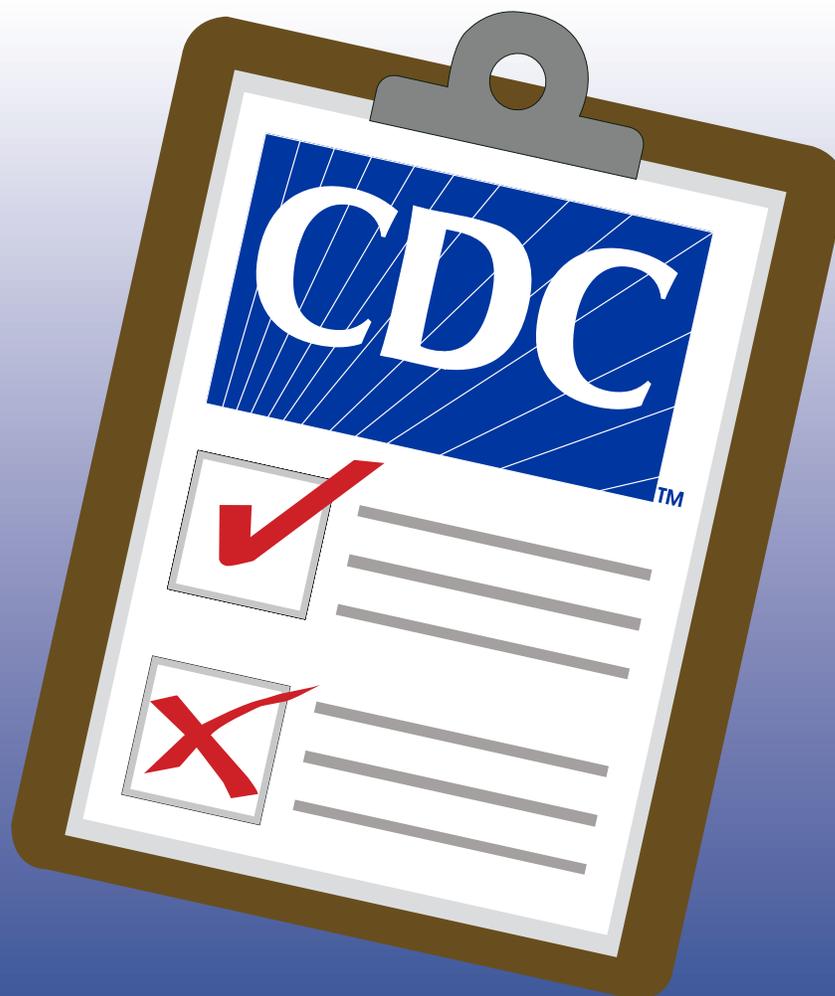
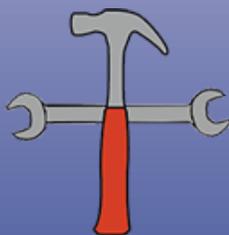


ErgoMine 1.0

Mining Ergonomics Audit for Android Help Guide



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No further development or upgrades for this software is planned. Any questions concerning this product can be directed to the NIOSH Mining program via email at OMSHR@cdc.gov.

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ErgoMine 1.0 Mining Ergonomics Audit for Android Help Guide

Introduction

Welcome to the ErgoMine Mining Ergonomics Audit App for Android! This help guide will provide you with an overview of the app's features and functions. ErgoMine 1.0 provides three mining-related audits that you can use to improve the health and safety of workers and the working environment. The audits include:

- Haul Truck
- Bagging
- Maintenance and Repair

The app is capable of collecting, storing, and exporting audit recommendations and will function in both portrait and landscape mode on all Android devices using *Android 3.2 Honeycomb* and higher. The app supports all screen sizes; however, we recommend that you use the app on a 7-inch screen or larger tablet. For the best performance of ErgoMine it is recommended that a PDF viewing application be installed on your device. This will optimize viewing of the additional PDF resources linked to in ErgoMine. There are several free PDF viewer applications available for download from the Google Play store.

Navigating the ErgoMine App

Throughout the app, an information icon appears in the top right corner. Selecting this icon loads a menu that allows you to access the:



- About dialog
- Disclaimer of liability
- CDC Privacy Policy
- Tutorial
- Help guide

The standard Android **Back** button on your device takes you to the previous page throughout the entire app. You can also use this button to exit an audit.



Conducting an Audit

Step 1: Select an audit type

1. On the Start page, select an audit type from the listed options: Haul Truck, Bagging, or Maintenance & Repair.



Figure 1. ErgoMine Start page showing the three types of audits available.

2. Once you have selected an audit type, the Audits page will load, showing any existing audits for the audit type you selected.

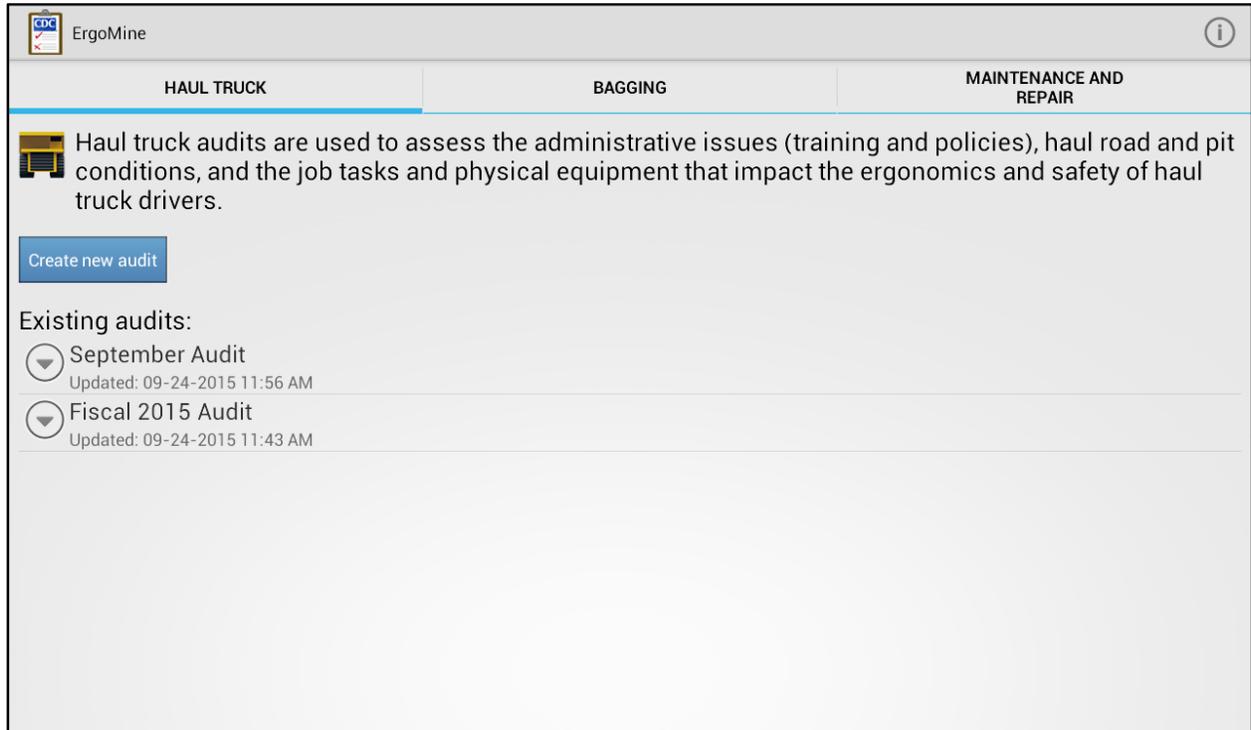


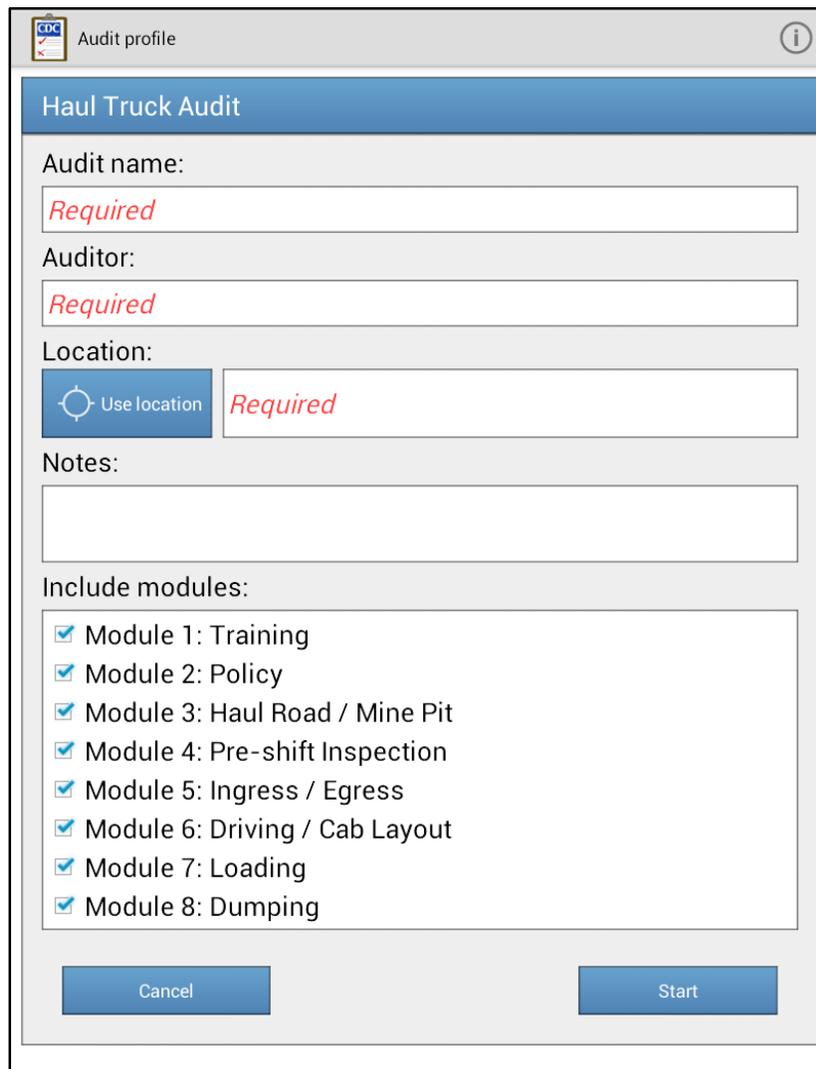
Figure 2. Audits page showing existing Haul Truck audits.

Step 2: Create a new audit or open an existing audit

To create a new audit:

1. On the Audits page (Figure 2), select the **Create new audit** button. This will open the Audit profile page (Figure 3). Completing the Audit profile page is required to begin an audit, but it can be edited at any time.

Create new audit



The screenshot shows a window titled "Audit profile" with a CDC logo in the top-left corner and an information icon in the top-right. The window has a blue header bar with the text "Haul Truck Audit". Below the header, there are several input fields and sections:

- Audit name:** A text input field with the word "Required" in red text below it.
- Auditor:** A text input field with the word "Required" in red text below it.
- Location:** A section containing a blue button with a location pin icon and the text "Use location", followed by a text input field with the word "Required" in red text below it.
- Notes:** A large, empty text area.
- Include modules:** A list of eight modules, each with a checked checkbox:
 - Module 1: Training
 - Module 2: Policy
 - Module 3: Haul Road / Mine Pit
 - Module 4: Pre-shift Inspection
 - Module 5: Ingress / Egress
 - Module 6: Driving / Cab Layout
 - Module 7: Loading
 - Module 8: Dumping

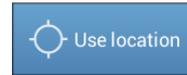
At the bottom of the window, there are two blue buttons: "Cancel" on the left and "Start" on the right.

Figure 3. Audit profile page.

2. Enter information on the Audit profile page in the required fields: Audit name, Auditor, and Location.

Using the location feature

You can manually enter location information or you can select the **Use location** button to tell the app to determine your location and perform an address lookup with Google Play services to associate this location with a specific landmark or area of interest. This feature uses Google Maps services and requires you to enable the Location (GPS) service on your device and connect to a WiFi or mobile network. You can enable these settings by leaving the app and entering your Android device's settings.



3. Modify the Module selections and fill in the Notes field if necessary.

Selecting audit modules

By default, all modules will be selected. Remove the ones you do not want to use by unchecking the box next to the module. You can return to the audit profile page at any time to make changes.

4. Select the **Start** button to begin the audit.



To open an existing audit:

1. On the Audits page (Figure 2), find the audit in the list of existing audits for the audit type selected. You can jump between Haul Truck, Bagging, and Maintenance and Repair audit types by touching the audit tab of interest at the top of the page.
2. Select any audit from the list to display a menu of actions you can perform on the audit. Select from the following actions:
 - **Edit profile.** This allows you to make changes on the Audit profile page.
 - **Open audit.** This will open the audit at your last saved question.
 - **View recommendations.** This allows you to view all recommendations based on the answers you have provided in the audit.
 - **Delete.** This will delete the audit, including all answers in all modules.

Step 3: Perform an audit

1. After creating a new audit or opening an existing one, an audit module will open.

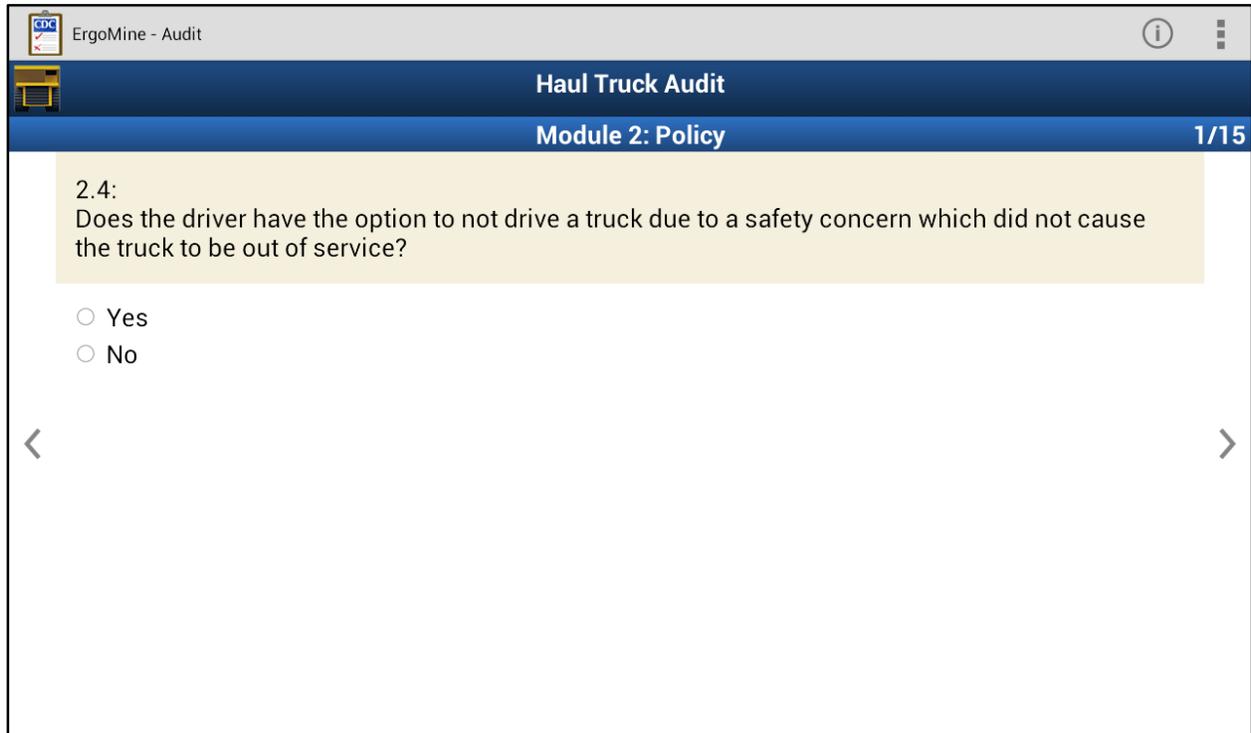


Figure 4. Example of a typical page you will see while performing an audit.

2. Use the left or right arrows, or swipe left or right, to move through the audit, answering the questions within each module.  

The audit automatically saves your answers as you progress through it, so do not worry about losing any information. The responses (and nonresponses) you provide may change the type and quantity of questions given to you, and this will be reflected on the right side of the module subtitle bar (the module subtitle bar displays the module number and name directly above the current question). The module subtitle bar will display your position in the list of available questions in the module.

3. As you answer questions, recommendations based on your answer may become available. To see the recommendations select the **View this answer's recommendations** button on the bottom of the page. 

4. Use the audit action menu to perform other available functions within the audit. While you are conducting an audit, the audit action menu icon, denoted by three stacked blocks, appears in the upper right corner beside the information icon. This menu includes all of the audit level actions you can perform on an audit. From this menu, you can:

- **Edit audit profile.** This displays the Audit profile page, where you can add or remove modules from an audit or modify other details. If you remove a module you have already provided answers to, the app will save those answers and make them available if you add the module back to the audit.
- **Close audit.** This closes the audit and returns you to the Audits page. Remember, the audit automatically saves your answers as you progress through it so there is no need to save it manually. You can also use the Android **Back** button to close an audit. 
- **Reset audit.** This action will clear all answers (to all questions) you provided in the audit and return you to the beginning of the audit.
- **Jump to beginning.** This action will take you to the first page of the audit.
- **Skip to module / Skip to question.** These functions allow you to move to a particular place in the audit.
- **View all recommendations.** This shows you all the current recommendations for the entire audit. Recommendations are only available for questions that you have answered.

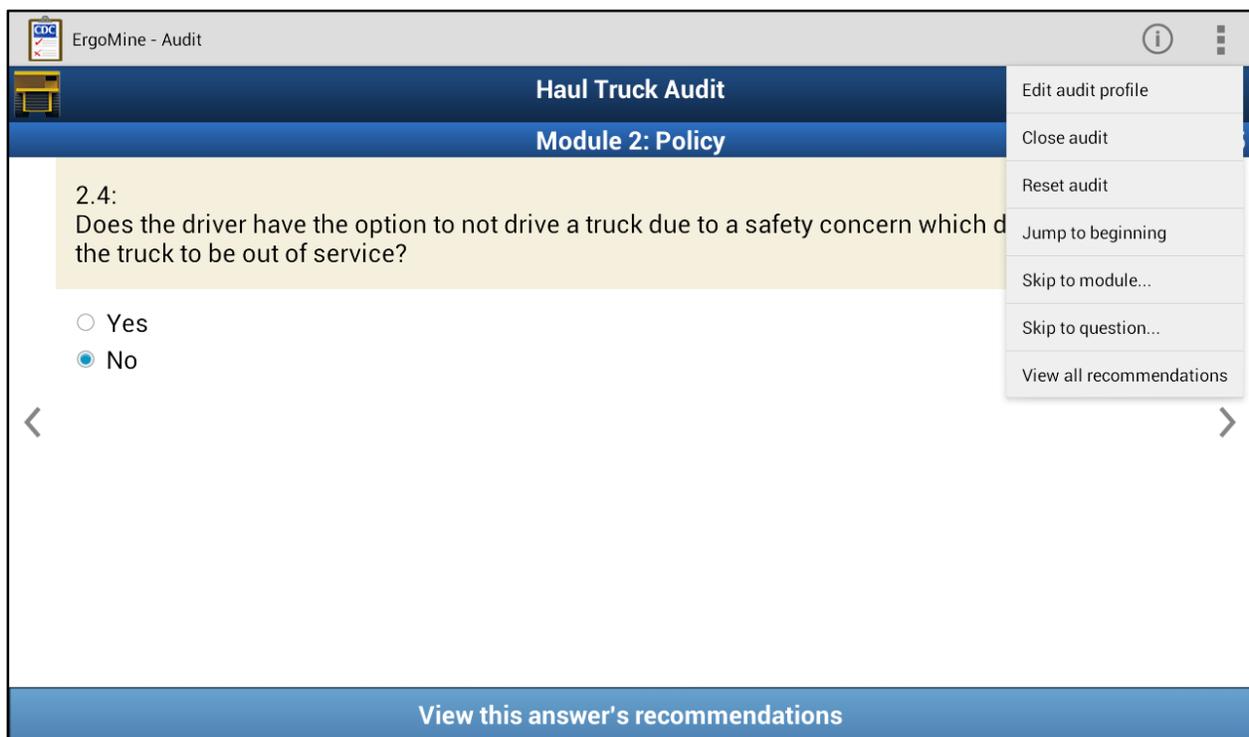


Figure 5. Audit action menu.

Step 4: View all recommendations for an audit

1. Select the **View all recommendations** option from the audit action menu to display a Recommendations page.

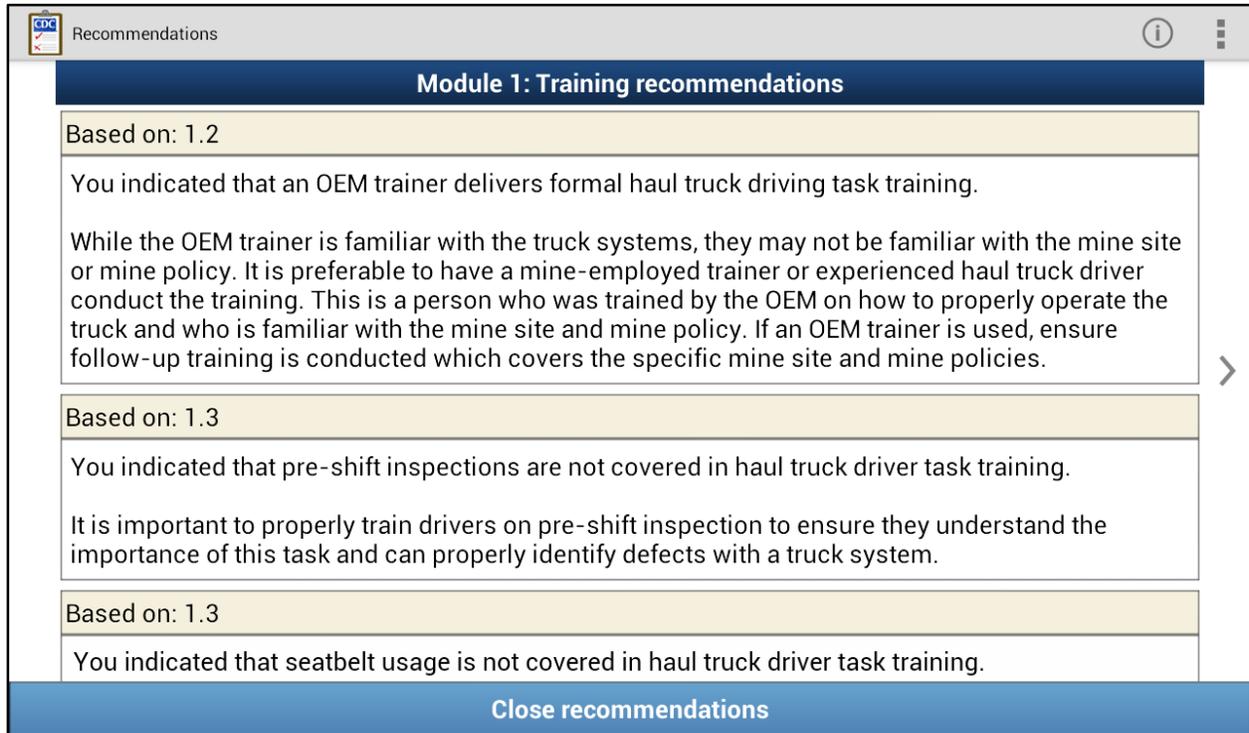


Figure 6. Example of a Recommendations page.

2. When viewing all recommendations for an audit, the recommendations are displayed by module with one module per page. Use the left or right arrows, or swipe left or right, to page through the recommendations for the various modules in the audit.
3. If desired, use the action menu in the upper right corner to send the recommendations via email or print them using Google Cloud Print. These features require a WiFi or mobile network connection, which you can enable by leaving the app and entering your device's settings.

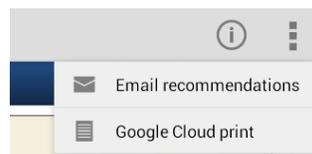


Figure 7. Action menu for the Recommendations page.

Emailing recommendations

You can export the recommendation reports generated by ErgoMine as an HTML file and email it to multiple recipients. In order to send the recommendations report via email, you will have to set up an email account on your Android device. To set up an email account refer to the instructions provided by your preferred email app.

- From the Recommendations page, use the action menu to select **Email recommendations**.
- A popup dialog will appear displaying the email apps available on your Android device.

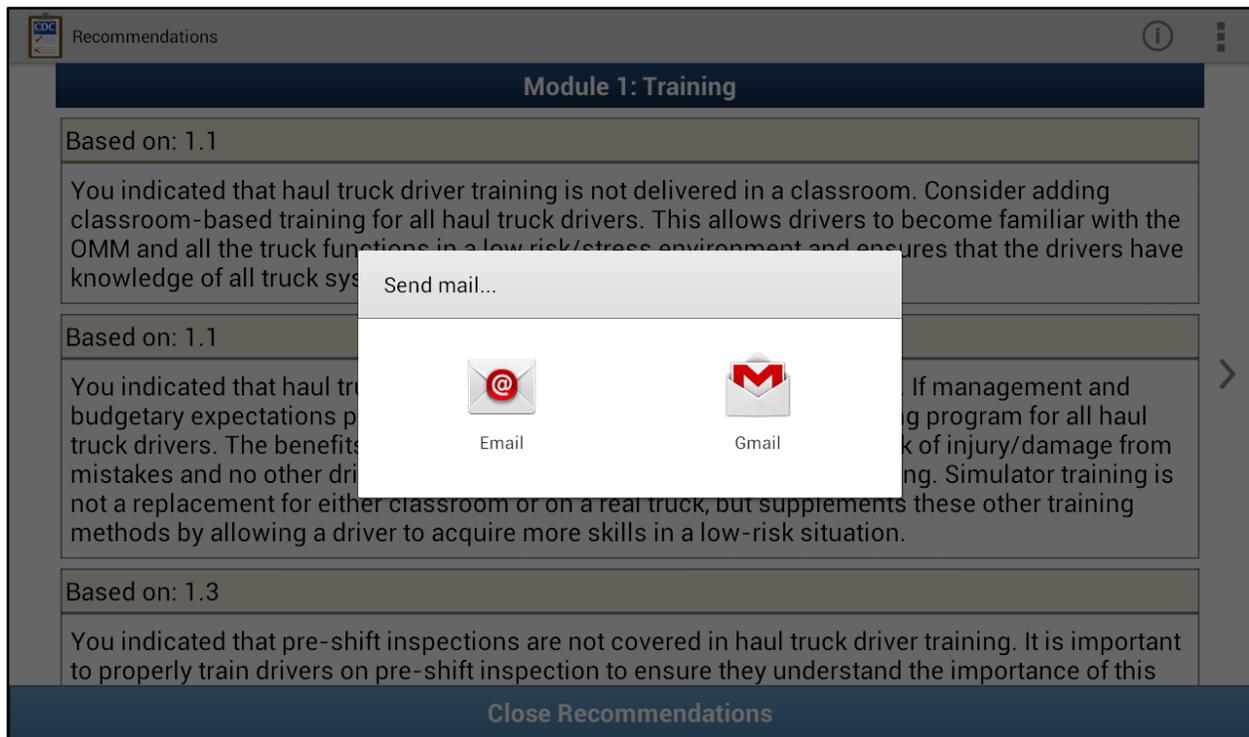


Figure 8. Example of the popup dialog showing email apps on a device.

- Navigate to an email client where you can enter recipients and email the HTML report.

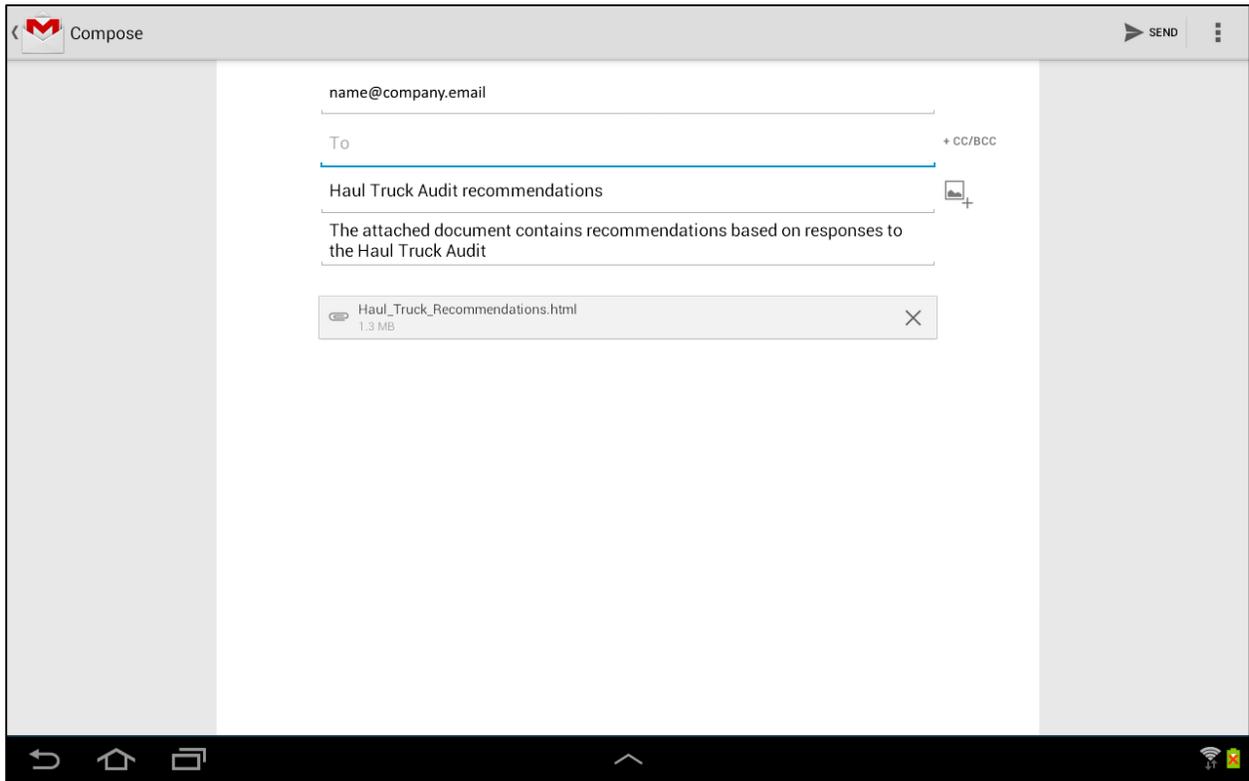


Figure 9. Example of an email client.

Printing with Google Cloud Print

You can have the recommendation reports generated by ErgoMine exported as an HTML file and sent to the Google Cloud Print service. The Google Cloud Print service allows you to print to your physical printer that you have set up with Google Cloud Print or save to Google Drive.

- From the Recommendations page, use the action menu to select **Google Cloud Print**. Google Cloud Print requires a Google account. A sign in screen will appear prompting you to sign in or create an account if you are not already signed in. Once signed in, the app will navigate to the Google Cloud Print page.

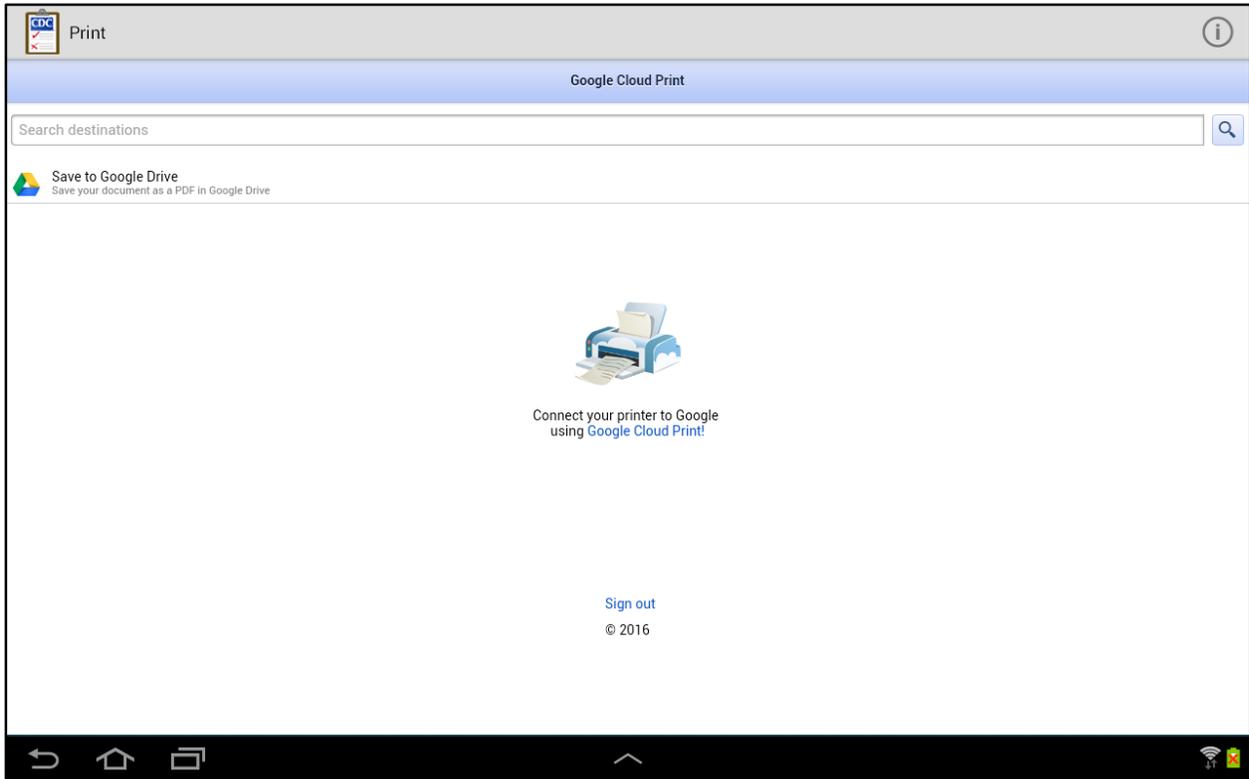


Figure 10. Example of the Google Cloud Print page.

- Select the destination for the HTML report. For example, if you select **Save to Google Drive**, Google Cloud Print will send the HTML report to your Google Drive and convert it to a PDF.

You can reach your Google Drive at <http://drive.google.com>.

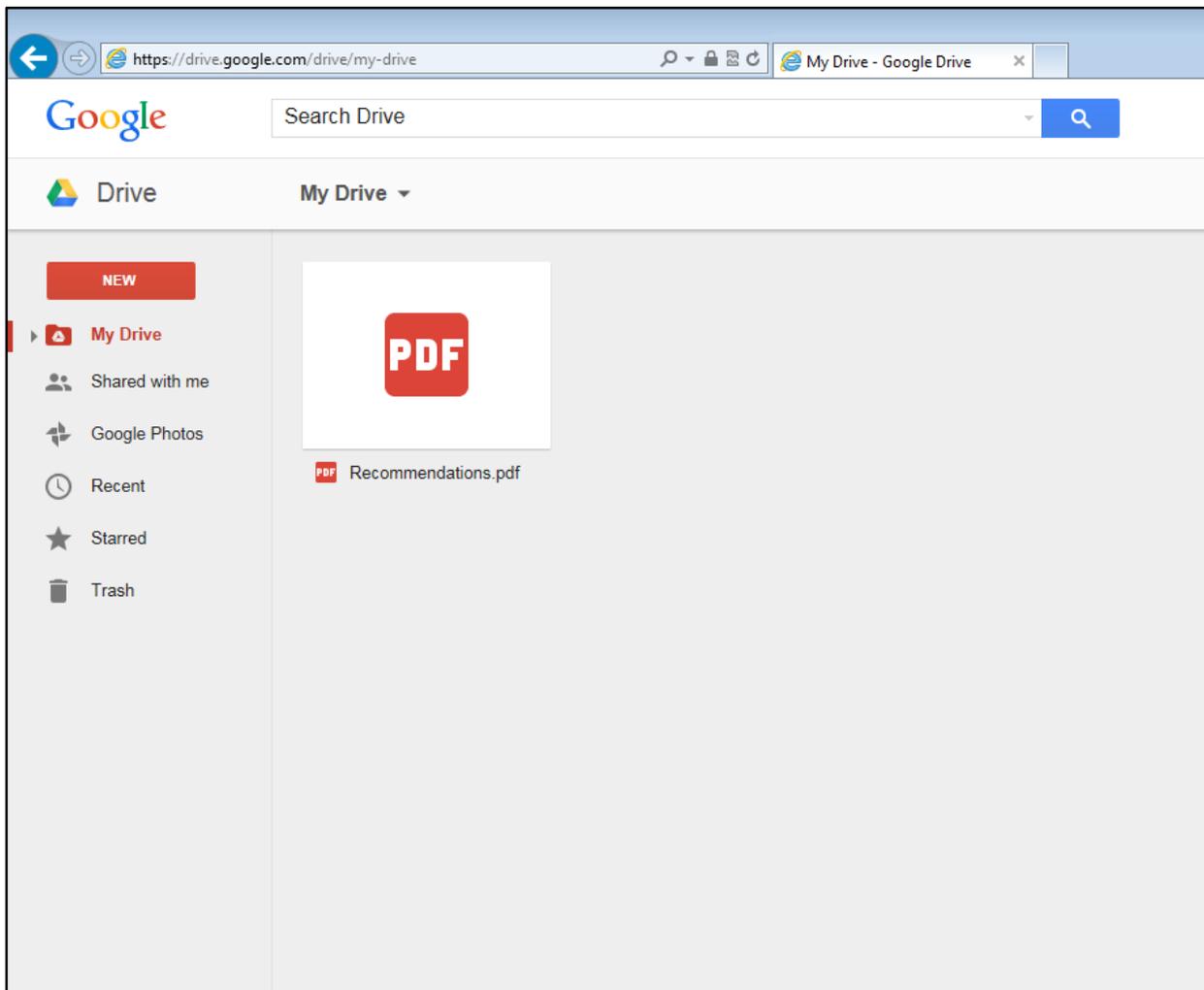


Figure 11. Example of a Google Drive page.

For more information on Google Cloud Print, see:

<http://www.google.com/cloudprint/learn/>

<https://support.google.com/cloudprint/?hl=en#topic=4456286>

Help and Support

The NIOSH Mining program would love to hear your feedback! Direct any questions concerning this product to OMSHR@cdc.gov.



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