Control of Emissions from Motor Vehicles
Held on January 14th, 2020 at 2:00 pm
by Teleconference ***from the*** Nevada Division of Environmental Protection
4th Floor Great Basin Conference Room
901 South Stewart Street
Carson City, NV 89701
to the Nevada Division of Environmental Protection
Red Rock Room
2030 East Flamingo Road
Las Vegas, NV 89119

These minutes are prepared in compliance with NRS 247.035. Text is in summarized rather than verbatim format. For complete contents, please refer to meeting tapes on file at the Nevada Department of Motor Vehicles.

THIS MEETING WAS PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS ON January 8th, 2020

Department of Motor Vehicles
555 Wright Way
Carson City, NV. 89711

Nevada State Library
100 N. Stewart St.
Carson City, NV. 89701

Department of Motor Vehicles
305 Galletti Way
Reno, NV. 89512

Clark County Department of Air Quality Management
500 Grand Central Pkwy
Las Vegas, NV. 89106

Washoe County District Health Department
1001 E. 9th St.
Reno, NV. 89512

Department of Motor Vehicles Website
www.dmvnv.gov

Department of Motor Vehicles
2621 East Sahara Ave.
Las Vegas, NV. 89104

1. Call to Order by the Chairman

Chairman Mike Sword was unable to attend this meeting and directed William Striejewske, Vice Chairman, to conduct on his behalf. The meeting of the Advisory Committee on Control of Emissions from Motor Vehicles was called to order at 2:00 pm.

2. Roll Call

MEMBERS:	***Representing***	***Present***	***Primary***	***Alternate***	***Voting***
JD Decker	DMV / CED	☒	☒	☐	☒
Mike Sword – Chairman	CC/DAQEM	☐	☒	☐	☐
Robert Tekniepe	CC/DAQEM	☒	☒	☐	☒
Shannon Rudolph	NDOA	☐	☐	☒	☐
William Striejewske	NDOA	☒	☒	☐	☒

Danilo Dragoni	NDEP	☒	☒	☐	☒
Joseph Perreira	NDEP	☒	☐	☒	☐
Sig Jaunarajs	NDEP	☒	☒	☐	☒
Ivie Hatt	DMV/CED	☒	☒	☐	☒
Louis Lanuza	DMV/CED	☐	☐	☒	☐
Mark Costa	NDOT	☐	☒	☐	☐
Sondra Rosenberg	NDOT	☐	☐	☒	☐
Araceli Pruett	CC/AQEM	☒	☐	☒	☐
Jeffrey Buss	U.S. EPA: Region 9	☐		Ex Officio	
Julie Hunter	WC-AQMD	☐	☐	☒	☐
Daniel Inouye	WC -AQMD	☒	☒	☐	☒
Charlene Albee	WC-AQMD	☐	☒	☐	☐
Yann Ling Barnes	WC-AQMD	☐	☐	☒	☐
Zheng Li	CC/AQEM	☐	☐	☒	☐
Patricia Bobo	NDEP	☐	☐	☒	☐
John Neese	DMV/CED	☒	☐	☒	☐

Vice Chairman William Striejewske moved for Mike Sword was unable to attend this meeting and directed William Striejewske, vice chair, to conduct on his behalf. The meeting of the Advisory Committee on Control of Emissions from Motor Vehicles was called to order at 2:00 pm.

3. Public Introductions

INTERESTED PARTIES:	**Representing:**
Morgan Friend	DMV/CED
Chris Patterson	DMV/CED
Kevin Williams	DMV/CED
Desreie Woods	DMV/CED
Robin Roques	DMV/CED
Joel Tyning	DMV/CED
Hywel Davies	DMV/CED
John Lee	DMV/CED
Arun Kumaran	DMV/CED
Todd Pardini	DMV/CED
Glenn Smith	DMV/CED
Zachary Inman	DMV/CED
Mark Thomsen	DMV/CED
Brett Patterson	DMV/CED
Kevin Malone	DMV/CED
Norma Havens	USA Fleet Solutions
Eric Wahrer	Dekra Automotive North America
Erin Flynn	Smog Busters
Jeffrey Kinder	NDEP
Bill Delaney	WEP
Michael Delaney	WEP
Chris Robbins	WEP

Chuch Gee	WEP
Richard Perkins	The Perkins Co.
Leo Drozdoff	The Perkins Co.
Peter Marrocco	Parsons
Jim Valerio	Parsons
Lloyd Nelson	Member of the Public
Matt Anderson	Forward Thinking
Franciso Vega	WCAQMD
Carol Kilner	Banalogic
Amanda Brazeau	Tesla

Vice Chairman William Striejewske mentioned a need to leave early due to a prior commitment in Reno and in case the meeting ran long it was determined by way of vote that Robert Tekniepe would take over the meeting if necessary.

4. Public Comments

A. No Public Comments.

5. Approval of Agenda Order

A. The Agenda was approved by the committee in the order as it was presented.

6. Approval of October 2019 Meeting Minutes:

A. October meeting minutes were approved by the committee.

7. Biometrics Presentation to Committee – Worldwide Environmental Products (WEP).

- **PowerPoint Presentation Available upon Request**

A. **Michael Delaney (WEP);** Founded in 1984 and solely focused on providing technology for the vehicle inspection programs both here domestically and around the world and has been the provider of vehicle emissions testing here in the State of Nevada since the year 2000. Today we'd like to go over some of the technologies we've implemented in other vehicle inspection programs to help reduce fraud that are proven to be working in other jurisdictions.

B. **Bill Delaney (WEP);** There is different types of fraud. There is fraud that happens when identifying who the actual inspector is – is the inspector who started the test/used their log in credentials the same person who completed the test or were credentials taken/used inappropriately? Currently the system has a credential/log in based password and we are proposing to use finger vein technology which used near infrared light and takes an image of your finger vein. You can scan in up to 10 fingers/keep profiles of 10 different fingers. It is a unique way of identifying people especially in the automotive industry where finger prints can be a little bit touchy due to oil/grease and don't work as well. The finger vein technology works well. It's being implemented in Mexico, Georgia has been using it for 6 to 7 years and California is moving to this type of technology as well. In this case the biometric can be stored locally on the analyzer. Based on the comparison of 4 biometric technologies to include; finger vein, finger-print, Iris and Face, the finger vein is

probably the safest/best to use when considering Accuracy, Security, Speed, Ease of Use, Privacy, User Resistance, Size and Cost parameters. Finger vein technology is currently being used in Europe/Asia within the banking industry with ATM machines.

C. **Michael Delaney (WEP);** We have experience will all 4 different types of biometrics and because fraud is such a common topic in our industry and we've seen so far without a doubt finger vein has been the most successful not just domestically but internationally.

D. **Bill Delaney (WEP);** Facial recognition is something a lot of people like but it doesn't work very well in our industry with some of the analyzers due to sunlight on the camera. Finger-print works pretty good, we use it in Missouri, but the finger vein is a bit more accurate. What we would propose is to add these to the current machines. We can handle the enrollment or work with DMV to handle the enrollment. The second piece for fraud detection is to upgrade the OBD II. Currently the OBD II modules have reached their "end of life" as far as availability for upgrades and most jurisdictions have moved to DAD (Data Acquisition Devices) OBD. These units are certified to have a higher connectivity rate (99.9%). It has a higher EVIN capture rate than other types of OBD II pickup devices out there. Also there is proprietary software that helps detect fraud in low level firmware and we can 100% of the time detect when a simulator has been hooked up as opposed to a vehicle. Additionally we suggest using a DAD Self Tester that reduces the case of artificially failing vehicles. Currently there is no real self-test in the equipment out there now and this can be used with the current OBD II units as well. We propose that during an inspection at the time if there is no communication with the vehicle at the time of inspection the inspector would be prompted to remove the connector from the vehicle, plug it into the self-tester and it checks all OBD II protocols and it also checks all the pin outs in the cables do you know the hardware is properly working. By doing this it will prevent people from having to wait until the 2nd or 3rd vehicle failure in a row before questioning whether the analyzer is working properly.

E. **Michael Delaney (WEP);** This is much more of a high level discussion pointing out some basic things. Getting the specific details of what we are doing is something that would take quite a bit of time and due to time constraints we are unable to cover it now but we are willing to make arrangements for future discussion.

F. **Bill Delaney (WEP);** Some of the newer vehicles has the odometer check so some more data can be mined in support of fraud detection. The DAD OBD II also allows us to get more Mode 9 data that is currently limited. This allows us to get more data out of the vehicle to allow for more vehicle fingerprinting/data analysis in support of catching fraud – that's what it is all about.

Q: Sig Jaunarajs (NDEP); You mentioned capturing odometer miles, currently that information must be put in by hand so you can capture that somehow strait off the vehicle? We have a new statutory requirement to capture that information for transportation planning purposes.

A: Bill Delaney (WEP); Yes, of the vehicles that support that note – 2019 vehicles and newer. In older vehicles the information is kept in various areas depending on the make and model of the vehicle but at this point it is considered proprietary and not easily obtained. The manufacturer wasn't required to provide the information until later.

Q: Sig Jaunarajs (NDEP); How much of a problem is fraud with regard to the inspectors and how often do you see this?

A: Todd Pardini (DMV/CED); It is relative to the covert operations that the department conducts. Currently we do multiple covert operations at the stations and those normally deal with procedural violations. I don't have the information with me to provide the average for EVIN fraud, but it is a concern/something that does/is happening.

A: Glenn Smith (DMV/CED); When we first started fraud detection operations it was quite an eye opener as to how much we saw. It has come down over the years but initially it was quite substantial.

A: Bill Delaney (WEP); The amount of fraud is usually perpetrated by a smaller group of people, it's all about the finding/identifying them, and those people can produce a lot of fraud. People with cars that won't pass/that are "chipped" tend to know where to go. They are high profitable places for those who are cheating. There has never been a jurisdiction that hasn't had fraud.

G. **Leo Drozdoff (The Perkins Co);** As a WEP representative, we worked with the Chair to put this presentation on at a high level. We appreciate the opportunity to come talk to the group and to the extent this committee/other agencies wants to know more about what's possible and drill into some of the details we'd happily come back or answer future questions.

H. **Bill Delaney (WEP);** To add on to what Leo is saying, if it makes sense to break out into smaller groups and share with them some of the things that we can do we'd love to have the opportunity to do that. We thank you for the opportunity to come up and show you just a few things.

8. Continuous Monitoring Presentation to Committee – Forward Thinking.

- **PowerPoint Presentation Available upon Request**

A. **Ivie Hatt (DMV/CED);** Opening up for Forward Thinking – this is the Continuous Monitoring Project we've been working on for some time now. We are currently in the testing phase of brining the program forward. Forward Thinking is the vendor currently participating in the pilot program and will be the first vendor to be certified with the DMV.

B. **Matt Anderson (Forward Thinking);** Vice President of sales for Forward Thinking. Based out of Jericho, New York with an international presence in over 10 countries and a nationwide install network with 24 x 7 support. We have dedicated developers/customer support personnel for the Nevada emissions program to ensure that it is as successful as possible. We are a full suite telematics platform but the discussion we are about to have is exclusive to the OBD II device. When it comes to the OBD II have a couple different options:

1. Plug & Play Device: Simply plug it in and it automatically reads the ECM and transmits the data back to intel-a-hub so you have the information in real time, automatically downloads any firmware updates so nothing is needed on the end user side. and

2. 3 Pin Power Device: Used when a vehicle is too old to have an OBD II device or when there is something already plugged in to the vehicle's OBD II Port. OBD II does not "play

well" with other devices so if you have something already plugged into the OBD II we do not recommend you plug in a second device as it will cause problems. We have a device available for you if there is something already plugged into the OBD II.

The whole idea behind this project was to be able to transmit all the emissions data/DTCs to the state in real time for a low cost. Our goal is to get as many devices out there as we can in order to cover the data/some hardware costs and make this program as efficient and widespread as possible for the State of Nevada. What we do is capture the DTCs/vehicle information in real time and send it to the state based on established requirements. This allows the end user the substitute the typical "in person smog check" with an electronic version and forego the need to go to an analyzer station/wait for an annual smog check. Participating vehicles must be registered in the State of Nevada in Washoe or Clark County. Forward Thinking is prepared to handle all of the hardware, installation if necessary (in order to save cost end users can install the device), provide online training as required and 24/7 customer support/online web training at no additional cost. For real time tracking we track every one minute, one mile or every 30 degree turn. Extended capabilities include pulling location, odometer, historical views and anything else that a normal telematics device provides. Additionally it can analyze and report the data for trends (speeding, idling, RPM, fuel, location, manufacturer variances in DTC count, etc.).

Q: Sig Jaunarajs (NDEP); I believe in 2013 or 2015 the statute was changed to allow continuous monitoring. For the sake of the committee and since some of the members are new, can we go over the history of this since it has been awhile coming?

A: Ivie Hatt (DMV/CED); It was adopted around 2007 and Lloyd Nelson was actually the Emissions Control Manager at the time.

A: Lloyd Nelson (Member of the Public); It started out with the study that went from 2008-2009 that looked at the different types of OBD continuous monitoring devices. Regulations came in around 2011.

A: Ivie Hatt (DMV/CED); After the study it was recommended that we did not start continuous monitoring until OBD was mandated and EPA came out with the guidance document. There has been a lot of changes, personnel turnover/competing priorities, within the Emissions Control Department, difficulty on holding onto programmers as well as time was necessary for the industry to meet the EPA standards whereby now we are completely engaged in support of getting the program fully operational.

Q: Sig Jaunarajs (NDEP); For clarification all of this is purely informational at this point and no decision is being asked to be made and/or action to be taken?

A: Ivie Hatt (DMV/CED); Yes, just an update to let you know that we are in the testing phase right now.

A: Arun Kumaran (DMV/CED); We are in non-production region piloting with Forward Thinking and we are planning to go live in a month or two. Once we are live fleets can sign up with certified vendors, Forward Thinking/others, and those meeting the requirements can skip the smog testing at smog stations when renewing registrations.

Q: Sig Jaunarajs (NDEP); So, you are going to have a certification process for new vendors?

A: Ivie Hatt (DMV/CED); The certification process for new vendors is already in place.

Q: William Striejewske (NDOA); Once DMV continuous monitoring goes live are they going to reach out to other departments with qualifying fleets to see whether or not they would be interested in participating in the continuous monitoring program?

A: Ivie Hatt (DMV/CED); A couple of weeks ago we sent out a notification to all fleets in the department's database letting them know this program is moving forward.

A: Matt Anderson (Forward Thinking); We've had about 10 conversations with interested fleet representatives three of which are working to participate in the pilot. This helps us obtain real data to validate the information received as well as creates champions of the program to help facilitate its expansion.

Q: William Striejewske (NDOA); Would it be possible to receive/distribute copies of the presentations given today?

A: Matt Anderson (Forward Thinking); Of course.

A: Bill Delaney (WEP); WEP has no problem with doing that.

9. Second Round of VW Funded Awards

A. **Joe Perreira (NDEP);** Back in mid-November NDEP announced our awards for the 2019 round of the Diesel Emission Mitigation Fund which is how Nevada competitively awards funds associated with the Volkswagen settlement. We received 10 applications of those 6 were funded totaling just more than 3 million dollars in awards. We're funding projects associated largely with airport ground support equipment (replacing aging gas/diesel powered equipment with full battery electric) and refuse truck replacements (replacing diesel powered garbage trucks with CNG powered garbage trucks). We expect these projects to be completed over the next 18 or so months. The lead time on the ground support equipment replacements take a little bit longer and we've been working with both the Reno/Tahoe International Airport and McCarran International Airport to ensure they have the infrastructure in place. Collectively at this point we have supported the early retirement replacement of something like 150 pieces of airport ground support equipment – that is a lot of power so just getting the lines installed/everything ready to handle all of that takes a little bit of work. For refuse truck replacements this year we've awarded funding for 28, 23 in Las Vegas Public Services and 5 with Waste Management in Washoe County. We've also funded several school bus replacements – this year we're funding 5 for Humbolt County School District (they are 1997 diesel powered school buses that are very old and very dirty diesel buses) and they will be operating brand new diesel equipment. We are excited about it as it will be much cleaner air for the kids on the buses. Through the Nevada Clean Diesel Program we help fund projects that are funded primarily through the Diesel Emission Reduction Act Program and this year we are funding awards with Clark County School District and the City of Reno that is collectively 11 school buses and 5 service vehicles, the later are older vehicles that spend a lot of time idling in neighborhoods so we're excited to get those replaced. The next channel of funding

for Nevada's allotment of Volkswagen funds is through the Nevada Electric Highway. To date we've supported 9 charging station with another 8 in line to fund. We're really excited to be working with the Nevada Governor's Office of Energy on this and getting a basic infrastructure for electric vehicle charging across the state is really important not only to both the NDEP and the GOE but also the Governor. We are really looking forward to having that all built out.

B. **Danilo Dragoni (NDEP);** Since we have so many new faces in the room I would like to give a quick overview of the goal of what we are doing here. Everyone knows that Volkswagen was caught cheating and reached a settlement with the EPA and about 25 million dollars was awarded to Nevada for mitigation of NOx emissions. What we are trying to do with this replacement is to reduce NOx emission from diesel or gasoline engines in support of maximizing the emission reduction for money we are investing. This has been a process for us for the last 3-4 years. If you want to know more we do have a nice web page with all the documents and descriptions of what we do at ndep.nv.gov.

10. Informational Items

A. **Joe Perreira (NDEP);** We released our statewide greenhouse gas inventory and projections just a couple of weeks ago, I just wanted to mention that we did in the report site Assembly Bill 146 study concerning the inspection/testing of motor vehicle and systems for the control of emission from motor vehicles in Nevada. In the report we were talking about policies related to reducing emissions from motor vehicles. The work that this committee did it made things very easy to say this study exists and there's some recommendations in that study pertaining to the classic vehicle program in Nevada. We think that legislation should take a look at what is included in that study if they are looking to combat emissions as it relates to the classic vehicle equipment.

B. **Danilo Dragoni (NDEP);** In this report transportation comes out to be the first sector in terms of emission in Nevada so there are a lot of things related to transportation and there is a Statement of Policy for solutions/recommendations and is also located on our website at ndep.nv.gov.

C. **Sig Jaunarajs (NDEP);** Our office down in Clark County is going to be moving at some point – end of June/early July and it might take a while to have the office space to accommodate the meeting. There will be an update provided during the next IM Committee Meeting.

11. Public Comments

A. No Public Comments.

12. Next Meeting and Adjournment

A. The next IM Committee meeting will be held on April 14, 2020 at 2:00 p.m.

B. The meeting adjourned at 2:52 p.m.