1. 2017 Safety Award Entry

2. Category: Best Safety Innovation

3. Technical Division: Collection and Transfer

4. McNeilus Truck and Manufacturing

5. Bryan Dodds, Bdodds@mcneilusco.com; 507 884 7694

6. SWANA #: 1334425

7. On-Board Computer Solution Focuses on Safer Drivers and Preventable Accidents

8. Product is being implemented in the counties:
   a. Lawrence County, AL
   b. Lauderdale County, AL
   c. Tyler, TX
   d. Partnership with Ft Worth, TX and Knights Waste
   e. Partnership with Eureka Recycling and St Paul, MN
   f. EnviroWaste and several councils in New Zealand

9. Populations range from 80k-1M+
Executive Summary

McNeilus Truck and Manufacturing has partnered with FleetMind Solutions in 2016 to offer an integrated safety solution call the SSV10. The SSV10 is an on-board computer that provides a comprehensive safety solution that allows for a 360 degree birds eye view of the vehicle, object detection, live stream video, video playback, driver safety coaching and scorecard, and automated routing. The product can be installed on any refuse vehicle by any manufacturer. Safety technology is always developing, so with this on-board computer platform, the latest safety features and functionalities can be pushed automatically to the software without the need for additional hardware or installations. An important part of the safety innovation is the training and implementation. With over 30 branches in the US, McNeilus makes sure that the haulers know how to utilize the software and incorporate it into their daily activities through rigorous training and on-site support.

Questions:

1. Describe the safety innovation you implemented in 2016 (during either the calendar or fiscal year—if the fiscal year, give dates), and what hazards you were seeking to address in taking this action.

The safety innovation that McNeilus implemented in 2016 was the addition of the SSV10 on-board computer to new and existing refuse trucks. For the last few years McNeilus has been collecting feedback on safety issues and accidents have been experiencing. With that feedback, McNeilus set out to make sure that they could provide a product that incorporates the latest safety technology and the robustness to allow updates to the system with new features as they become available. The safety innovation was so significant it took McNeilus from offering a camera and monitor in 2015 to offering a system that provides live streaming video, 360 degree birds eye view, driver coaching and scorecard, DVR, breadcrumb trail, vehicle alerts and alarms, and obstacle detection in 2016. McNeilus was not only looking to provide a total safety solution, but has dedicated a team to support the product and teach haulers how to implement it into their safety program.

Images from youtube video (https://www.youtube.com/watch?v=bqWLn6NDgr0)：
2. **How did you measure results for your program before implementing your innovation?**

McNeilus spent over 1.5 years field testing and collaborating with FleetMind on developing this innovation. One of our major milestones was to see the frequency of accidents go down by 15% from the previous year’s data. Secondly, McNeilus looked at how the number of workman’s compensation claims compared year over year. Lastly, McNeilus wanted to see how many haulers didn’t have driver coaching or preventable accident training. They collected data on several haulers and found a number of them didn’t have any routine practice in place.

Article in Waste Advantage Magazine (http://www.mazdigital.com/webreader/31290?page=22)
3. **What results did you use as a baseline for comparison between the old program and the program after the innovation?**

McNeilus gathered as much data as possible, depending on when the customer implemented the product. For those that didn’t have a full year of implementation, they looked at the months data compared to the same month the previous year. One specific customer was Knight Waste working with the City of Ft Worth in Texas. McNeilus was able to get results from 3 months on accidents, workman’s compensation claims, and safety implementation programs.


4. **Over what period of time was the innovation implemented, and how?**

On the above case study with Knight Waste, the pilot test was implemented on two trucks for a period of 3 months. McNeilus went on-site to install the innovation and taught their staff how to utilize the safety software. There was also training with the drivers on how to log in and out when starting their routes, how to use the monitor to see all the different camera angles, how to record events with video or pictures by utilizing the monitor, and even showed how the drivers can utilize the monitor as a two way radio.

Images from training documents and used during on-site learning courses:
5. What were the results of the innovation and how do they compare to the baseline you had established?

The results of the innovation led to a full fleet-wide system implementation. By making accident investigation more accountable and accurate, the innovation has saved Knights Waste thousands of dollars in potential claims and hours in investigation. Richard Knight, VP and COO for Knight Waste Service had this to say, “Implementing the SSV10 system will help us verify to the City of Fort Worth that customers are being serviced and provided them with that information in real-time. The system will also enable us to document activities and incidents with video and photos, significantly reducing our lability…” “In my opinion, it has proven to be the “most complete” technology solution for our needs.”

Article from Recycling Today:

(http://www.recyclingtoday.com/article/mcneilus-brings-street-smart-vision-to-knight-waste-services/)
6. Why do you think your safety program deserves this innovation award?

I believe this product and program deserves the innovation award because safety should come standard. Manufacturers should be leading the charge on getting the safest trucks and the latest safety technology on the road. Accidents can happen the second the trucks come out of the factory, so it’s important that safety be integrated with all new trucks. Another important reason why this program should win the innovation award is because of the focus on implementation. McNeilus placed as much importance on training drivers and the office staff to utilize the technology as they did in the actual development of the product. McNeilus has made the decision to make safety standard and will continue to invest in safety technologies.