**CRC Report No. RW-118** 

## Re-locating the FEAT Data Repository to the University of Denver Library

November 2021



The Coordinating Research Council, Inc. (CRC) is a non-profit corporation supported by the petroleum and automotive equipment industries. CRC operates through the committees made up of technical experts from industry and government who voluntarily participate. The four main areas of research within CRC are: air pollution (atmospheric and engineering aviation fuels. lubricants. studies): and equipment performance; heavy-duty vehicle fuels, lubricants, and equipment performance (e.g., diesel trucks); and light-duty vehicle fuels, lubricants, and equipment performance (e.g., passenger cars). CRC's function is to provide the mechanism for joint research conducted by the two industries that will help in determining the optimum combination of petroleum products and automotive equipment. CRC's work is limited to research that is mutually beneficial to the two industries involved. The final results of the research conducted by, or under the auspices of, CRC are available to the public.

CRC makes no warranty expressed or implied on the application of information contained in this report. In formulating and approving reports, the appropriate committee of the Coordinating Research Council, Inc. has not investigated or considered patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents.

## **Re-locating the FEAT Data Repository to the University of Denver Library**

Gary A. Bishop

Department of Chemistry and Biochemistry University of Denver Denver, CO 80208

**Prepared for:** 

Coordinating Research Council, Inc. 5755 North Point Parkway, Suite 265 Alpharetta, Georgia 30022 Contract No. RW-118 The University of Denver has informally operated an internet data repository since the late nineties. The site (www.feat.biochem.du.edu) has hosted all of the emission databases collected from the various projects and research that Don Stedman's group has conducted since 1987. In addition to the databases the site has also contains all of the reports and journal publications that the group published as a direct result of the emission measurements collected. The site is generally divided according to the types of vehicle that were measured, heavyduty, light-duty and non-road vehicles. In addition the web site contains sections for links to other relevant work, a publications listing, non-journal reports, data and publications from the Smart Sign project, a listing of present and past sponsors of the research and a simple tutorial explaining how FEAT works.

With the passing of time the collection has grown and other researchers have used the data sets in their own research. FEAT emissions data has been featured in a number of important publications that have emphasized the importance of maintaining the repository. The current web site is run off a server that is in Gary's office and maintained by him. With retirement happening in the next year we are moving the repository to a University of Denver Library server where it will be hosted and maintained for the foreseeable future.

The University of Denver Library maintains a number of different resources that support the research activities at the University. One is called the Digital Commons which was envisioned for just this type of project and is going to be the new home for the FEAT Data Repository which can be found at the following location <u>https://digitalcommons.du.edu/feat/</u>. Figure 1 shows the screen that greets users when you follow the link to the site. The current library contact and maintainer for the site is Ms. Jenelys Cox (jennifer.cox@du.edu).

As the site's purpose is to store and allow retrieval of the various emission databases that the University of Denver has collected the layout of the site is very simple. There are four collections; 1) Publications, 2) Heavy-duty Vehicles, 3) Light-duty Vehicles and 4) Non-Road Vehicles. Figure 2 shows the bottom half of the top level screen for the repository that lists all of the links to the major sections or more directly to specific data sets within each of the categories. The journal articles, reports and presentations are listed by publication year. The heavy-duty data sets are arranged according to the method used to collect them either the FEAT optical remote sensing system or the OHMS integrated plume capture method. For the light-duty vehicles the measurements are arranged using the location of the measurements. Within the United States the sites are aggregated by State with each State having an individual link to go directly to that collection.

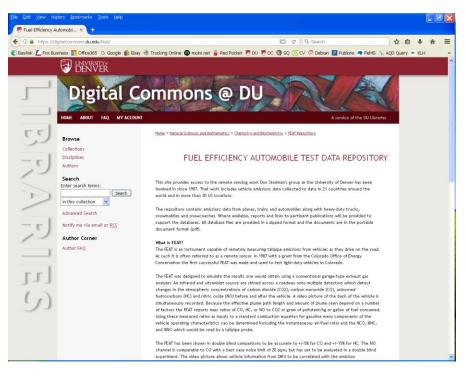


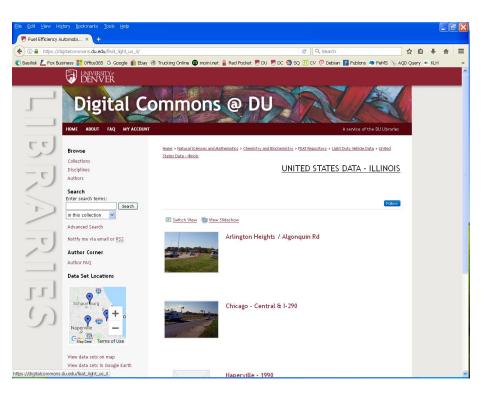
Figure 1. A screen capture of the top level page for the repository.

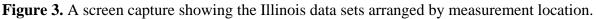
Elle Edit View Higtory Bookmarks Tools Help					
🖲 Fuel Efficiency Automobi × +					
			•	-	
( Intps://digitalcommons.du.edu/feat/		合自 📲	î	=	
😮 Basilisk 🛴 Fox Business 🚦 Office365 🛛 Google 👔 Eba	y 🛞 Trucking Online 🔘 moini.net 🧯 Red Pocket 🐬 DU 🐬 DC 🥘 SQ 🛄 CV  Oebian 📳 Publions 🖛 PeMS 🦮 AQD	Query 🛎 KLH		33	
	roov.			^	
	Browse the Fuel Efficiency Automobile Test Data Repository Collections:				
	Fuel Efficiency Automobile Test Publications				
	Heavy Duty Vehicle Data				
	= FEAT Heavy-Duty Vehicle Measurements				
	= FEAT Heavy-Duty Vehicle Measurements Publications				
	On-road Heavy-duty Monitoring System Measurements				
	On-road Heavy-duty Monitoring System Publications				
	Light Duty Vehicle Data				
	United States - All Data				
	United States Data - Arizona				
	= United States Data - California				
	= <u>United States Data - Colorado</u>				
	United States Data - Illinois				
	United States Data - Maryland				
	United States Data - Nebraska				
	= United States Data - Oklahoma				
	United States Data - Pennsylvania				
	= United States Data - Texas = United States Data - Utah				
	= United States Data - Washington				
	= World - All Data				
	= World Data - Asia				
	= World Data - Australia				
	= World Data - Europe				
	World Data - New Zealand				
	= <u>World Data - North America</u>				
OIGITALCOMMONS.	Home   About   FAQ   My Account   Accessibility Statement				
powered by bepress					
				~	

**Figure 2.** A screen capture of the bottom portion of the top level page for the repository. This shows two of the three sections listed, Heavy-duty and Light-duty vehicles.

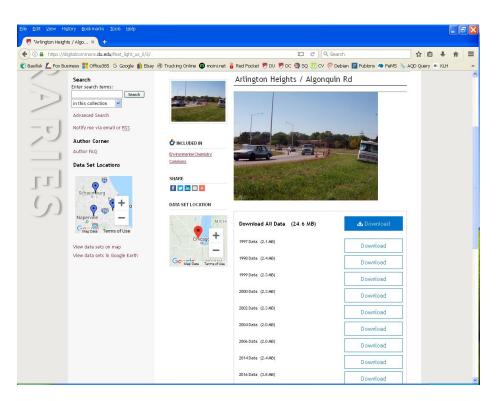
Outside of the United States the data is arranged by the continent that it was collected on. Non-road vehicle emission measurements are listed together.

Each data collection includes a map with the best location information that was available for identifying the sites used to collect the emission measurements. Where available we also have included a photograph of the location and the remote sensing setup. Figure 3 shows a sample of this layout for the Illinois sites with the map showing the locations on the left and each data collection site listed on the right. For Illinois we have data from three locations in and around the Chicago area, 1) Arlington Heights / Algonquin Rd (the main E-23 site), 2) Central & I-290 and 3) Naperville IL. Following the link for a particular site reveals the available data sets. If there are more than one data set a link is included to allow the user to download all of that sites data sets in a single file or individually. Figure 4 shows a sample of this layout for the Arlington Heights / Algonquin Rd. site.





We have now stopped adding any new data to the original FEAT web site and are adding new files to the Library web site. The current FEAT web site now has a redirection message on the front page (See Figure 5) and we expect to terminate its use by the end of 2021. The Library site is live now and can be accessed by anyone. When we turn off the FEAT web site we believe the University will provide an automatic redirect to the new site.



**Figure 4.** A screen capture showing the listing of all the databases that are available for the Arlington Heights / Algonquin Rd. site in Chicago. At the top of the list is a link that allows all of the files to be downloaded in a single file.

Eile Edit View Higtory E	cookmarks Icools Help		- 8 🗙				
U Colorado COVID: 710,14	× 🍿 Fuel Efficiency Automobi × +						
( www.feat.biochem.	du.edu	C Q Search	☆ 自 ♣ 余 ♀- ☰				
🗶 Fox Business 🚦 Office365 G Google 🁔 Ebay 🛞 Trucking Online 🚇 moinlinet 🔒 Red Pocket 👼 DU 👼 DC 🤤 SQ 🛄 CV 🖗 Debian 🎴 Publicis 👄 Pehlis 🚡 AQD Query 📼 IAH 🚇 Farvin							
	el Efficiency Automobile Test FEAT ata Center Sile Indox						
Heavy-Duty Vahicles	Fuel Efficiency Automobile Test Data Cente	er is Moving!					
Light-Duty Vehicles	This site provides access to the remote sensing work Don Stedman's group Denver has been involved in since 1987. That work includes vehicle emissic in 21 countries around the world and in more than 30 US locations.						
Non-Road Vehicles Publications Listing Reports	Emissions data from planes, trains and automobiles along with heavy-duty th movrocoathes can be found following the links to the left. Where available, r pertinent publications will be provided to support the databases. All database pipped format and the documents are in the portable document format (pdf) something you can't find let us know and we'll try and add it to the site!	eports and links to se files are provided in a					
The Smart Sign Project Spansors What's a FEAT?							
	What's New						
	<ul> <li>The FEAT Data. Center is Moving to a new loc: <u>Imp // digital common do a chall fail</u> All of the data set have now been moved and 1 working on moving an amary publications at poo- Thai at the will centain active while this is one-going data sets will no longer be added to this site you check the digital commons atte for the newest data     </li> </ul>	we are sīble. Jout new I need to					
Nttps://www.derverpost.com	WWW © FEAT biochem du edu Search	Google <sup>-</sup>					

Figure 5. The current front page of the FEAT website with the redirection information.