The NELAC-Institute

Laboratory Accreditation Management System

TNI LAMS 2.0

Accreditation Body User Manual

01/30/20

Changes

11 July 17	Added instruction for AB Recognition Table Edit.
11 July 17	Made corrections and additions to the upload procedure.
28 Mar 18	Deleted reference to manual FOA edit/update
08 Apr 18	Added Lab_Type as the last column in Demographic CSV upload file.
18 Oct 18	Added information about filtering analytes by "Type"
29 Mar 19	Analytes associated with methods displayed for members on method info table
25 Apr 19	Added example of NIST Webpage analyte link display.

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Overview

Scope

This document describes the use of The NELAC-Institute Laboratory Accreditation Management System (TNI LAMS) 2.0 by Accreditation Bodies (ABs) and general users. It is not intended to fully document the database structure or web application.

Introduction

TNI LAMS provides a system for tracking environmental laboratory contact information, accreditation status, AB Fields of Recognition (Matrix-Technology combinations) and AB contact information. It also provides data to assist with secondary recognition by Accreditation Bodies (ABs) and provide easily accessible data repository using webbased technology for global access by all stakeholders. The system also provides a central location for method codes, analyte codes, and technology codes.

Although the underlying database structure remains unchanged from LAMS, LAMS 2.0 web user interface has been completely rewritten. Since the web language used in LAMS was no longer being supported by the server operating system we took the opportunity to update to a more current and reliable script. This also gives us the opportunity to update and provide more options.

TNI standards define both primary and secondary ABs. The Primary AB is the AB that actually performs a laboratory onsite assessment and grants accreditation in accordance with the applicable standards. A Secondary AB is an Accreditation Body that grants approval to an organization based on accreditation by its Primary Accreditation Body. This approval is known as reciprocity and is granted on an organization by organization basis. The standards define duties and responsibilities of both Primary and Secondary ABs in implementing reciprocity. Primary ABs use the TNI database to record any changes in the accreditation status of a laboratory. Secondary ABs will base their reciprocal accreditation on the Primary Accreditation. The primary AB retains responsibility for ensuring that the laboratory complies with applicable standards. Because not all ABs offer the same Fields of Accreditation, it is possible for an organization to have multiple Primary ABs. It is common for organizations to have multiple Secondary ABs.

Accreditation is granted for matrix-method-analyte combinations. The national database tracks both the primary and secondary Accreditation Bodies that awarded the accreditation for each matrix-method-analyte along with the effective date of the accreditation status. Dates are needed in order to track the change in accreditation status and provide subsequent notification of any Secondary AB that has accredited that laboratory.

User Interface

The national database application is Web-enabled, and all access is provided through a current version Web browser installed on the user's workstation. No additional client software is required. This choice yields maximum ease of use because most users should be familiar with using a browser and navigating through pages via links, browser buttons, etc. Queries, data drill down, and preformatted reports are provided.

Manual Data Entry/Manual Data Edit

The data entry portion of the application is available to authorized users who have a valid user ID and password. Data entry pages utilize standard Web input features such as selection lists, radio buttons, and command buttons to guide the user through the input process and offer help on entering valid data and provide error checking to ensure all required fields have been entered.

LAMS provides the AB (after appropriate logon) the ability to:

- Create/Modify Accredited Laboratory
- Create/Modify Accredited Laboratory demographics

Bulk Data Upload

Some states already have automated systems to manage their accreditation programs. Typically, these systems are tailored to specific requirements of the state and often have more functionality than is envisioned for the national database. However, these systems do contain information that must be entered into the national database. Periodic automated loading of updated information from existing databases maintained by NELAP Accreditation Bodies is a functional requirement of the national database.

Several different approaches were considered for bulk data uploading. Because Internet access is a requirement for users of the TNI national database, an electronic method of file transfer is required. Data will not be accepted on physical media. Automated data transfer requires clearly defined data standards that specify the content, format, and order of the data fields being transferred. The system accepts a Text (.CSV) file that is easily produced by the AB and can be readily loaded into the national database using standard data loading tools. These tools provide mechanisms for data validation and verification. A data error report will be generated and include any problems or errors that need to be resolved by the submitter. Only records with errors will not be uploaded. All other records, whether in Lab Demographics or FOA will load successfully. It is up to the AB to make corrections to the file and re-upload or make corrections manually.

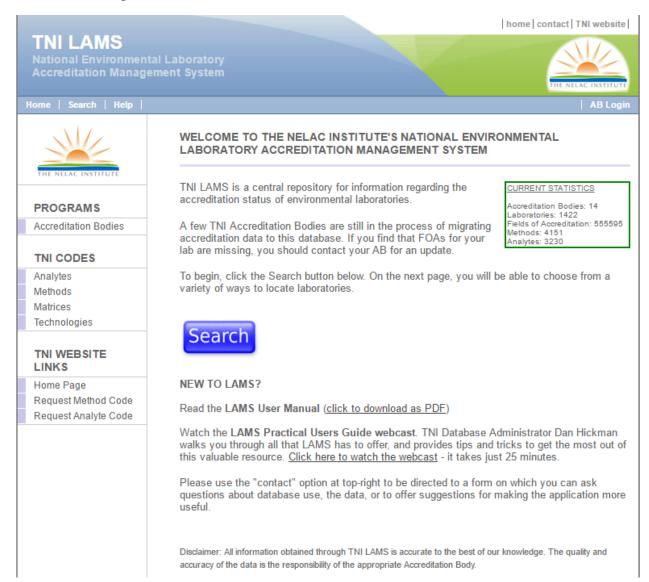
It is important to note that stakeholders required that a lab can be set to "inactive" only in the manual mode and not through bulk upload.

Administrative Maintenance Interface

Data administration tasks, which will be the responsibility of the TNI database administrator, are performed via a Web-enabled interface. No direct database access is anticipated for routine data administration tasks. The LAMS database administrator will maintain the login and password table and the Matrix, Technology, Method, and Analyte tables using an interactive Web-based interface. Any data administration on other tables will be performed through direct database access by the DBA.

General User Instructions (things you can do without logging in)

Open browser and enter http://lams.nelac-institute.org in the address line. You should see the following screen:



You can also get to LAMS from the TNI home page.

TNI LAMS Top Banner

This blue banner with the TNI logo in green appears on each page. Across the top of each page are three links:

Home always brings you back to this home screen.

TNI Website takes you to the TNI home page.

Contact will bring you to the TNI LAMS Contact form. This form can be used to make comments or suggestions about LAMS or ask questions about data or information found in the database. Note that this form is to be used only for LAMS and not for questions about any other part of TNI or the TNI webpage.

Be sure to select "I'm not a robot" before selecting "Continue".



At the bottom of the banner there are another three links:

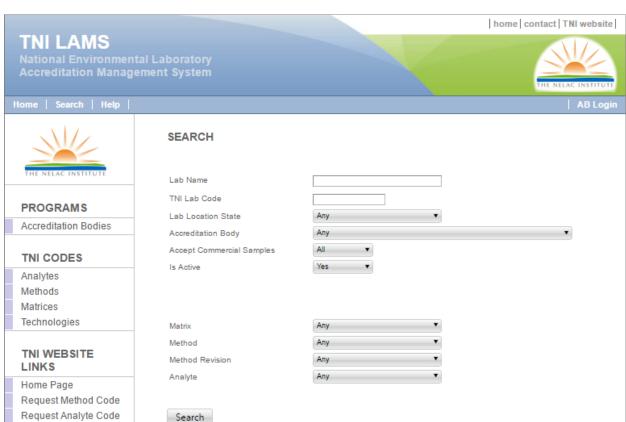
Home takes you back to the original LAMS home page

Search allows the user to search accredited laboratories. This is the same function as the large blue search button found on the home page. The use is explained in a later section.

Help brings up a short reference page explaining the tables in the left navigation pane.

Search





Selecting the big blue "**Search**" button on the home page or selecting "**search**" from the menu bar takes you to a page that allows you to search for a lab using a variety of filters.

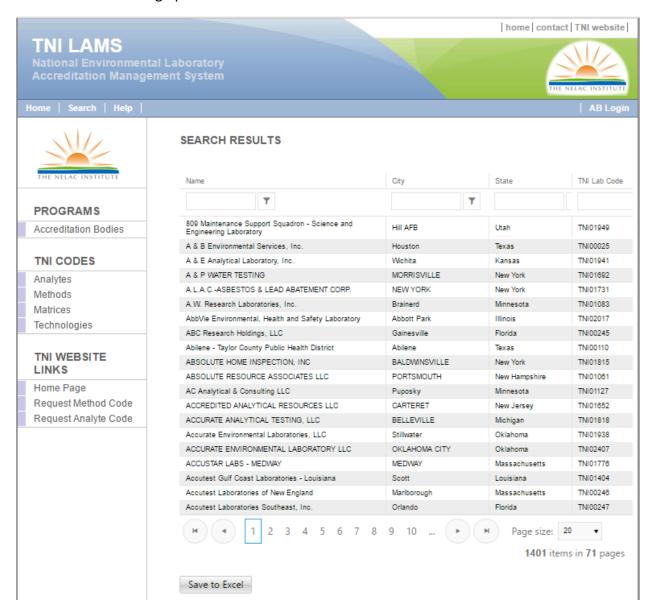
LAMS only allows a single filter in the upper section of the search. You can enter any part of the Lab Name or TNI Lab Code but not any of the other filters. If the lab name and TNI Lab Code are left blank, you may drop down the state in which the lab is located, and/or select whether the lab Accepts Commercial Samples and/or whether the lab is Active/Not Active/All. These filters work on the entire list of labs regardless of whether accreditations are listed.

Dropping down and selecting a specific AB will limit the search to those labs holding a current Field of Accreditation (FOA) from one of the Accreditation Bodies. So if a lab is listed under the search but not when an AB is selected, then the AB has not entered any FOA records for that lab.

The lower section of the search allows you to further refine the search by entering any part of the matrix, method, method revision, and/or analyte. Multiple filters are allowed in this section.

Be sure to select "Search" at the bottom of the page to apply the filters.

You will be presented with a list of labs that meet the criteria. Leaving all search fields blank will bring up an entire list of active labs.

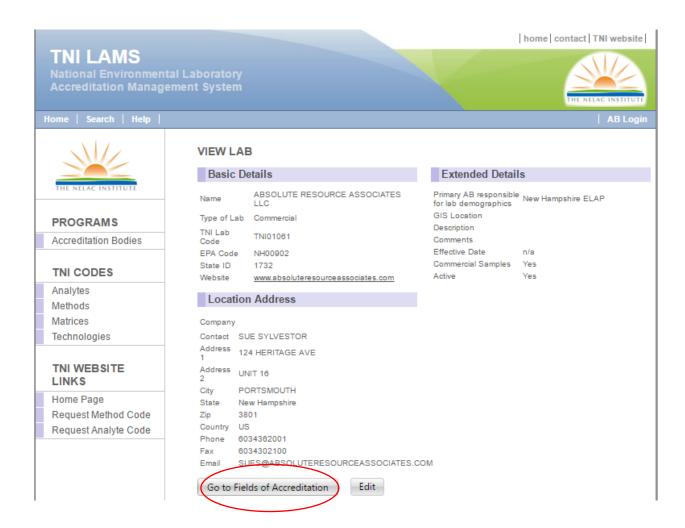


Note that as in all the tables, you can select the number of records to display by using the dropdown box at the bottom of the table. You can select a particular page, go 1 page forward or backward or move directly to the beginning or the end.

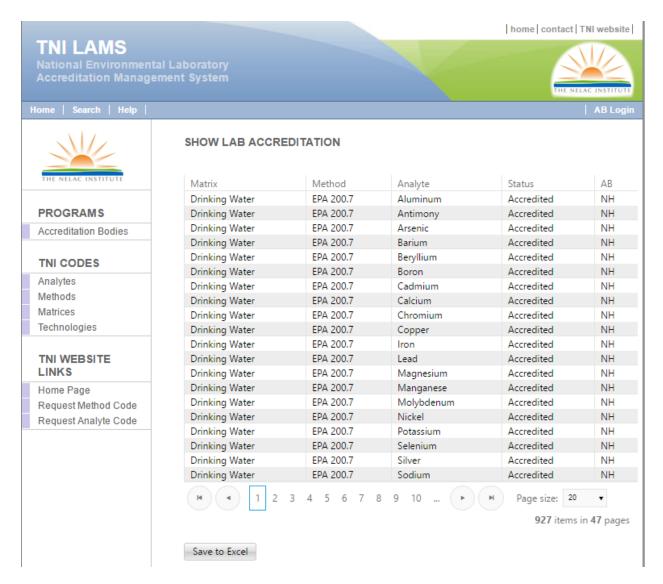
Each column can be sorted by selecting the header for that column. Each column can also be filtered by entering any part of the record and selecting the search symbol.

Selecting "Save to Excel" will generate a CSV file using the filtered data in this table.

Once you select a lab you will go to the lab information page where the lab demographics are located.



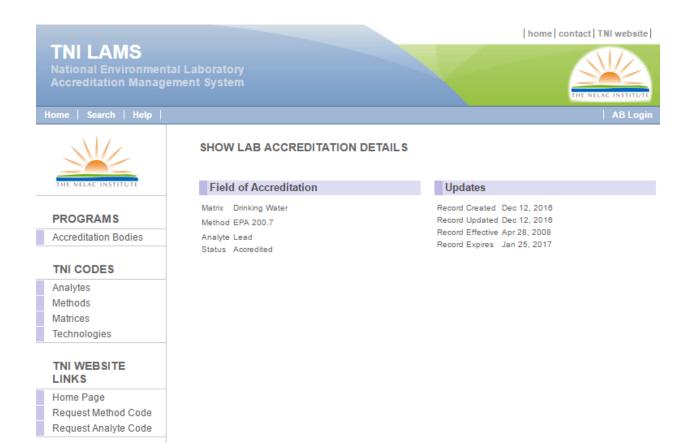
To view the Fields of Accreditation select "Go to Fields of Accreditation". You will be presented with a complete view of all FOAs for the selected lab, including Primary and Secondary accreditations from all ABs.



Each column can be sorted by selecting the header for that column. Each column can also be filtered by entering any part of the record and selecting the search symbol.

Selecting "Save to Excel" will generate a CSV file using the filtered data in this table. Once the file has been downloaded, it can be opened in Excel or Access and then sorted and filtered to meet the needs of the user.

If you select a specific FOA, you will be taken to the FOA information page containing information about that specific FOA including the dates it was first created and last updated. It also displays the effective date and the date the FOA will expire.



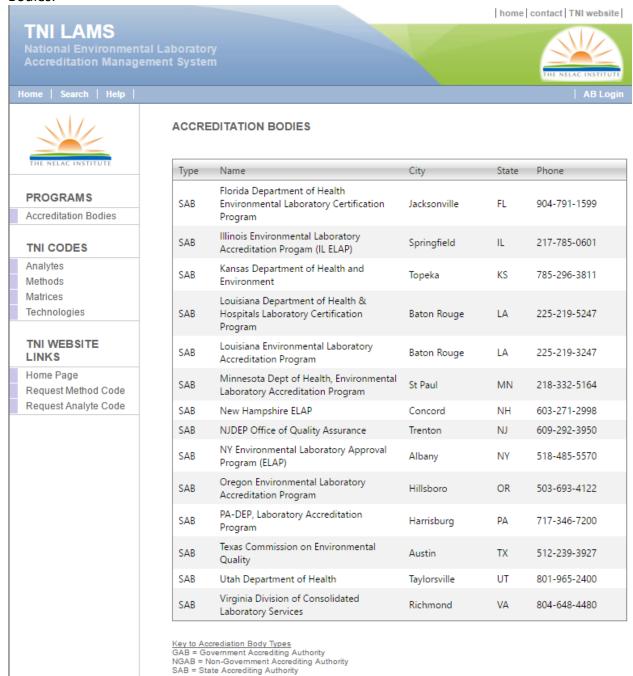
Left Navigation Panel

On the left side of each page under the TNI logo are links to important tales in LAMS. Each one is described below.

PROGRAMS

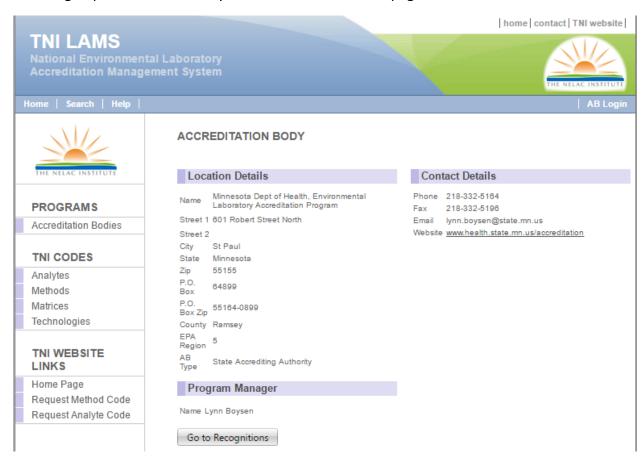
Accreditation Bodies

Selecting "Accreditation Bodies" takes you the table listing TNI recognized Accrediting Bodies.

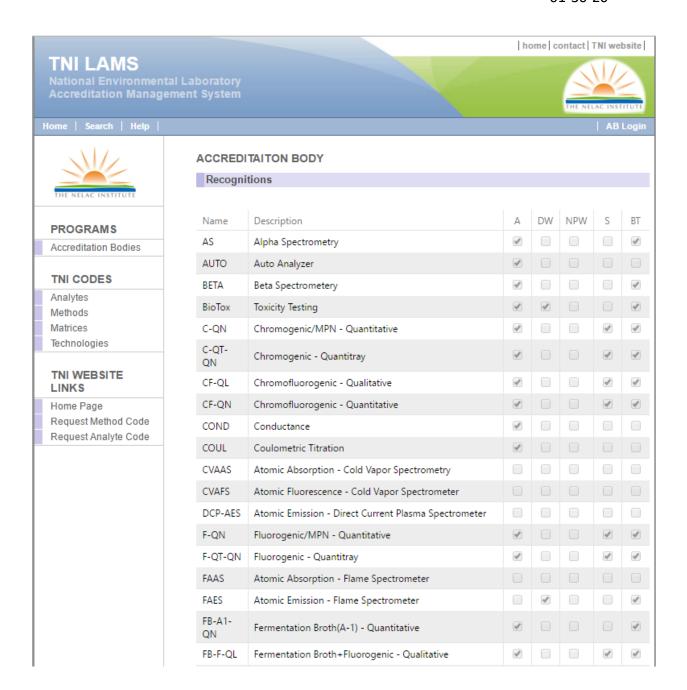


Note the addition of Accreditation Body Type.

Selecting a specific AB will take you to the AB information page.



At the bottom of the page is a link "Go to Recognitions" which will bring up a page that describes the matrix/technology for which the AB grants accreditation.

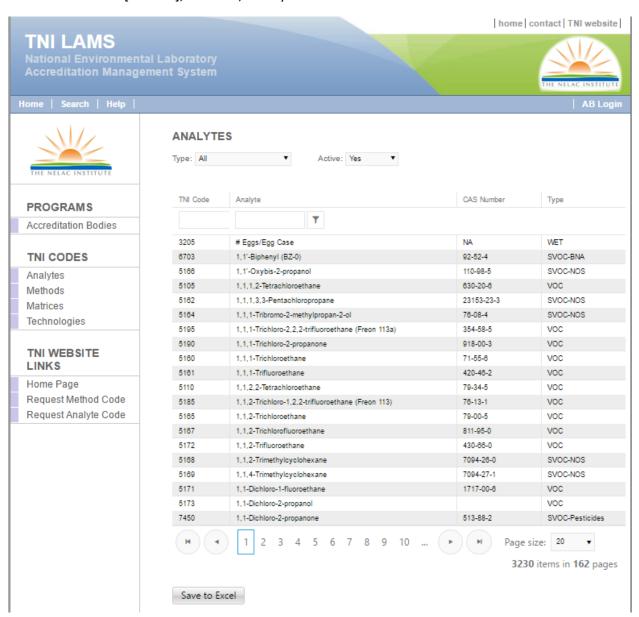


TNI CODES

Analytes

Selecting "Analytes" brings up a copy of the analyte table where you can search/filter by:

- Analyte Code
- Analyte name or part of a name
- CAS Number
- Type (Group by Category)
- Active [default], Inactive, or All):

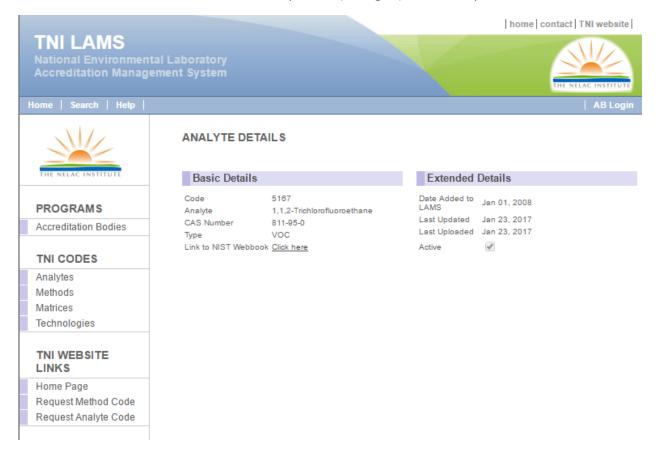


At the bottom of the page you can select a specific page or the number of records to display per page.

If you filter by Type, only analytes in that category will be displayed. This is meant to provide an easier way to locate analytes but the type is not intended to define a specific parameter. For example, 1,4-Dichlorobenzene

Selecting "Save to Excel" will generate an Excel file using the filtered data in this table. Once the file has been downloaded, it can be opened in Excel or Access and then sorted and filtered to meet the needs of the user.

Selecting a specific analyte will take you to the analyte information page where you will find the date it was added to LAMS, last updated (changed), and last uploaded:



Selecting "Link to NIST Webbook" displays the chemical page from NIST



Ethane, 1,1,2-trichloro-1-fluoro-

- Formula: C₂H₂Cl₃F
- Molecular weight: 151.395
- IUPAC Standard InChl:
 - InChI=1S/C2H2Cl3F/c3-1-2(4,5)6/h1H2
 InChITRUST CERTIFIED
 - Download the identifier in a file.
- IUPAC Standard InChiKey: ZKVMMSGRDBQIOQ-UHFFFAOYSA-N
- CAS Registry Number: 811-95-0
- Chemical structure:



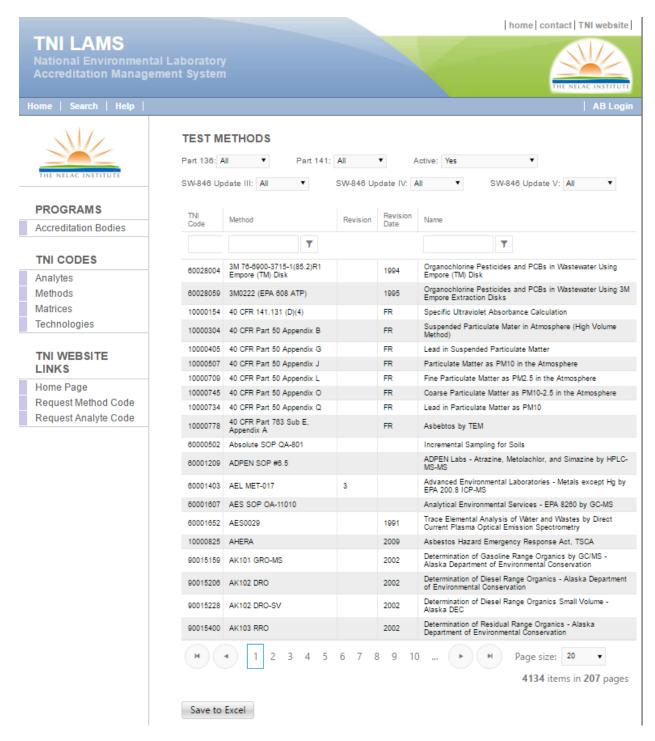
This structure is also available as a 2d Mol file

- Other names: 1,1,2-Trichloro-1-fluoroethane
- Permanent link for this species. Use this link for bookmarking this species for future reference.
- Information on this page:
 - Notes
- Other data available:
 - Phase change data
 - o Mass spectrum (electron ionization)
- Data at other public NIST sites:
 - o Gas Phase Kinetics Database
- Options:
 - Switch to calorie-based units

Methods

Selecting "Methods" brings up a copy of the method table where you can search by:

- Method Code
- Reference
- Method Name
- Method Revision
- Approved for use under 40 CFR Part 136
- Approved for use under 40 CFR Part 141 and 143
- Contained in SW-846 Update III
- Contained in SW-846 Update IV
- Contained in SW-846 Update V
- Active (Default)/Inactive/All

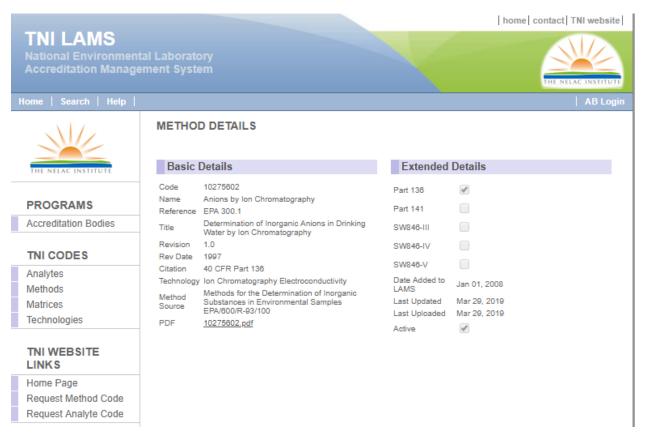


You can sort by any column by clicking the column header and you can select up to 100 records to display per page.

Selecting "Save to Excel" will generate an Excel file using the filtered data in this table. Once the file has been downloaded, it can be opened in Excel or Access and then sorted and filtered to meet the needs of the user. The file contains the following fields:

- TNI Method Code
- Method
- Method Revision
- Revision Date
- Method Short Name
- Technology
- Official Method Title
- Method Source
- Citation
- Approved for use under 40 CFR Part 136
- Approved for use under 40 CFR Part 141 and 143
- Contained in SW-846 Update III
- Contained in SW-846 Update IV
- Contained in SW-846 Update V
- Date Created
- Date Updated
- Last Uploaded
- Active (Default)/Inactive/All

Selecting a specific method will take you to the method information page where you will also find the official method title, the analytic technology, the citation, and the method source. It also shows date it was added to LAMS, last updated (changed), and last uploaded:



Method Compendium

If a copy of the method has been archived, a link to the PDF will appear on this information page. Selecting it will download the PDF version of the method to your computer. LAMS maintains copies of active, inactive and legacy methods for reference and comparison. Methods are continually being added as they become available. Note that some methods are proprietary, and in that case the link will lead back to the source where the method can be obtained.

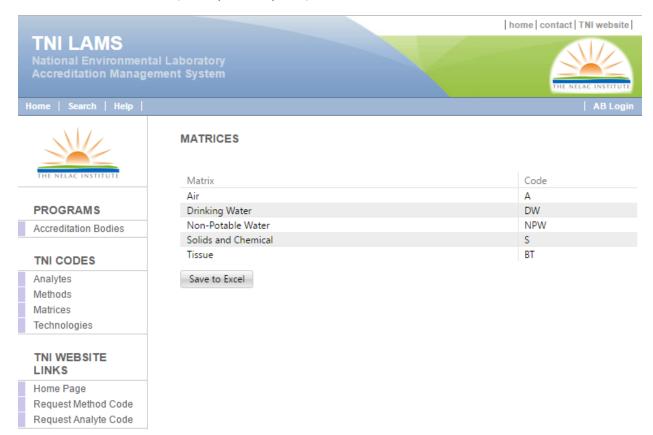
Associated Analytes

If you are logged in as a TNI member a list of analytes associated with the method will be displayed. These are accredited method-analyte combinations uploaded to LAMS.



Matrices

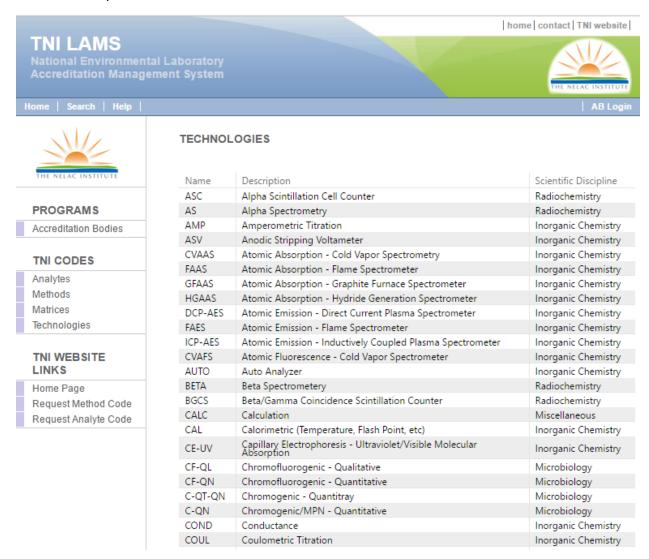
Selecting "Matrices" brings up a copy of the matrix table showing the TNI accreditation matrices and their code (mainly used by ABs)



Selecting "Save to Excel" will generate an Excel file using the filtered data in this table.

Technologies

Selecting "**Technologies**" brings up a copy of the technology table showing the TNI accreditation technologies, their codes (mainly used in the method code table) and their scientific discipline.



Selecting "Save to Excel" will generate an Excel file. Once the file has been downloaded, it can be opened in Excel or Access and then sorted and filtered to meet the needs of the user.

TNI WEBSITE LINKS

Home Page

Selecting "Home Page" brings you to the TNI homepage, not the LAMS homepage.

Request Method Code

Selecting "Request Method Code" brings up a form to request the addition of a new method to the method table and creation of a TNI Method Code. Be sure to check the method table carefully before requesting addition of a new method.

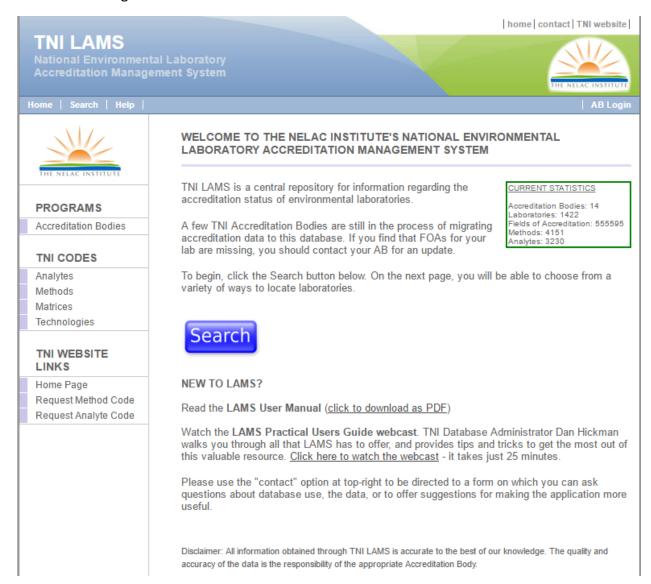
Request Analyte Code

Selecting "Request Analyte Code" brings up a form to request the addition of a new analyte to the analyte table and creation of a TNI Analyte Code. Be sure to check the analyte table carefully before requesting addition of a new analyte.

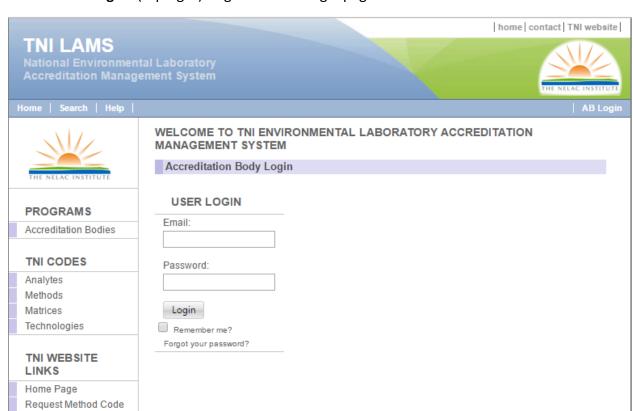
Accreditation Body Instructions (things you can do after login)

User Login

Open browser and enter http://nelac-institute.org/lams in the address line. You should see the following screen:



No login is required for users to reach the LAMS homepage or contact page and you may use the search feature for laboratories, Accreditation Bodies, and other tables.



Click on "AB Login" (top right) to go to the AB login page.

Enter email address and password and then select "**Login**". Once you have logged in you will see your email displayed in the top banner. To change your password click on your email address in the banner.

Selecting "Forgot your password?" will allow you to enter your email address and get a temporary password.

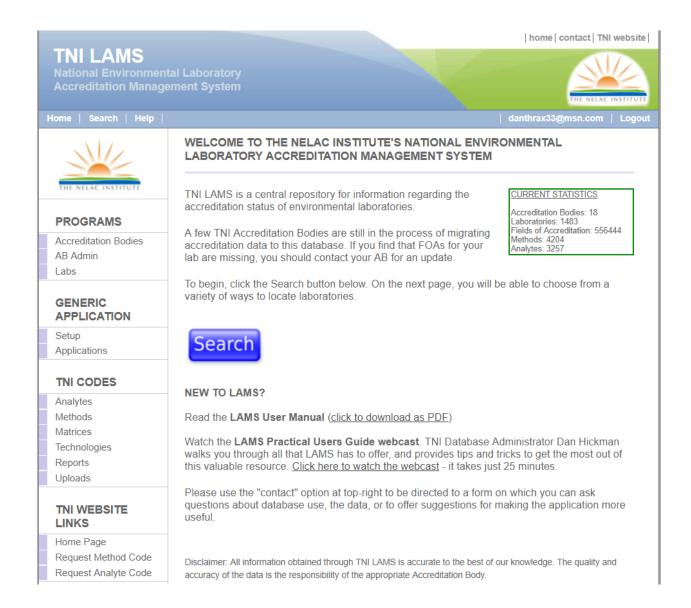
Once you login, a new page specific to Accreditation Bodies will appear.

You will also notice that once logged in, your user name will be displayed in the top banner next to logout.

Change Password

Request Analyte Code

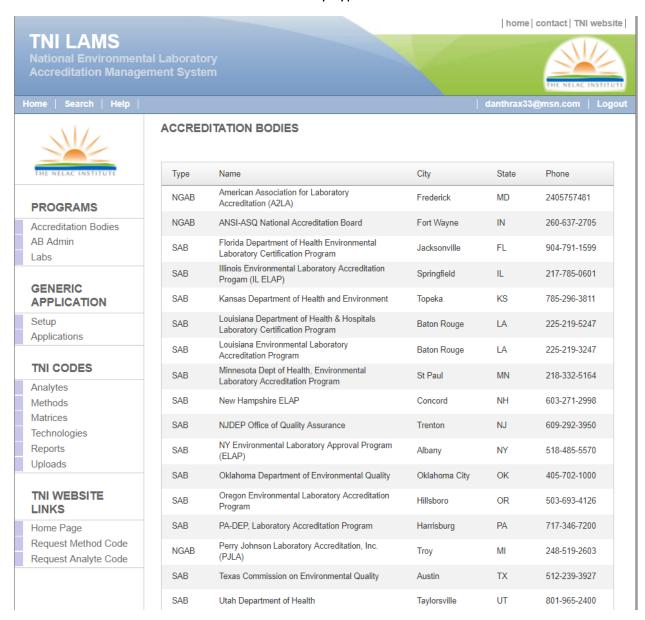
Click on your name at the top of the screen and you will be given the opportunity to change your password. Enter your current password and your new password twice and select "Change Password".



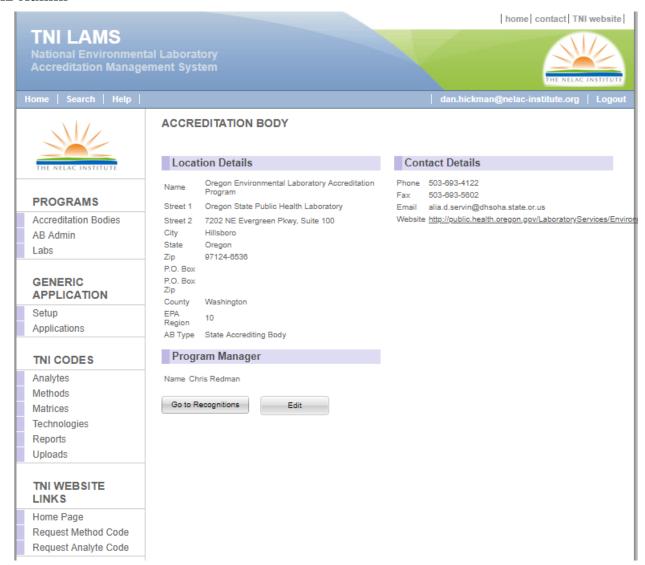
PROGRAMS

Accreditation Bodies

Selecting "Accreditation Bodies" displays a list of currently recognized Accreditation Bodies. Note the addition of Accreditation Body Type.



AB Admin



The AB Admin section contains details about your program. Be sure to complete and update regularly all the information. You will also track your staff on this page. You can edit information on staff, add new staff, or delete staff. Selecting "Send Activation Email" will reset the user's password and send an Email allowing them to login and select new password.

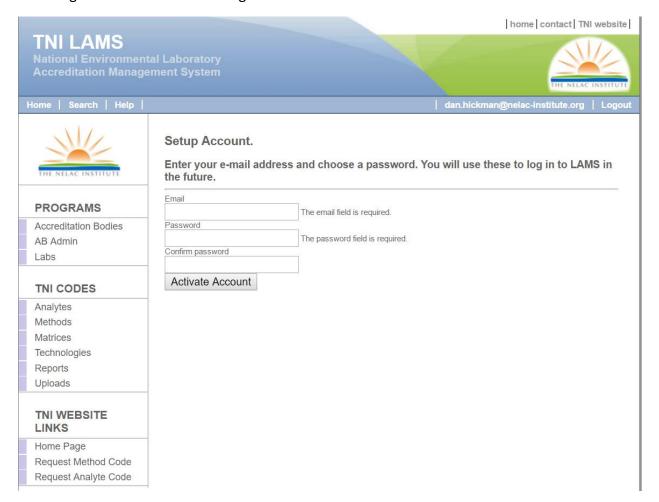
Add Employee

The "Add Employee" button creates a new employee and brings up a new set of info fields. For type, you can select "Manager of ELAP" or "ELAP Technical Staff". Selecting "Send Activation Email" will send an email to the staff person with a link to complete the registration and allow login.

Save

The "Save" button saves all your work in progress on this page. If you leave this page without saving, anything you entered will be lost. When the info has been saved, select "Send Activation Email". The new user will receive an email from LAMS with a link to complete the account activation. This link is viable for a short time (24 hours). If the user has difficulty finding the email, be sure to check the spam or junk mail folder.

Selecting the link in the email will get to this screen



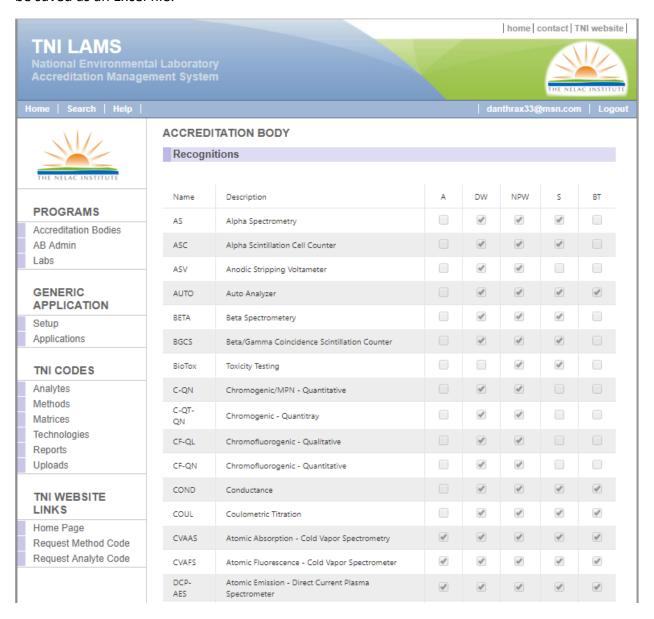
Enter the email used in add employee. Select a password, enter password again to confirm and then select "Activate Account".

You get a page informing you that your LAMS account setup is complete. Click <u>here</u> to login. You will open the standard login screen.

Go To Recognitions

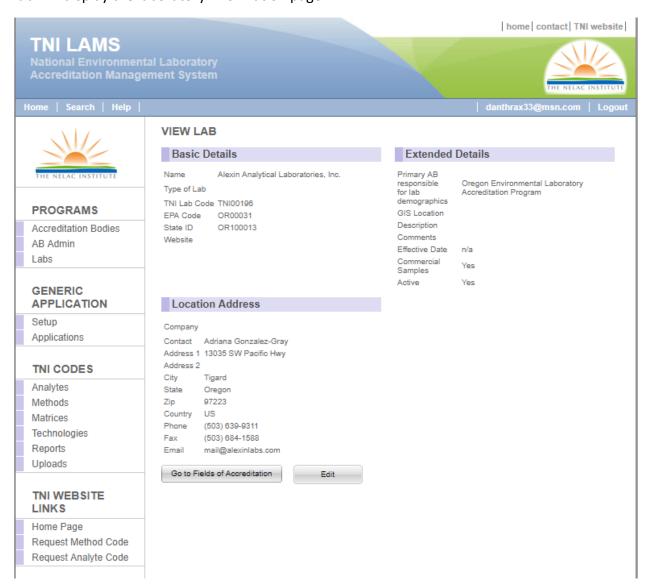
The "Go To Recognitions" button will take you to a page that lists your program's Fields of Recognitions as reported by the AB Evaluation Team. Be sure to review the list and notify TNI of any discrepancies.

To make changes, select "Edit" at the bottom of the table. Select appropriate combinations of Technology and Matrices. If you select "Save to Excel", the table will be saved as an Excel file.

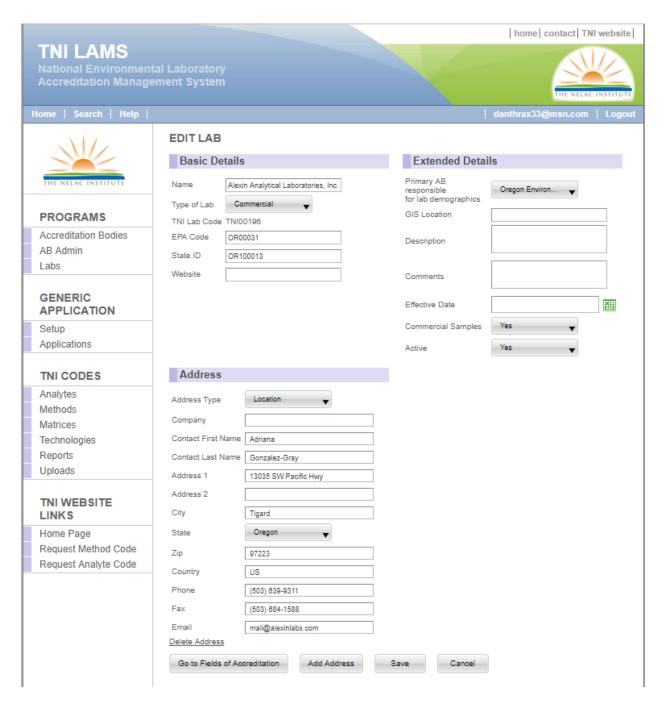


Labs

Once you have logged in, selecting "Labs" will display a list of only the labs for which your AB has granted primary and/or secondary FOAs in LAMS. Highlighting a particular lab will display the laboratory information page.



In order to update or change information select "Edit" to display the information in an edit screen. Here you can edit or add information. Be sure to select "Save" when you are finished.

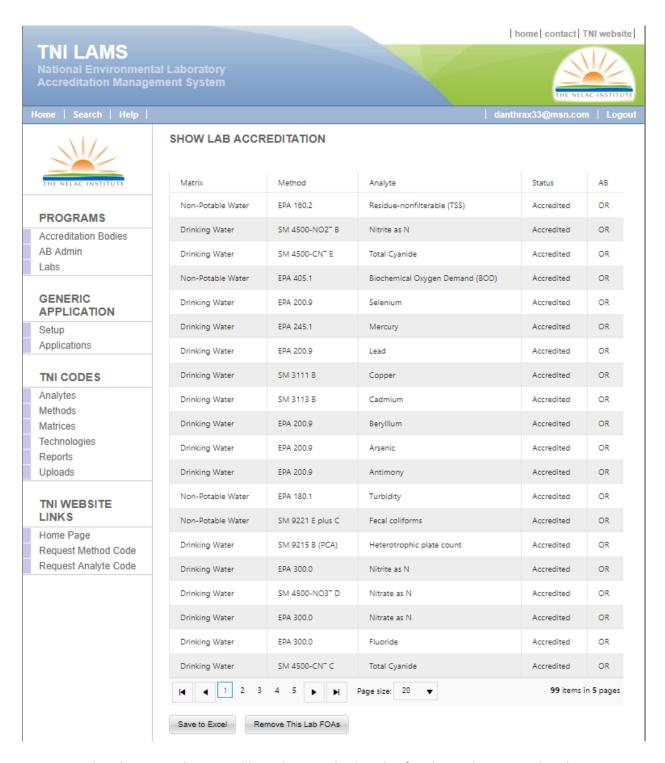


Add Address

You can add an address and choose from Location, Billing, Mailing, or Owner address.

Go to Fields of Accreditation

To view the Fields of Accreditation select "Go to Fields of Accreditation". You will be presented with a complete view of all FOAs for the selected lab, including Primary and Secondary accreditations from all ABs.

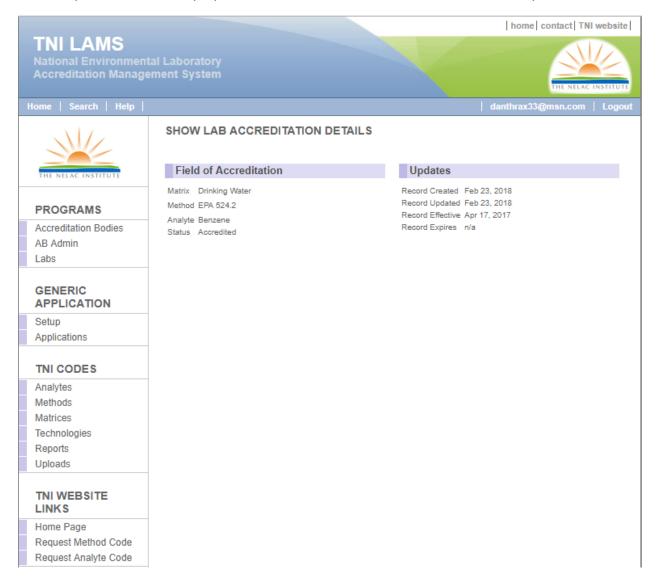


Each column can be sorted by selecting the header for that column. Each column can also be filtered by entering any part of the record and selecting the search symbol.

Selecting "Save to Excel" will generate a CSV file using the filtered data in this table. Once the file has been downloaded, it can be opened in Excel or Access and then sorted and filtered to meet the needs of the user.

Selecting "Remove This Lab FOAs" will remove all of your FOAs for this specific lab but will leave all other AB FOAs in place.

If you select a specific FOA, you will be taken to the FOA information page containing information about that specific FOA including the dates it was first created and last updated. It also displays the effective date and the date the FOA will expire.

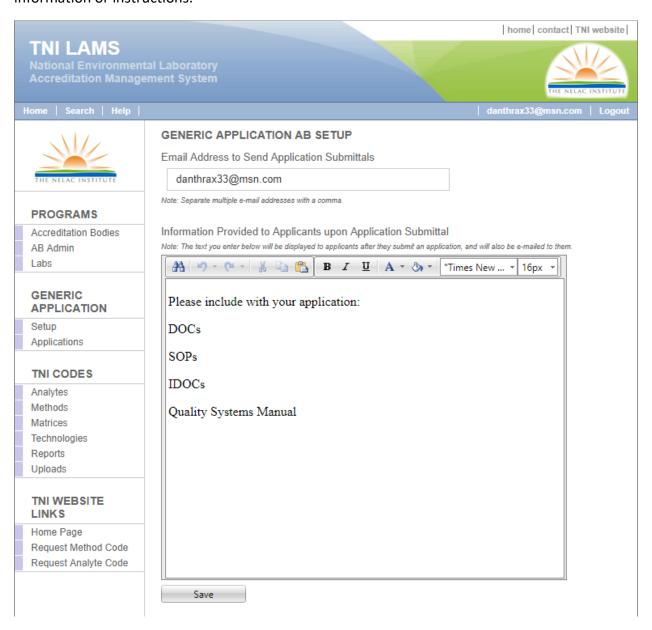


GENERIC APPLICATION

TNI developed a generic electronic application for laboratories to use when submitting an application for accreditation by TNI recognized Accreditation Bodies, both primary and secondary. This section enables the ABs interested in allowing application by this method to setup the email for application delivery and note all the items expected to be sent in to complete the application package. It also allows the ABs to manage submitted electronic applications.

Setup

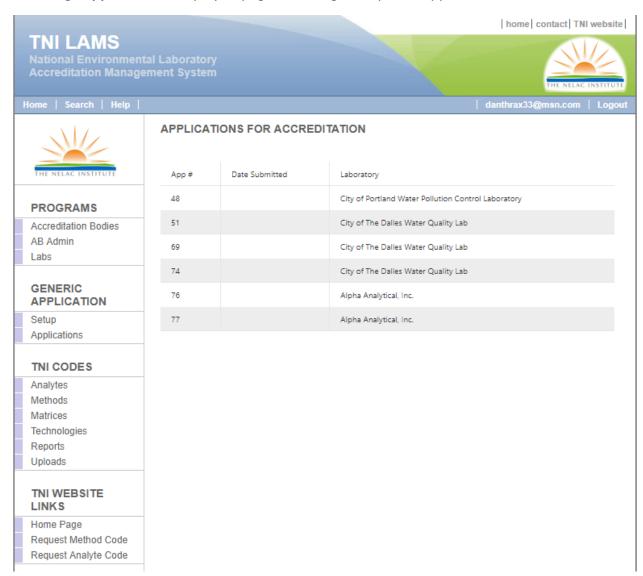
Selecting "**Setup**" displays a page to provide an email and a section for additional information or instructions.



Select "Save" when complete

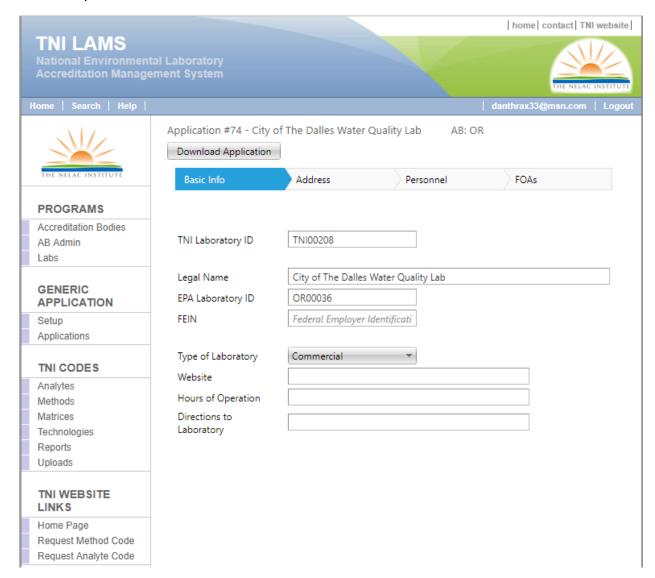
Applications

Selecting "Applications" displays a page to manage completed applications.



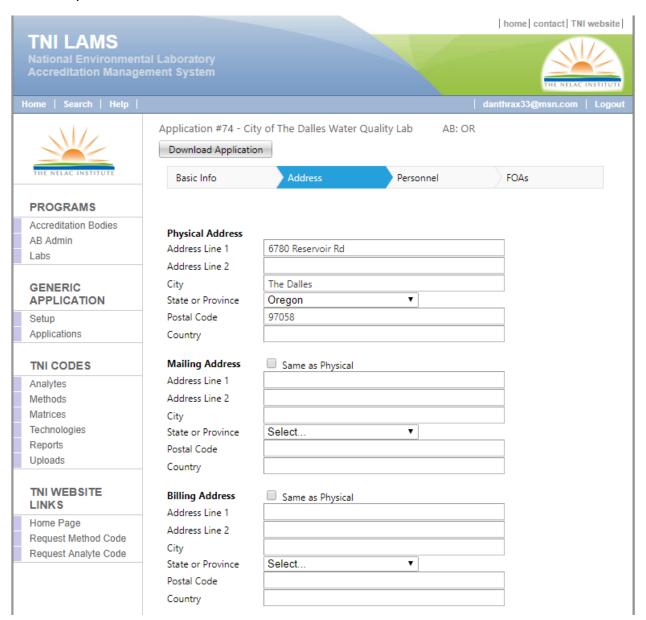
Select any application to review or modify its contents.

Laboratory basic information:

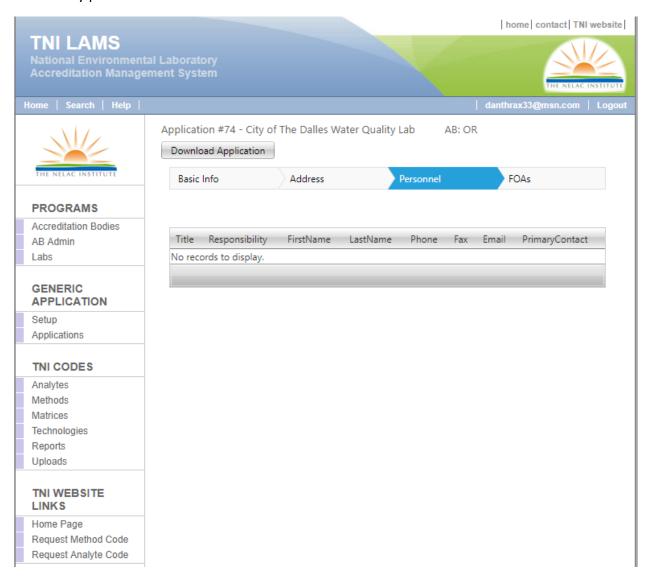


Select "Download Application" to produce a copy of the application PDF and CSV files.

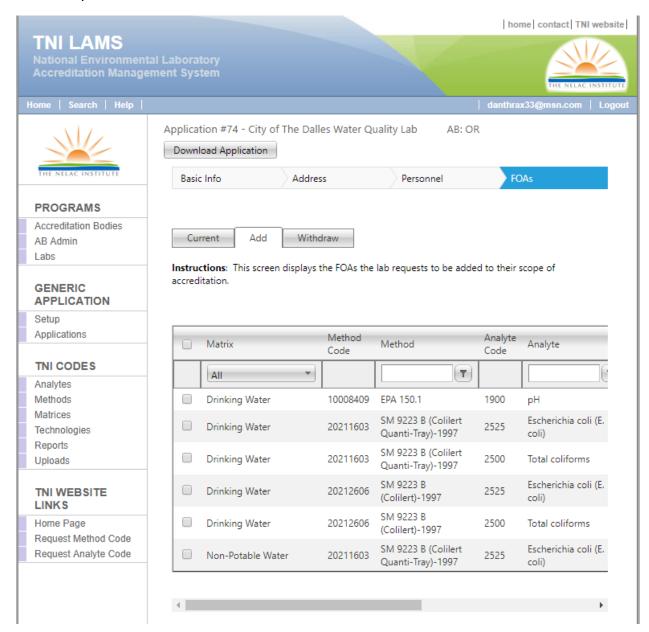
Laboratory address information:



Laboratory personnel:



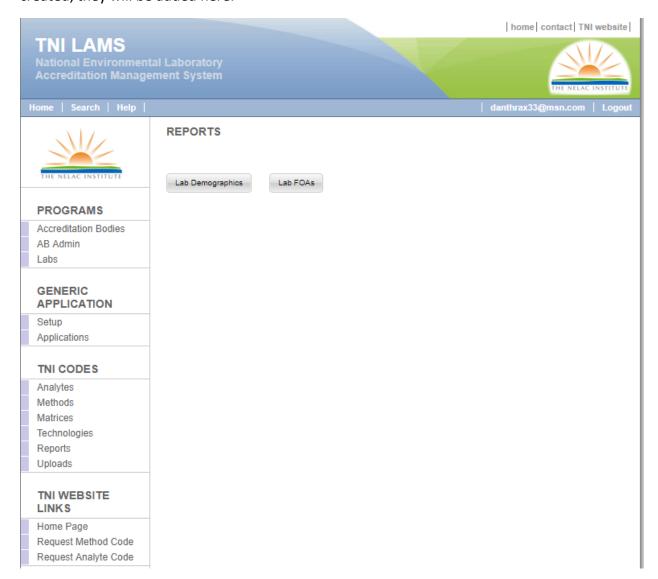
Laboratory Fields of accreditation:



TNI CODES

Reports

Selecting "Report" displays a page of canned reports. As new queries/reports are created, they will be added here.



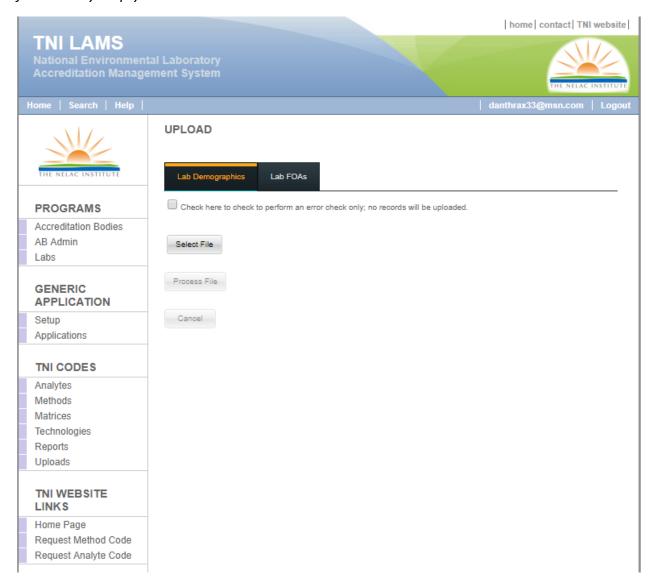
Lab Demographics is a report containing all the demographic information for laboratories for which you are listed as the primary AB. It is in the same format as the lab demographics upload file. You could make changes here and use this file to reupload. Note that occasionally a laboratory might have multiple ABs. LAMS assumes that the AB which performed the basic Quality Assurance system onsite is the AB listed as the Primary AB and is responsible for maintenance of the lab demographics.

Lab FOAs is a report that contains all FOAs for all labs accredited by your program. It is in the same format as the lab FOA upload file. You could make changes here and use this file to re-upload.

Uploads

There are two files that are uploaded here; Primary Laboratory Demographics (name, address, phone, etc.) and laboratory Fields of Accreditation (Primary and Secondary).

NOTE: The upload application expects the first row to be a header and will not accept a file with any empty rows.



Primary Laboratory Demographics - Bulk Upload

Create Text (.CSV) file with the following columns in the format specified:

Column	Description	Format
TNI Lab Code	Unique lab code generated	8 character alphanumeric text
	by LAMS	Example: TNI04763
EPA Lab Code	EPA Office of Water lab ID	Alphanumeric text
State ID	Unique state identifier	Alphanumeric text
Lab Name	Laboratory name	Alphanumeric text
Address1	Lab address	Alphanumeric text
Address2	Lab address second line	Alphanumeric text
City	Lab city	Text
State	Lab state	Text 2 digit abbreviation
ZIP	Lab ZIP Code	Standard or expanded
Country	Country location	Text
Phone	Lab Phone	(NNN) NNN-NNNN xNNN
FAX	Lab FAX	(NNN) NNN-NNNN
ContactFirstName	Lab contact person first	Text
	name	
ContactLastName	Lab contact person last	Text
	name	
Contact EMAIL	Contact person email	Alphanumeric text
	address	
Primary AB	Primary AB abbreviation	2 digit state identifier
Commercial Samples	Lab accepts commercial	Y or N
	samples	
Lab_Type	Lab description	Not Specified
		Federal
		State
		Municipal
		Industrial
		Commercial
		Mobile
		Governmental
		University
		Research

If Lab Type was not included in the upload, or if it is blank, the type will default to "Not Specified." If a value is provided in the csv, but it does not match one of the values listed above, an error will be displayed for that row and that row will not upload.

When laboratories are first loaded or when new laboratories are added, the TNICODE field is left blank and an ID is automatically assigned by LAMS.

NOTE: Anytime a record is uploaded with a **blank** TNICODE, a new lab will be created even if it is a duplication of an existing lab so it is very important that the AB database is updated to reflect the assigned TNICODE.

NOTE: LAMS will accept any format for phone and FAX numbers and will display them exactly as uploaded. For consistency in the database we ask that numbers be formatted as shown above whenever possible.

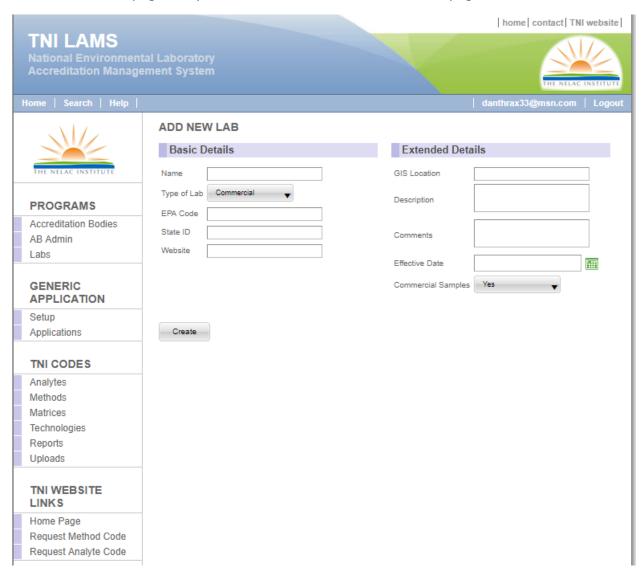
Select "Lab Demographics" tab then click "Select File". Choose the lab demographics .CSV file that you created.

When file has transferred, select "Process File" and the process bar will be displayed. The process bar displays percentage complete. At the end of the upload you will get the number of records successfully uploaded and the number of errors (records not uploaded). If there are errors during upload, the records with errors are skipped but the rest are uploaded.

If you select, "Check here to perform an error check only; no records will be uploaded" and the follow the same upload process as above an error report will be generated but none of the data will be uploaded. This gives the AB an opportunity to correct the file before upload.

Primary Laboratory Demographics - Create New Lab

Login and select "Labs" from the navigation column on the left. Select "Add a lab" at the bottom of the page and you will be taken to the ADD NEW LAB page:



Fill in details and select "Create". A new TNI lab code will be assigned and new lab record created. Be sure to update your records with this code.

Primary Laboratory Demographics - Manual Edit

Login and select "Labs" from the navigation column on the left.

NOTE: When you are logged in as an AB, only the labs for which you are identified as responsible for demographics will be listed (default "active"). If you are interested in modifying an inactive lab be sure to select "**Inactive**" or "**All**".

If a lab has primary accreditation through your program but is not listed here it is likely listed with another Primary AB. Use the search function to find the lab and look up its Primary AB. If you believe that you should be the AB responsible for the demographics, work it out with the other AB and make any appropriate changes.

Filter by Lab Code, Name (or partial name), EPA ID, State ID or page through entries and select lab. That will bring up the lab information page. Select "Edit" at the bottom of the page and make changes. You can also add other address types such as mailing, billing or owner by selecting "Add Address". When you are finished be sure to press "Save"

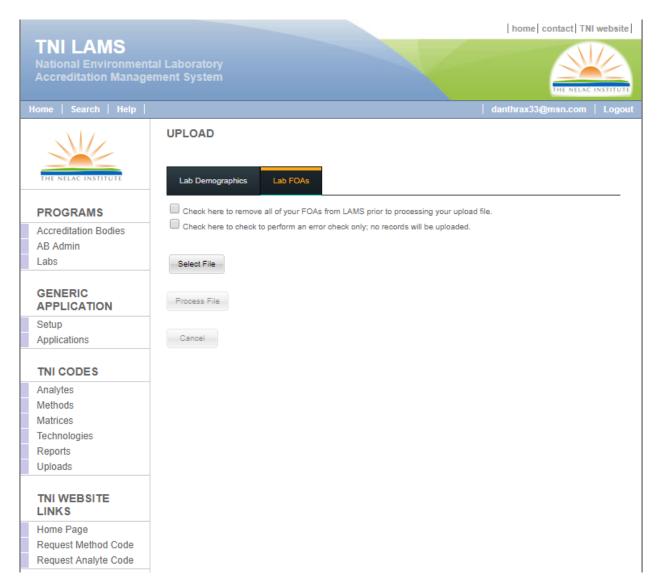
Laboratory Fields of Accreditation (FOA) - Bulk Upload

Create a Text (.CSV) file with the following columns:

Column	Description	
TNILabCode	Unique TNI Lab Code (assigned by LAMS)	
Matrix	A	
	DW	
	NPW	
	S	
	BT	
MethodCode	TNI Method Code	
AnalyteCode	TNI Analyte Code	
MaxDate	Beginning date of current status (dd-mmm-yy)	
Status	Status:	
	ACC	
	SUS	
	NOT	
Type	Accreditation type P or S	
Expiration Date	FOA expiration date (dd-mmm-yy)	<u> </u>

For matrix, LAMS just needs the matrix code (basically an abbreviation) but it must match or you well get an error.

For status, LAMS only tracks 3 status types: Accredited (ACC), Suspended (SUS), and Not Accredited (NOT). Any status that is neither accredited nor suspended should be listed as not accredited (things like "withdrawn" or "retired", for example). However, we are requesting that ABs only enter ACC or SUS at this time.



Select "LAB FOAs" tab.

This upload procedure will upload any number of Lab FOAs. You can load 1 lab, 2 labs, 20 labs, or all your labs and all their FOAs. As the file is processed, all the FOAs for a particular lab are deleted as soon as the TNI Lab Code is first read. That allows for a clean copy of each lab's FOAs. If a lab is no longer accredited, the system will not find a TNI Lab Code in the file and fail to delete the FOAs. When you are loading a complete FOA file (all labs and all FOAs) check the box "Check here to remove all of your FOAs prior to processing your upload file". The complete list of FOAs for all your labs will be deleted and then only the FOAs in the current file will be left in the database.

NOTE: Do not use this process to load partial FOAs. For example, if you load primary accreditations for a lab and then upload secondary accreditations for the same lab, all primary accreditations will be deleted and only secondary accreditations will be listed.

Press "Select File". Choose the lab FOA .CSV file that you created.

Select "**Process File**" and the process bar will be displayed. The process bar displays percentage complete. At the end of the upload you will get the number of records successfully uploaded and the number of errors (records not uploaded). If there are errors during upload, the records with errors are skipped and the rest are uploaded.

Any errors that occur during the upload process will be reported and those records will not be uploaded, however, all other records will be uploaded. So if you were uploading 30,000 FOA records and had 7 records with errors, 29,993 records would make it into LAMS. At that point you can manually fix the errors in LAMS or fix the errors in the CSV file and repeat the upload process.

NOTE: The most common errors are caused by:

- bad or missing analyte or method codes
- nonexistent or misspelled matrix codes or status codes
- not using correct date format (DD-MMM-YYYY)

NOTE: Another common error is not selecting the proper information type tab.

Routine Data Maintenance by Accreditation Body

Regular Upload of Laboratory Demographics and FOAs

The most recent upload dates are stored with the lab demographics information and with the individual FOA records. These dates need to be recent in order to give assurance that the data is current and up-to-date. The best solution is to extract data from the AB database on a regular basis and perform a complete upload. If no changes are required, the .CSV file could be saved and reloaded on a regular basis. This ensures that the data is refreshed (eliminating concerns of data corruption, accidental deletion, or accidental modification).

Demographic uploads and FOA uploads should be performed whenever changes are made or according to the schedule adopted by the Accreditation Body Council. When queries from the AB database are complicated or resource intensive a good solution would be to save the .CSV file and make changes there. LAMS could then be updated by reloading this file.

Laboratory List Maintenance

In order to take a laboratory off the list when it leaves the program, it is necessary to manually change the laboratory to "inactive". If the laboratory is staying in the program but changing to another AB, manually change the primary AB listed. If you are not sure of the new AB, set it to blank (the first on the list).

Reviewing the lab list

On a regular basis (2 or 3 times per year), select "report" from the left navigation panel and download a demographics file by selecting "Lab Demographics". Open the file in Excel and compare it to your current list of primary labs. Make changes as necessary keeping in mind that a lab must be set to inactive manually.

Manual Deletion of FOAs

Occasionally it might be necessary to delete all your AB's FOAs from a single lab rather that uploading a complete FOA file for all labs. In this case, select "Labs" from the left navigation column (displays labs holding primary or secondary accreditation from you) and select the specific lab. Select "Go to Fields of Accreditation" and then select "Remove this Lab FOAs". All your AB FOAs for this specific lab will be removed but leave any others in place.

Database Tables

$DATABASE: lams_production$

ab_recognitions Table

Field	Purpose	Туре
id	Primary key	integer
AB_id	Foreign key to accreditation_bodies table	integer
Technology_id	Foreign key to technologies table	integer
Matrix_id	Foreign key to matrices table	integer
Active	Active/Inactive	boolean
created_at	Record first created	date/time
updated_at	Record last updated	date/time

ab_statuses table

Field	Purpose	Туре
id	Primary key	integer
Status	AB current status	string(255)
created_at	Record first created	date/time
updated_at	Record last updated	date/time

$accreditation_bodies\ table$

Field	Purpose	Туре
id	Primary key	integer
Code	AB Abbreviation	string(255)
EPARegion	EPA region	integer
TimeZone	Time Zone	string(255)
Status_id	Foreign key to ab_statuses table	integer
StatusDate	Date of last status change	date
OutOfStateAccreditation	AB offers out of state accreditation	boolean
InStateFee	AB fee instate	boolean
OutStateFee	AB fee out of state	boolean
Name	AB name	string(255)
Street1	Street address	string(255)
Street2	Street address (cont)	string(255)
City	City	string(100)
State_id	Foreign key to states table	integer
County_id	Foreign key to counties table	integer
Zip	Zip code	string(12)
POBox	PO Box number	string(25)
POBoxZip	PO Box Zip code	string(12)
Phone	AB phone number	string(25)
Fax	AB FAX number	string(25)
Email	AB contact email	string(255)
URL	AB webpage	string(255)
created_at	Record first created	date/time
updated_at	Record last updated	date/time

analytes table

Field	Purpose	Type
id	Primary key	integer
AnalyteCode	TNI assigned analyte code	integer
Analyte	Analyte name	string(255)
CasNumber	CAS number	string(20)
Type_id	Foreign key to analyte_types table	integer
created_at	Record first created	date/time
updated_at	Record last updated	date/time
active	Active/Inactive	boolean

analyte_types table

Field	Purpose	Туре
id	Primary key	integer
AnalyteType	Analyte type	string(255)
created_at	Record first created	date/time
updated_at	Record last updated	date/time

counties table

Field	Purpose	Туре
id	Primary key	integer
State_id	Foreign key to states table	integer
County	County name	string(100)

labs table

Field	Purpose	Туре
id	Primary key	integer
TNILabCode	TNI assigned = TNI + 5 digits	string(15)
EPA_Code	EPA Office of Water code	string(20)
StateID	State assigned laboratory code	string(20)
Name	Laboratory name	string(255)
Description	Laboratory type	text
PrimaryAB_id	Foreign key to accreditation_bodies table	integer
SecondaryAB_id	Foreign key to accreditation_bodies table	integer
Website	Laboratory website	string(255)
Comments	AB comments about laboratory	text
LabType_id	Foreign key to lab_types_table	integer
GISLocation	GIS laboratory coordinates	string(255)
EffectiveDate	reserved	date
AcceptCommercialSamples	Laboratory accepts commercial samples	boolean
Active	Active/Inactive	boolean
created_at	Record first created	date/time
updated_at	Record last updated	date/time

lab_accreditations table

Field	Purpose	Туре
id	Primary key	integer
Lab_id	Foreign key to labs table	integer
Matrix_id	Foreign key to matrices table	integer
Method_id	Foreign key to test_methods table	integer
Analyte_id	Foreign key to analytes table	integer
	Foreign key to	
AccreditationBody_id	accreditation_bodies table	integer
AccreditationBodyType	Primary/Secondary	string(15)
Status_id	Foreign key to statuses table	integer
EffectiveDate	Date FOA became effective	date
created_at	Record first created	date/time
updated_at	Record last updated	date/time
Active	Active/Inactive	boolean
ExpireDate	Date FOA expires	date

lab_addresses table

Field	Purpose	Туре
id	Primary key	integer
Lab_id	Foreign key to labs table	integer
LabAddressType_id	Foreign key to lab_address_types table	integer
CompanyName	Laboratory owner	string(255)
ContactName	Designated laboratory contact	string(255)
Address1	Address	string(255)
Address2	Address (cont)	string(255)
City	City	string(100)
State_id	Foreign key to states table	integer
Zip	Zip code	string(12)
Phone	Laboratory phone number	string(25)
Fax	Laboratory FAX number	string(25)
Email	Contact email	string(255)
created_at	Record first created	date/time
updated_at	Record last updated	date/time
ContactNameFirst	Contact First Name	Text
ContactNameLast	Contact Last Name	Text
Country	Country location	Text

lab_address_types table

Field	Purpose	Туре
id	Primary key	integer
AddressType	Location, mailing, etc	string(255)

lab_statuses table

Field	Purpose	Туре
id	Primary key	integer
Status	Laboratory status	string(255)

lab_types table

Field	Purpose	Туре
id	Primary key	integer
Туре	Federal, state, municipal, etc	string(255)

matrices table

Field	Purpose	Туре
id	Primary key	integer
Matrix	Matrix name	string(50)
MatrixAbbrev	Matrix abbreviation	string(5)
Code	Upload code for FOA	String(5)

programs table

Field	Purpose	Туре
id	Primary key	integer
Program	Program abbreviation	string(10)
ProgramName	Program name	string(100)

scientific_disciplines table

Field	Purpose	Туре
id	Primary key	integer
Discipline	Discipline name	string(255)
created_at	Record first created	date/time
updated at	Record last updated	date/time

$secret_questions\ table$

Field	Purpose	Туре
id	Primary key	integer
Question	Security guestion	string(255)

states table

Field	Purpose	Туре
id	Primary key	integer
state	State name	string(100)
stateab	State abbreviation	string(4)

statuses table

Field	Purpose	Туре
id	Primary key	integer
Status	FOA status	string(255)
Code	FOA status code	String(5)

technologies table

Field	Purpose	Туре
id	Primary key	integer
Name	Technology abbreviation	string(50)
Description	Complete technology name	string(255)
ScientificDiscipline_id	Foreign key to scientific_disciplines table	integer
created_at	Record first created	date/time
updated_at	Record last updated	date/time
active	Active/Inactive	boolean

test_methods table

Field	Purpose	Туре
id	Primary key	integer
Code	TNI assigned method code	string(50)
Name	Method name	string(255)
ShortName	Method reference (i.e. EPA 524.2)	string(255)
Description	Official method title	string(255)
Revision	Method revision	string(10)
RevisionDate	Method revision date	date
Citation	Method citation	string(255)
Technology_id	Foreign key to technologies table	integer
active	Active/Inactive	boolean
created_at	Record first created	date/time
updated_at	Record last updated	date/time
method_source	Source for method	text
appr_p136	Approved under 40 CFR Part 136	boolean
appr_p141	Approved under 40 CFR Part 141	boolean
last_update	Record last updated	date/time
pdf_url	Link to method PDF	text
sw846_up3	Contained in SW-846 update III	boolean
sw846_up4	Contained in SW-846 update IV	boolean
sw846_up5	Contained in SW-846 update V	boolean

uploads table

Field	Purpose	Туре
id	Primary key	integer
User_id	Foreign key to users table	integer
MimeType	File type identifier	string(255)
Filename	Upload filename	string(255)
Type	Upload type	string(255)
Status	Reserved	string(255)
created_at	Record first created	date/time
updated_at	Record last updated	date/time

users table

Field	Purpose	Туре
id	Primary key	integer
UserType_id	Foreign key to user_types table	integer
Lab_id	Foreign key to labs table	integer
	Foreign key to	
accreditation_body_id	accreditation_bodies table	integer
FirstName	First name	string(50)
MiddleName	Middle name	string(50)
LastName	Last name	string(50)
UserID	TNI assigned user ID	string(50)
HashedPassword	Encrypted password	string(255)
JobTitle	User job title	string(255)
Organization	User organization	string(255)
Address1	User address	string(255)
Address2	User address (cont)	string(255)
City	City	string(100)
State	Foreign key to states table	integer
Zip	Zip code	string(12)
County	Foreign key to counties table	integer
Phone	User phone number	string(25)
Fax	User FAX	string(25)
Email	User email	string(255)
AreasOfResponsibility	User area of responsibility	string(255)
Education	User education	string(255)
ExperienceLevel	User experience	string(255)
LastTraining	Date of last pertinent training	date/time
	Ability to sign laboratory	
SignAccredCerts	accreditation documents	boolean
SecretQuestion	Secret security question	string(255)
HashedAnswer	Encrypted answer	string(255)
Salt		string(255)
Active	Active/Inactive	boolean
created_at	Record first created	date/time
updated_at	Record last updated	date/time

user_types table

Field	Purpose	Туре
id	Primary key	integer
Key		integer
Туре	User type	string(255)
Display	Display selection	boolean