be phytotoxic to plants) from the environment which may be present as a result of inorganic chlorate uses.
Chlorate is a thyroid toxicant producing thyroid gland follicular cell hypertrophy in rats and mice following chronic exposures, and may produce follicular cell tumors in rats. The lack of mutagenicity indicates that the thyroid tumors are induced by a non-mutagenic mechanism and are therefore not likely to be carcinogenic. The effects may be attributed to changes in levels of thyroid hormones seen after administration of high doses of sodium chlorate. In female mice there was equivocal and marginal evidence of increased pancreatic islet carcinoma. Sodium chlorate was negative in most bacterial gene mutation assays and in several cytogenetics tests, including a hypoxanthineguanine phosphoribosyl-transferase (HGPRT) assay in Chinese hamster ovaries and a micronucleus assay.
Based on the very low vapor pressure and very high solubility of chlorate ion in water, chlorate is not expected to volatilize from soil or water. In addition, the low log n-octanol/water partition coefficient indicates that chlorates have low potential to bioaccumulate.
Inorganic chlorates are generally completely ionized in water, producing chlorate (ClO_3^-) anion. Anions do not bind readily to soil or sediment particulates and, therefore, are expected to be very mobile. Assuming that chlorate does not undergo any redox reactions, it is expected to be very mobile and to partition predominantly into the water. However, extensive redox reactions are expected to occur in the environment that will reduce the concentration of chlorate in the water column. The redox chemistry of chlorate affects its behavior in soils and natural water. Therefore, identification of the conditions under which chlorate and other oxyanions of chlorine may predominate is an important consideration in the environmental fate and risk assessment of chlorate. The oxidation-reduction reactions of chlorate with organic matter and other inorganic chemical species are very complex and depend on the redox conditions of the media, nature and concentration of reductants, chlorate concentration, temperature, pH, and degree of moisture (soils). For example, chlorate is generally more stable under alkaline than acidic conditions; however, when a chemical element (chlorine) can exist in two or more oxidation states (i.e., chlorite and chlorate), the redox potential of the media also effects the predominance of the reduction products. Nitrate concentrations in soil and water (as well as other physical and chemical properties of soil and water) play an important role in the redox chemistry of chlorate in the environment. The duration of residual activity for sodium chlorate in soil was 3-4 months after using 1,000 liters of a 1% solution/ha. Sodium chlorate may persist in soil for 6 months to 5 years, depending on rate applied, soil type, fertility, organic matter, moisture, and weather conditions. Toxicity in soil is decreased considerably by a high nitrate content, alkaline conditions, and high soil temperatures. Decomposition of the compound occurs more readily in moist soils above 20 degrees C.
Plants absorb sodium chlorate through both roots and leaves. Chlorate is carried downward through the xylem since it kills the phloem tissue. It also increases the rate of respiration, decreasing catalase activity, and depleting the plant's food reserves. Chlorate-injured plants are more susceptible to frost. Sodium chlorate is 30-50 times more toxic to plants than sodium chloride (table salt)
Chlorate is nontoxic (acute toxicity > 100 mg/l) to most of the freshwater and marine species examined. However, chlorate is highly toxic (acute toxicity < 0.1 mg/l) to certain macro brown algal species. The toxicity of chlorate is coupled to its reduction to chlorite and this reduction is linked to an active, functioning nitrate reductase system. Chlorite is toxic to the algae, which do not contain the enzyme chlorite dismutase to convert chlorite into innocuous chloride and oxygen
Sodium chlorate is considered non-toxic to fish. The possible 48-hour LC50 for various species of fish is as hight as 10,000 mg/l; other reported literature values confirm low toxicities, e.g.:

- Fish (freshwater) LC50: 7.3-1100 mg/l; NOEC 600-1000 mg/l
- Invertebrates (freshwater) LC50: 2100 - 4100 mg/l; NOEC 52-1000 mg/l
- Aquatic Plants LC50: 133-444 mg/l; NOEC 50-3137 mg/l

Chlorites produced as a result of the reduction of chlorates exhibit low to high environmental toxicity. Environmental conditions dictate the rate and extent of conversion.
Biological uptake of chlorate by phytoplankton appears to be a potential and significant sink for effluent-derived chlorate. Since chlorate is an analogue of nitrate, chlorate will be taken up by the phytoplankton. Once chlorate is in the marine environment, it can be taken up by macroalgae using the same mechanism as nitrate. In brown algae, the uptake of nutrients is an active process and does not simply rely on the slow diffusion of seawater Nitrate and chlorate are structurally analogous to each other and may potentially be incorporated into the same enzyme active site, as is evidenced by the fact that chlorate can be used as a substrate by various nitrate reductases. There is competition for the active sites on the enzyme system and if nitrate is abundant, it prevents too much chlorate from being reduced. If nitrate concentrations are just high enough to induce the nitrate reductase system, but not high enough to out-compete chlorate for all the active sites, then chlorate may be reduced to chlorite at a maximal rate.
Chlorite toxicity to various aquatic species has been reported:

- Fish (freshwater) LC50: 50.6-420 mg/l; NOEC 32-216 mg/l
- Fish (estuarine/ marine) LC50: 75 mg/l; NOEC 13.9 mg/l
- Invertebrates (freshwater) EC50: 0.027-1.4 mg/l; NOEC 0.003 - 0.4 mg/l
- Invertebrates (estuarine/ marine) EC50: 0.576 - 21.4 mg/l; NOEC 14.3 mg/l
- Aquatic Plants EC50: 1.32 mg/l; NOEC <0.62 mg/l

The long-term toxicity of sodium chlorate to birds resulted in reduced egg production and fertility.
■ DO NOT discharge into sewer or waterways.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
sodium chlorate			LOW	

GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

EXHIBIT 19

Name / Cas No / RTECS No	EHS	TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
E2~ / CAS:7775-09- 9 / FO0525000		1244		647		Inorg	0	0	Inorg	1	NI	1	0	(2)	1	1	S	D	2

Legend: EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships) NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation, B1=Acuteaquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg), C2=Acutemammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation & corrosion, D2=Eye irritation& corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats, E3=Interference with coastal amenities, For column A2: R=Readily biodegradable, NR=Not readily biodegradable. For column D3: C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lunginjury, N=Neurotoxic, I=Immunotoxic. For column E1: NT=Not tainting (tested), T=Tainting test positive. For column E2: Fp=Persistent floater, F=Floater, S=Sinking substances. The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard. (GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

Section 13 - DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

A. General Product Information
Ignitability characteristic: use EPA hazardous waste number D001 (waste code I)

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.
¦ Puncture containers to prevent re-use and bury at an authorized landfill.
Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
FOR DISPOSAL OF SMALL QUANTITIES:

- Cautiously acidify a 3% solution or a suspension of the material to pH 2 with sulfuric acid.
- Gradually add a 50% excess of aqueous sodium bisulfite with stirring at room temperature. (Other reducers such as thiosulfate or ferrous salts may substitute; do NOT use carbon, sulfur or other strong reducing agents). An increase in temperature indicates reaction is taking place. If no reaction is observed on the addition of about 10% of the sodium bisulfite solution, initiate it by cautiously adding more acid.
- If manganese, chromium or molybdenum are present adjust the pH of the solution to 7 and treat with sulfide to precipitate for burial as a hazardous waste. Destroy excess sulfide, neutralize and flush the solution down the drain (subject to State and Local Regulation).

[Sigma/Aldrich].

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.
- Bury residue in an authorized landfill.
- Recycle containers where possible, or dispose of in an authorized landfill.

Section 14 - TRANSPORTATION INFORMATION

DOT:

Symbols:	None	Hazard class or Division:	5.1
Identification Numbers:	UN1495	PG:	II
Label Codes:	5.1	Special provisions:	A9, IB8, IP2, IP4, N34, T3, TP33
Packaging: Exceptions:	152	Packaging: Non-bulk:	212
Packaging: Exceptions:	152	Quantity limitations: Passenger aircraft/rail:	5 kg

EXHIBIT 19

Quantity Limitations: Cargo aircraft only:	25 kg	Vessel stowage: Location:	A
Vessel stowage: Other:	56, 58		

Hazardous materials descriptions and proper shipping names:
Sodium chlorate

Air Transport IATA:

ICAO/IATA Class:	5.1	ICAO/IATA Subrisk:	None
UN/ID Number:	1495	Packing Group:	II
Special provisions:	None		

Shipping Name: SODIUM CHLORATE

Maritime Transport IMDG:

IMDG Class:	5.1	IMDG Subrisk:	None
UN Number:	1495	Packing Group:	II
EMS Number:	F-H , S-Q	Special provisions:	None
Limited Quantities:	1 kg		

Shipping Name: SODIUM CHLORATE

Section 15 - REGULATORY INFORMATION

REGULATIONS

sodium chlorate (CAS: 7775-09-9) is found on the following regulatory lists;
"Canada - Saskatchewan Industrial Hazardous Substances","Canada Domestic Substances List (DSL)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (French)","GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO IBC Code Chapter 17: Summary of minimum requirements","IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances","International Council of Chemical Associations (ICCA) - High Production Volume List","OECD Representative List of High Production Volume (HPV) Chemicals","US - Massachusetts Oil & Hazardous Material List","US - New Jersey Right to Know Hazardous Substances","US - Pennsylvania - Hazardous Substance List","US - Rhode Island Hazardous Substance List","US Department of Homeland Security Chemical Facility Anti-Terrorism Standards - Chemicals of Interest","US DOE Temporary Emergency Exposure Limits (TEELs)","US EPA High Production Volume Chemicals Additional List","US FDA Indirect Food Additives: Adhesives and Components of Coatings - Substances for Use Only as Components of Adhesives - Adhesives","US NFPA 1 Annex B Typical Oxydizers","US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide","US Toxic Substances Control Act (TSCA) - Inventory","USA: Chemical Facility Anti-Terrorism Standards - List Appendix A - 6CFR 27"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE
■ Contact with air may produce sufficient heat to ignite combustible materials.*.
■ Cumulative effects may result following exposure*.
■ May produce discomfort of the respiratory system and skin*.
* (limited evidence).

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

■ Classification of the mixture and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

EXHIBIT 19

Issue Date: Jan-15-2010

Print Date:Jul-21-2010

EXHIBIT 19

AGELADAKIS FAMILY VETERINARY CLINIC, PLLC

House Call Notes **Date** 4-29-2021

Location FISHER RANCH

- OWNER CALLED, CATTLE "IN DISTRESS," WORRIED IT COULD BE SOMETHING SERIOUS.
- CAUSE UNKNOWN.
- UPON OBSERVATION
  - ANIMAL #1 : "JESSI LEA" (Approx 450 kg, 2 YEARS)
    - ON GROUND, ISOLATED
    - DYSPNEA, CNS – SIGNS OF MOTOR IMP, TWITCHING, RAPID BLINK RESPONSE, DIL PUPILS.
    - FROTHY HYPERSALIVATION, VERY VOCAL
    - HEMATOCHEZIA
    - Sx: TONIC/CLONIC SEIZING (CNS)
    - TEMP : 101.6°F – NO FEVER.
    - [redacted] (TAIL CUFF)
      mPAP – 55 mm Hg
    - SUSPECT TOXICOSIS, CHEMICAL ?
    - SOME MOLD ON FEED, NOTHING THAT WOULD EXPLAIN Sx.
    - THERE WAS A WHITE POWDER @ POTENTIAL DRINKING SITE, OWNER COULDN'T IDENTIFY.
- SEVERAL OTHER ANIMALS EXPERIENCING SAME Sx.

UPDATE
POST-MORTEM:
SEVERAL ANIMALS DECEASED SHORTLY AFTER VISIT, SUSPECT POISON, OWNER SAYS [redacted] "ABSOLUTELY DOES NOT WANT NECROPSY" TO CONFIRM CAUSE OF DEATH.

Signature M. Ageladakis

EXHIBIT 20

EXHIBIT 21

Griffin, Josiah (Jefferson Fisher Ranch)

From: headchef@jeffersonfisheranch.net
Sent: Wednesday, December 8, 2021 8:32 PM
To: ryan@Bauerleyourface.com
Subject: Re: I remember April 28th
Signed By: Josiah Griffin

Sir,

My name is Josiah Griffin. A bit about me, I have been working at Jefferson Farm Ranch for pretty much my whole life. My mother taught me everything she knows while she worked there, so when she passed on, I took her position in the kitchens. We do everything from processing foods for storage to making meals for the Jefferson family guests. I enjoy the Jefferson family, but I would never lie for them. Those cattle were sick.

On the night of April 28th, 2021, I was in the kitchen very late getting some bread to prove. We had to prepare for a big celebration that week to honor Jay's latest accomplishments in writing, and Jay loves bread. I heard the cows making lots of noise close to the kitchen. They were acting very very strangely. Seemed sort of listless out there. I definitely remember that night because it was so odd. When the Jefferson family mentioned that you were looking for anyone with a memory of that night and gave your email, I thought I'd reach out to let you know that was something I definitely remembered. I am pretty sure it was the same night, and not some other because, of course, the cattle died the next day, and everyone was so mournful. I remember noticing some brownish residue on their hind quarters as I went to my car that night. It was unusual enough that I told my wife about it. She likes to call me when I'm on my way home. I told her, "I swear these cows look strange, and I see some discharge or something." You can ask her about it if you want. She'd remember. She always does.

Very respectfully,

Josiah Griffin
JFR, Head Chef

EXHIBIT 22

6:00

11

DM

Drew

Why are you so down. Is it your love 😂

Yeah dude. With the ranch going through all this financial stuff, I don't think there's much time for romancin'

Ever thought maybe the issue is you?

😂

Not a chance

My game is strong, gotta be $$$

Game recognizes game

Read 5:58 PM

I'd do anything to get with that tho haha

iMessage

Cash

EXHIBIT 23

MORGAN AGELADAKIS, DVM

EXPERIENCE

- VETERINARIAN • AGELADAKIS FAMILY VETERINARY CLINIC, PLLC • AUGUST 2002 – PRESENT
  Joined family veterinary practice after earning DVM. Started work as assistant veterinarian, then became partner. Handled long-term client accounts in the Charlottesville area, providing medical treatment and maintenance services of cows and horses. Took over practice as sole owner in January 2012. Currently supervise an assistant veterinarian, two nurse technicians, and an office administrator.

- LABORATORY/RESEARCH TECHNICIAN • LONE STAR STATE UNIVERSITY • JULY 1997-AUGUST 1999
  Responsible for performing lab procedures related to ongoing bovine research, including maintaining cell cultures with sterile technique, operating complex testing equipment, safeguarding samples from contamination or deterioration, and ensuring proper chain of custody for research samples and data. Contributed to primary research for peer-reviewed publication in North American Journal of Bovine Veterinary Science (NAJBVS).

EDUCATION

- DOCTOR OF VETERINARY MEDICINE (DVM) • 2002 • LONE STAR STATE UNIVERSITY

- BACHELOR OF SCIENCE (BS), MAGNA CUM LAUDE • 1997 • LONE STAR STATE UNIVERSITY

CERTIFICATIONS

AMERICAN BOARD OF VETERINARY PRACTITIONERS (ABVP) CERTIFICATIONS:

- EQUINE MEDICINE – 2003 TO CURRENT
- BEEF CATTLE – 2003 TO CURRENT

EXHIBIT 24

RECORD OF PROCEEDINGS UNDER ARTICLE 15, UCMJ

For use of this form, see AR 27-10; the proponent agency is OTJAG-CL.

NAME	GRADE	SSN	UNIT & LOCATION	MONTHLY BASE PAY
JENKINS, Lee [illegible]	E-4	000000000000000	HHC, 1st Bn, 1st Bde, Fort Hood, LS 76543	$1,979.70 ~~$2,902.60~~

1. I am considering whether you should be punished under Article 15, UCMJ, for the following misconduct:

In that you did, at or near Fort Hood, Lone Star on or about 19 July 2012, wrongfully, without authority, wear upon your uniform the Combat Infantryman Badge. This is in violation of Article 107, UCMJ.

In that you did, at or near Fort Hood, Lone Star on or about 19 July 2012, with intent to deceive, make to COL Steve Dray, official statements, to wit: "I make more money than you do, ~~plus my mustache is cooler,~~" which statement was totally false. This is in violation of Article 107, UCMJ.

RM

In that you did, at or near Fort Hood, Lone Star on or about 19 July 2012, conspire with CPL Joshua Mikkelsen and SPC Sara Nicholson to commit an offense under the Uniform Code of Military Justice, to wit: animal neglect of the unit mascot, Bessie the bovine, by failing to change out her water and hay as necessary such conduct being to the prejudice of good order and discipline in the armed forces and of a nature to bring discredit upon the armed forces.

(SEE CONTINUATION SHEET)

2. You are not required to make any statements, but if you do, they may be used against you in this proceeding or at a trial by court-martial. You have several rights under this Article 15 proceeding. First I want you to understand I have not yet made a decision whether or not you will be punished. I will not impose any punishment unless I am convinced beyond a reasonable doubt that you committed the offense(s). You may ordinarily have an open hearing before me. You may request a person to speak on your behalf. You may present witnesses or other evidence to show why you shouldn't be punished at all *(matters of defense)* or why punishment should be very light *(matters of extenuation and mitigation)*. I will consider everything you present before deciding whether I will impose punishment or the type and amount of punishment I will impose. If you do not want me to dispose of this report of misconduct under Article 15, you have the right to demand trial by court-martial instead. In deciding what you want to do you have the right to consult with legal counsel located at Trial Defense Services, 330 761st Tank Battalion Ave, Fort Hood, LS 76543. You now have 48 hours to decide what you want to do.

NAME, GRADE, AND ORGANIZATION OF COMMANDER	SIGNATURE	DATE
Brandon R. Bergmann, LTC, HQ, 1st Bn, 1st Bde		2JAN13

3. Having been afforded the opportunity to consult with counsel and understanding my rights listed above and on page three of this form, my decisions are as follows *(Initial appropriate blocks, date, and sign)*:

a. [ ] I demand trial by court-martial.

b. [JJ] I do not demand trial by court-martial and in the Article 15 proceedings:

(1) I request the hearing be: [ ] Open [JJ] Closed

(2) A person to speak in my behalf: [ ] Is requested [JJ] Is not requested

(3) Matters in defense, extenuation, and/or mitigation:

[JJ] Are not presented [ ] Are attached [ ] Will be presented in person

NAME AND GRADE OF SERVICE MEMBER	SIGNATURE	DATE
LEE [illegible] Y JENKINS, E-4	Leeroy Jenkins	2 JAN 13

4a. In a *(n)* [ ] Open [RM] Closed hearing, having considered all matters presented, I hereby make the following finding:

[ ] Guilty of All Specifications. [RM] Guilty of Some Specifications *(line out Not Guilty Specifications)*. [ ] Not Guilty of All Specifications *(line out all Specifications and sign below)*.

Based on my findings, I impose the punishments that are officially recorded in Item 6 of this form.

4b. I direct the original DA Form 2627 be filed in the:

[ ] Performance section of the OMPF [ ] Restricted section of the OMPF [RM] NA as soldier was an E-4 or below at start of proceedings

4c. You are advised of your right to appeal to the next superior authority: Cdr, HQ, 1st Bde, Fort Hood, LS within five (5) calendar days. An appeal made after that time may be rejected as untimely. Punishment is effective immediately unless otherwise stated in Item 6.

NAME, GRADE, AND ORGANIZATION OF COMMANDER	SIGNATURE	DATE
Rick Mathew, COL, 1st Bde, Fort Hood, LS	Rick Mathew	2JAN13

5. *(Initial appropriate block, date, and sign)*

[ ] I do not appeal [JJ] I appeal and do not submit additional matters [ ] I appeal and submit additional matters

NAME AND RANK OF SERVICE MEMBER	SIGNATURE	DATE
JENKINS, Leeroy E-4	Leeroy Jenkins	7JAN13

NAME (Last, First, MI)	GRADE	SSN	UNIT & LOCATION
JENKINS, Leeroy	E-4	000000000000000	HHC, 1st Bn, 1st Bde, Fort Hood, LS 76543

6. The following punishment is imposed:

To be reduced in ranks to an E-3 suspended for 30 days
Oral reprimand

7. I have considered the appeal and it is my opinion that:

Nothing to see here!

NAME, RANK, AND ORGANIZATION OF REVIEWING JUDGE ADVOCATE	SIGNATURE	DATE
Melvin Williams, COL, SJA, III Corps & Fort Hood, LS	Mel Williams	30 JAN 13

8. After consideration of all matters presented in the appeal, the appeal is:

☒ Denied ☐ Granted as follows:

NAME, RANK, AND ORGANIZATION OF COMMANDER	SIGNATURE	DATE
BG TODD LINDQUIST, CG, FORT HOOD, LS	Todd L	30 JAN 13

9. I have seen the action taken on my appeal.

NAME AND RANK OF SERVICE MEMBER	SIGNATURE	DATE
	Leroy Jenkins	14 FEB 13

10. Allied Documents and/or Comments:

ERB

ARTICLE 15 RIGHTS, MAXIMUM PUNISHMENTS, AND FILING

Article 15, UCMJ, is a federal law that permits commanding officers to conduct non-judicial proceedings for minor offenses. A Soldier may refuse Article 15 proceedings and demand trial by court-martial, unless attached to or embarked on a vessel. A Commander may find a Soldier guilty of an offense at an Article 15 proceeding only after being convinced beyond a reasonable doubt that the Soldier is guilty.

SOLDIERS HAVE THE FOLLOWING RIGHTS AT AN ARTICLE 15 PROCEEDING:

a. To refuse Article 15 proceedings and demand trial by court-martial. If the Soldier is attached to or embarked on a vessel, he or she is not permitted to refuse Article 15 proceedings. If a Soldier demands trial by court-martial, the trial could be a Summary, Special, or General Court-Martial. A Soldier may object to trial by Summary Court-Martial. At a Special or General Court-Martial, a Soldier is entitled to be represented by qualified military defense counsel, or by civilian counsel at no expense to the government.
b. To request an open or closed hearing.
c. To request a person to speak on his or her behalf.
d. To invoke his or her rights under Article 31(b), UCMJ, to remain silent and to not make any statement regarding the offense(s) for which the Article 15 hearing is held. If the Soldier makes a statement, that statement may be used as evidence in a later trial by court-martial.
e. To present matters in defense, extenuation, or mitigation.
f. To discuss the Article 15 and its proceedings with an attorney in private before making these elections.
g. To appeal the findings and punishment to the next superior authority.

MAXIMUM PUNISHMENTS UNDER A FORMAL ARTICLE 15 FOR ENLISTED SOLDIERS IF IMPOSED BY:

A Company Grade Officer: An oral or written reprimand, restriction for 14 days, extra duty for 14 days, correctional custody for 7 days (if the Soldier is in the grade of E-3 or below and if a correctional custody facility is available), reduction of one grade (if the Soldier is in the grade of E-4 or below), and forfeiture of 7 days' pay. The amount of the forfeiture is computed at the reduced grade, even if suspended, if reduction is part of the punishment imposed.

A Field Grade or General Officer: An oral or written reprimand, restriction for 60 days, extra duty for 45 days, correctional custody for 30 days (if the Soldier is in the grade of E-3 or below and if a correctional custody facility is available), reduction of one or more grades (if the Soldier is in the grade of E-4 or below, and if imposed by a Commander of a unit authorized a Commander in the grade of O-5 or higher), reduction of one grade if the Soldier is in the grade of E-5 or E-6, and forfeiture of ½ of one month's pay for two months. The amount of the forfeiture is computed at the reduced grade, even if suspended, if reduction is part of the punishment imposed. When restriction is combined with extra duty, the maximum period of restriction is 45 days.

MAXIMUM PUNISHMENTS UNDER ARTICLE 15 FOR COMMISSIONED & WARRANT OFFICERS IF IMPOSED BY:

A Company Grade Officer or Field Grade Officer: A written reprimand and restriction for 30 days.

Note: The authority of company and field grade officers to impose Article 15 punishment on fellow officers is typically withheld by the General Court-Martial Convening Authority (GCMCA). Check with the command's Staff Judge Advocate before attempting to take action.

A General Officer or GCMCA: A written reprimand, arrest in quarters for 30 days, restriction for 60 days, and forfeiture of ½ of one month's pay for two months.

THE FILING OF ARTICLE 15 FORMS & REVIEW BY DA CAREER MANAGERS AND SELECTION BOARDS:

If a Commander finds a Soldier in the rank of Sergeant (E-5) or above guilty of one or more offenses at an Article 15 proceeding and imposes punishment, the Commander must file the Article 15 form in either the Soldier's Official Military Personnel File (OMPF) performance or restricted fiche. MOS/specialty career managers and DA Selection Boards routinely use the OMPF performance fiche. The OMPF restricted fiche is not given to MOS/specialty career managers or DA selection boards without the approval of the Commander, HRC or selection board proponent. If the Soldier is in the grade of E-4 or below at the start of an Article 15 proceeding and punishment is imposed, the form will be maintained locally and no filing in the OMPF, either in the performance or the restricted fiche, is authorized. AR 27-10, Chapter 3 provides detailed rules governing requests to transfer an Article 15 from a Soldier's performance fiche to his or her restricted fiche.

THE NEED TO IMPROVE STANDARDS OF PERFORMANCE AND CONDUCT:

Soldiers found guilty at an Article 15 proceeding are considered to be on notice that they must improve their conduct and performance. An Article 15 may form the basis, either in whole or in part, for an administrative separation action that results in a less than honorable discharge. Soldiers are strongly encouraged to exhibit the behavior necessary to receive an Honorable Discharge. If not, one or more of the following situations may occur:

a. The Soldier may be separated with a General Discharge under Honorable Conditions or with an Other Than Honorable Discharge.
b. A Soldier separated with less than an honorable discharge may be barred from ever enlisting again, may encounter problems securing civilian employment, and may forfeit the many benefits generally associated with an Honorable Discharge.
c. The Soldier should be aware that the likelihood of upgrading a less than honorable discharge, while possible, is unlikely.

ARTICLE 15 PUNISHMENT WORKSHEET

(Generated by MJOnline)

Soldier's Data: JENKINS, Lee ,

Imposing Commander: Melvin Williams , O-6 **Type of Article 15:** Field Grade Article 15

The following maximum allowable punishment may be imposed:

Reduction: Can reduce E5 or E6, one grade only. Can reduce E4 or below one or more grades.

Forfeiture Amount of forfeiture is computed at the reduced grade, even if suspended, if reduction is part of the punishment imposed. (maximum, half of one month's pay for two months).

E7 $2,151

Deprivation of Liberty Punishments:

Correctional Custody: Maximum of 30 days. Note: This punishment may be imposed only if a CCF is available. Only Soldiers in grades E-1 to E3 can be placed in a CCF. May not be combined with Extra Duty or Restriction.

Extra Duty:

Maximum allowable days is 45.

Restriction:

Maximum allowable days is 60. Combinations of extra duties and restriction cannot exceed the maximum allowed for extra duty. Further limit of area for restriction is authorized.

Reprimand: May be an oral or written reprimand. *(Must be in writing if an officer.)*

Any punishment may be suspended for up to 6 months.

PUNISHMENTS	SUSPENSIONS
Reduction to the Grade of: _____	*(Suspended for _____ days/month).* **OR** *(Reduction below the Grade of _____ suspended for _____ days/months).*
Forfeiture of _____ pay per month for *(one month) (two months)*	*(Suspend _____ of the forfeiture for _____ days/months).*
Correctional Custody for _____ days.	*(Suspended for _____ days/months).*
Extra duty for _____ days.	*(Suspended for _____ days/months).*
Restriction for _____ days.	*(Suspended for _____ days/months).*

(Normal limits are Company area, Dining/Medical Facility, Place of Worship, and Place of Duty.)

Reprimand _____*(Oral _____) (Written _____).*

(Reprimands for enlisted Soldiers may be oral or written and oral is typically appropriate. Reprimands of commissioned or warrant officers must be in writing.)

Date Punishment Imposed: _____ Commander's Initials: _____

EXHIBIT 25

RECORD OF PROCEEDINGS UNDER ARTICLE 15, UCMJ
Continuation Sheet

Item 1, Continued:

In that you, did, at or near Fort Hood, LS on or about 1 January 2013, wrongfully communicate to MAJ Eye M. Infantry a threat to injure your fellow Soldiers by stating, "These hands are rated E for everybody," being prejudicial to good order and discipline in the armed forces. This is in violation of Article 134, UCMJ.

END OF CHARGES

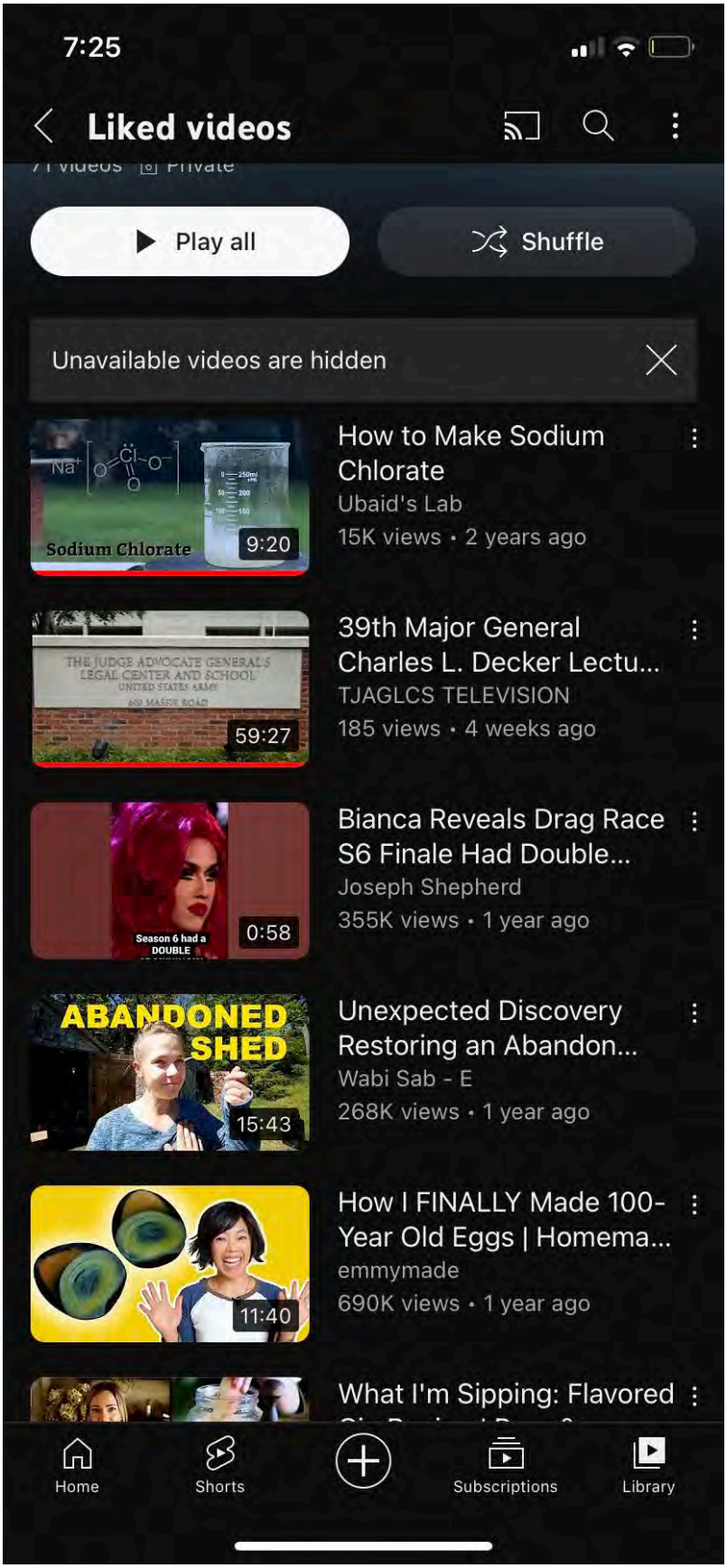

7:25
Liked videos
Play all
Shuffle
Unavailable videos are hidden
How to Make Sodium Chlorate
Ubaid's Lab
15K views • 2 years ago
Sodium Chlorate
9:20
39th Major General Charles L. Decker Lectu...
TJAGLCS TELEVISION
185 views • 4 weeks ago
59:27
Bianca Reveals Drag Race S6 Finale Had Double...
Joseph Shepherd
355K views • 1 year ago
Season 6 had a DOUBLE
0:58
Unexpected Discovery Restoring an Abandon...
Wabi Sab - E
268K views • 1 year ago
ABANDONED SHED
15:43
How I FINALLY Made 100-Year Old Eggs | Homema...
emmymade
690K views • 1 year ago
11:40
What I'm Sipping: Flavored
Home
Shorts
Subscriptions
Library

EXHIBIT 26


01 FOR USE ON
PASTURES
LAWNS
02 CONTROLS
BROADLEAF WEEDS
Amine 400
60° 90°
WARM-WEATHER SOLUTION
8
RAINFAST 8 HOURS
GRAZING*
*when used alone once spray has dried
03 ATTRIBUTES

EXHIBIT 27

NO. 22-003209-CV

JEFFERSON FISHER RANCH	§	**IN THE 725th DISTRICT COURT**
	§	
Plaintiff,	§	
	§	**IN AND FOR**
v.	§	
	§	
ARMADILLO MODERN POWER LIGHT ELECTRIC,	§	**BELL COUNTY**
	§	
	§	
Defendant.	§	**STATE OF LONE STAR**
	§	

FINAL JURY INSTRUCTIONS

Members of the jury, I shall now instruct you on the law that you must follow in reaching your verdict. It is your duty as jurors to decide the issues, and only those issues, that I submit for determination by your verdict. In reaching your verdict, you should consider and weigh the evidence, decide the disputed issues of fact, and apply the law on which I shall instruct you to the facts as you find them, from the evidence.

The evidence in this case consists of the sworn testimony of the witnesses, all exhibits received into evidence, and all facts that may be admitted or agreed to by the parties. In determining the facts, you may draw reasonable inferences from the evidence. You may make deductions and reach conclusions which reason and common sense lead you to draw from the facts shown by the evidence in this case, but you should not speculate on any matters outside the evidence.

In determining the believability of any witness and the weight to be given the testimony of any witness, you may properly consider the demeanor of the witness while testifying; the frankness or lack of frankness of the witness; the intelligence of the witness; any interest the witness may have in the outcome of the case; the means and opportunity the witness had to know the facts about which the witness testified; the ability of the witness to remember the matters about which the witness testified; and the reasonableness of the testimony of the witness, considered in the light of all the

evidence in the case and in light of your own experience and common sense.

Evidence may be direct or circumstantial. “Direct evidence” is evidence which tends directly to prove or disprove a fact in issue. If a fact in issue was whether it rained during the evening, testimony by a witness that he/she saw it rain would be direct evidence that it rained. On the other hand, “circumstantial evidence” is evidence that tends to prove some other fact from which, either alone or together with some other facts or circumstances, you may reasonably infer the existence or nonexistence of a fact in issue. If there was evidence the street was wet in the morning, that would be circumstantial evidence from which you might reasonably infer it rained during the night. There is no general rule for determining or comparing the weight to be given to direct or circumstantial evidence. You should give all the evidence the weight and value you believe it deserves.

The issue for your determination is whether the injuries sustained by the Jefferson Fisher cattle were the result of the alleged negligence of Drew Martins, whether Armadillo Power Light Electric (AMPLE) can be held responsible for that negligence if it occurred, or of the negligence of Jefferson Fisher Ranch. In that regard, you are instructed that Jefferson Fisher Ranch has the burden of proof on the negligence claim against AMPLE, meaning that Jefferson Fisher Ranch must convince you by a preponderance of the evidence that, in their view, the negligence of its employee, Drew Martins, was a substantial factor in bringing about Plaintiff’s injuries and without which the injuries would not have occurred. You are further instructed that AMPLE has the burden of proof on the claim that Plaintiff’s injuries were caused solely or in part by the negligence, if any, of Plaintiff or by the negligence of Drew Martins who was acting outside the scope of his employment or a combination of the negligence, if any, of one or more of those parties, or from some other cause.

There may be more than one cause of an injury, but if an act or omission of any person not a party to the suit was the “sole cause” of the injury, then no act, omission, or product of any party

could have been a cause of the injury.

"Negligence" means failure to use ordinary care, that is, failing to do that which a person of ordinary prudence would have done under the same or similar circumstances or doing that which a person of ordinary prudence would not have done under the same or similar circumstances.

"Ordinary care" means that degree of care that would be used by a person of ordinary prudence under the same or similar circumstances.

A "high degree of care" refers to that degree of care applied by a person in a given circumstances. The degree of care exercised is proportional to the danger involved. Restricted use pesticides require a high degree of care. Sodium chlorate is a restricted use pesticide.

"Proximate cause" means that cause which, in a natural and continuous sequence, produces an event, and without which cause such event would not have occurred. Generally, in order to be a proximate cause, the act or omission complained of must be such that a person using ordinary care would have foreseen that the event, or some similar event, might reasonably result therefrom. This case may have involved the use of a substance that required a high degree of care which must have been proportional to the danger involved. There may be more than one proximate cause of an event.

This case also raises the question of something called *respondeat superior*. This Latin phrase means "let the master answer," and it stands for the concept that a business may be responsible for the negligent act or omission of its employees so long as the behavior occurs during the course of their employment. Here, Jefferson Fisher Ranch claims that their business was harmed by Drew Martins's negligence.
Jefferson Fisher Ranch also claims that AMPLE is responsible for the harm because Drew Martins was acting as their employee when the incident occurred. If you find that Drew Martins's alleged negligence harmed Jefferson Fisher Ranch, then you must decide whether AMPLE is responsible
for the harm. In order to decide whether AMPLE is responsible, you must also decide whether Drew Martins's behavior was compliant with company policy and whether the company either directly or indirectly encouraged Martins to violate that policy, ie whether Martins was acting in the course of their employment.

Answer "Yes" or "No" to all questions unless otherwise instructed. A "Yes" answer must be based on a preponderance of the evidence unless you are otherwise instructed. If you do not find that a preponderance of the evidence supports a "Yes" answer, then answer "No." The term "preponderance of the evidence" means the greater weight and degree of credible evidence admitted in this case. Whenever a question requires an answer other than "Yes" or "No," your answer must be based on a preponderance of the evidence unless you are otherwise instructed.

At this point in the trial, you, as jurors, are deciding if the deaths of the cattle were proximately caused, in whole or in part, by negligence, if any, of Drew Martins, and if Martins was acting in the scope of AMPLE's employment at the time of the behavior, or by the negligence, if any, of Drew Martins, in his individual capacity, or by the negligence, if any, of Jefferson Ranch or from some other cause. If you find AMPLE was at fault in whole or in part, you will hear additional argument from the attorneys and you will hear additional witnesses testify concerning damages. Until that time, you are not to concern yourselves with any question of damages. Your verdict must be based on the evidence that has been received and the law on which I have instructed you. In reaching your verdict, you are not to be swayed from the performance of your duty by prejudice, sympathy, or any other sentiment for or against any party. When you retire to the jury room, you should select one of your members to act as foreperson, to preside over your deliberations, and to sign your verdict. You will be given a verdict form, which I shall now read and explain to you.

(READ VERDICT FORM)

When you have agreed on your verdict, the foreperson, acting for the jury, should date and sign the verdict form and return it to the courtroom. You may now retire to consider your verdict.

_____

Honorable Maurice Lescault
Bell County Circuit Judge

NO. 22-003209-CV

JEFFERSON FISHER RANCH	§	**IN THE 725th DISTRICT COURT**
	§	
Plaintiff,	§	
	§	**IN AND FOR**
v.	§	
	§	
ARMADILLO MODERN POWER LIGHT ELECTRIC,	§	**BELL COUNTY**
	§	
	§	
Defendant.	§	**STATE OF LONE STAR**
	§	

JURY QUESTION NO. 1

Did Drew Martins engage in negligent behavior that was a proximate cause of the injures in question?

Answer "yes" or "no."

Answer: _____

If you have answered "yes" to Jury Question No. 1, answer the following question. Otherwise, do not answer the following question.

JURY QUESTION NO. 2

When Drew Martins caused the damages was he acting within the scope of his employment by Armadillo Modern Power Light Electric?

Answer "yes" or "no."

Answer: _____

If you have answered "yes" with respect to both previous questions, answer the following question; otherwise, do not answer the following question.

JURY QUESTION NO. 3

Did the plaintiff, Jefferson Fisher Ranch, also engage in negligent behavior that was a proximate cause of the injuries in question?

If you have answered "yes" with respect to question 3, answer the following question; otherwise, do not answer the following question.

JURY QUESTION NO. 4

What percentage of responsibility do you attribute to each of the plaintiff and defendant?

1. Armadillo Modern Power Light Electric _____%

2. Jefferson Ranch _____%

Total 100 %

CERTIFICATE

We the jury, have answered the above and foregoing questions as herein indicated, and herewith return same into Court as our verdict.

_____
Kier Elmonairy
Presiding Juror

To be signed by those rendering the verdict if not unanimous.
