



# **U.S. Environmental Protection Agency Central Data Exchange (CDX)**



## **CDX Workflow for Electronic Toxic Substances Control Act (eTSCA) Submissions**

**User Guide**

**Version 1.1**

**November 3, 2008**

U.S. Environmental Protection Agency

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## Section 1. Introduction

This document presents the user guide for the U.S. Environmental Protection Agency's (EPA's) Office of Prevention, Pesticides, and Toxic Substances (OPPTS) / Office of Pollution Prevention and Toxics (OPPT), and Central Data Exchange (CDX) Electronic Toxic Substances Control Act (eTSCA) Submissions data flow that provides service for 30 different types of Toxic Substances Control Act (TSCA) submissions through EPA's CDX system.

### 1.1 Background

The purpose of this system is to provide secure electronic submission and receipt of eTSCA submissions. Industries can submit the encrypted and signed data through CDX to the OPPT environment in the Enterprise Content Management System (ECMS). OPPT analysts obtain the data from ECMS and use it in a workflow process.

The eTSCA application facilitates the receipt and storage of eTSCA-related submissions into the ECMS.

### 1.2 Scope

The eTSCA User Guide provides the user with the information that she/he need to know about Registration for CDX and eTSCA/ePMN software use, as well as handling backup of the Encryption and Decryption Keys.

## Section 2. System High Level Overview

The eTSCA system involves submission and distribution of eTSCA detail reports using the Web services capabilities and generic services of the CDX Node, Java Node Client, and eTSCA back-end node. The eTSCA system provides the following capabilities:

- Submitters can submit encrypted and signed eTSCA detail reports in Zip format via Web services to the CDX Node.
- The CDX Node validates the signature on the .zip file
- The CDX Node distributes eTSCA detail reports to the NCS Back-end Node via Web services.
- The NCS Back-end Node accepts the eTSCA detail report and validates the signature, decrypts the document, unzips it, processes it, and loads it to the Documentum system.
- The NCS Back-end Node notifies the CDX Node of the document processing outcome.
- The NCS Back-end Node submits the copy of records for all received documents to the CDX Node.
- The CDX Node provides the status of the transaction to the eTSCA/ePMN software via Web services and e-mails.
- The CDX Node provides the Copy of Record (CoR) to the eTSCA/ePMN software via Web services.
- The eTSCA/ePMN software provides an ability to decrypt the CoR.
- The eTSCA/ePMN software provides an ability to submit Support documents via submit Web services.
- The eTSCA/ePMN software provides an ability to download documents from the CDX Node via download Web services.
- The CDX Node distributes Support documents to the NCS Back-end Node.
- The NCS Back-end Node submits documents containing a Submission Report Number (SRN document) to the CDX Node via submit Web services.
- The NCS Backend Node submits document containing a Pre-manufacturing Notice (PMN) Case Number to the CDX Node via submit Web services.
- The CDX Node provides the status of documents downloaded to the NCS Back-end Node via query Web services.

## Section 3. Web CDX Registration Steps

The following section describes CDX Web registration process for an eTSCA submitter. All CDX Web users enter the system through the CDX Web Home page as shown in Figure 3-1.

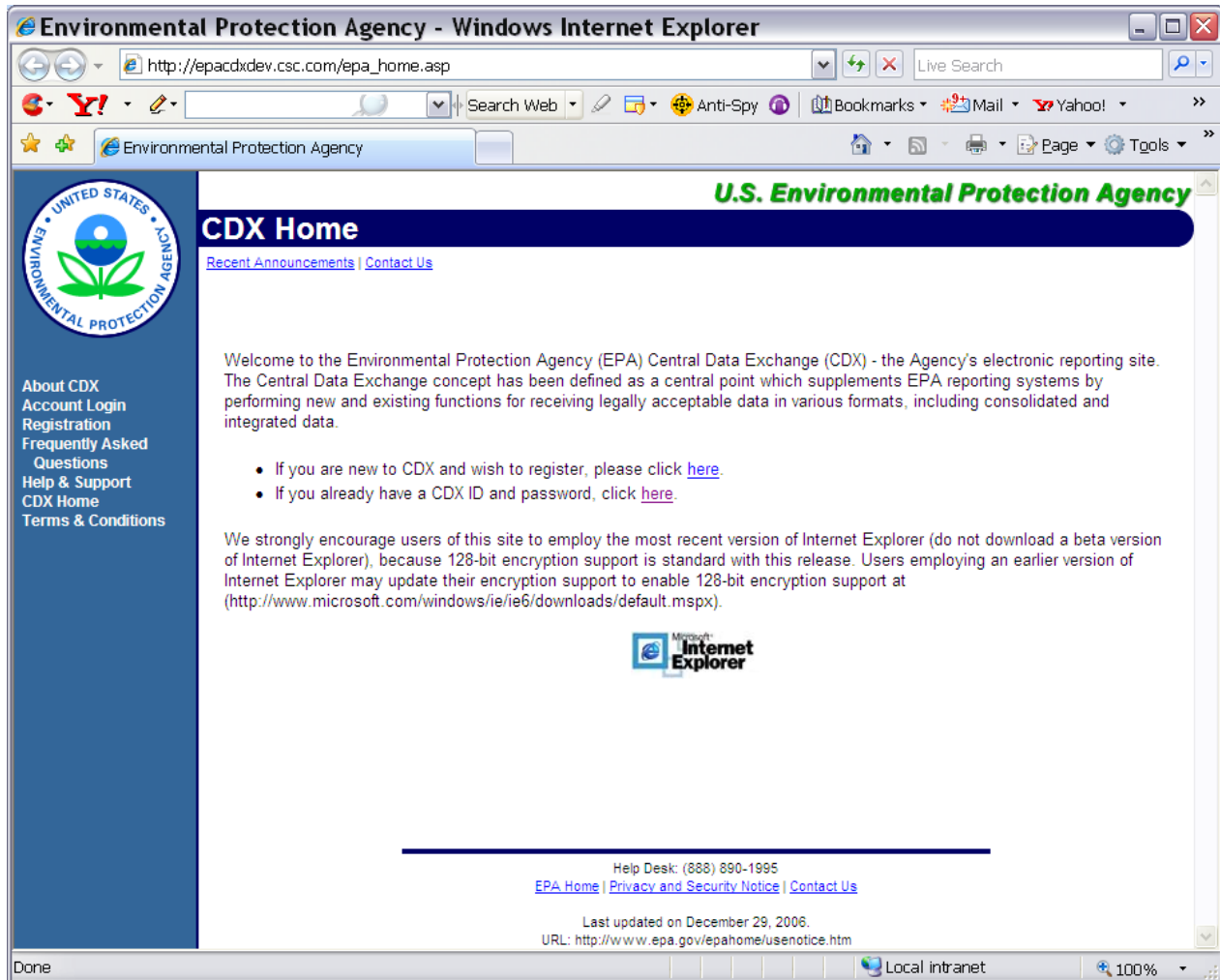


Figure 3-1. CDX Web Home Page

New users click on a “Registration” link to start a registration wizard. A warning notice will be displayed as shown in Figure 3-2.



Figure 3-2. CDX Web Warning Notice and Privacy Statement

The user clicks on the continue option to start the registration process. This action will display terms and conditions agreement form as shown in Figure 3-3.

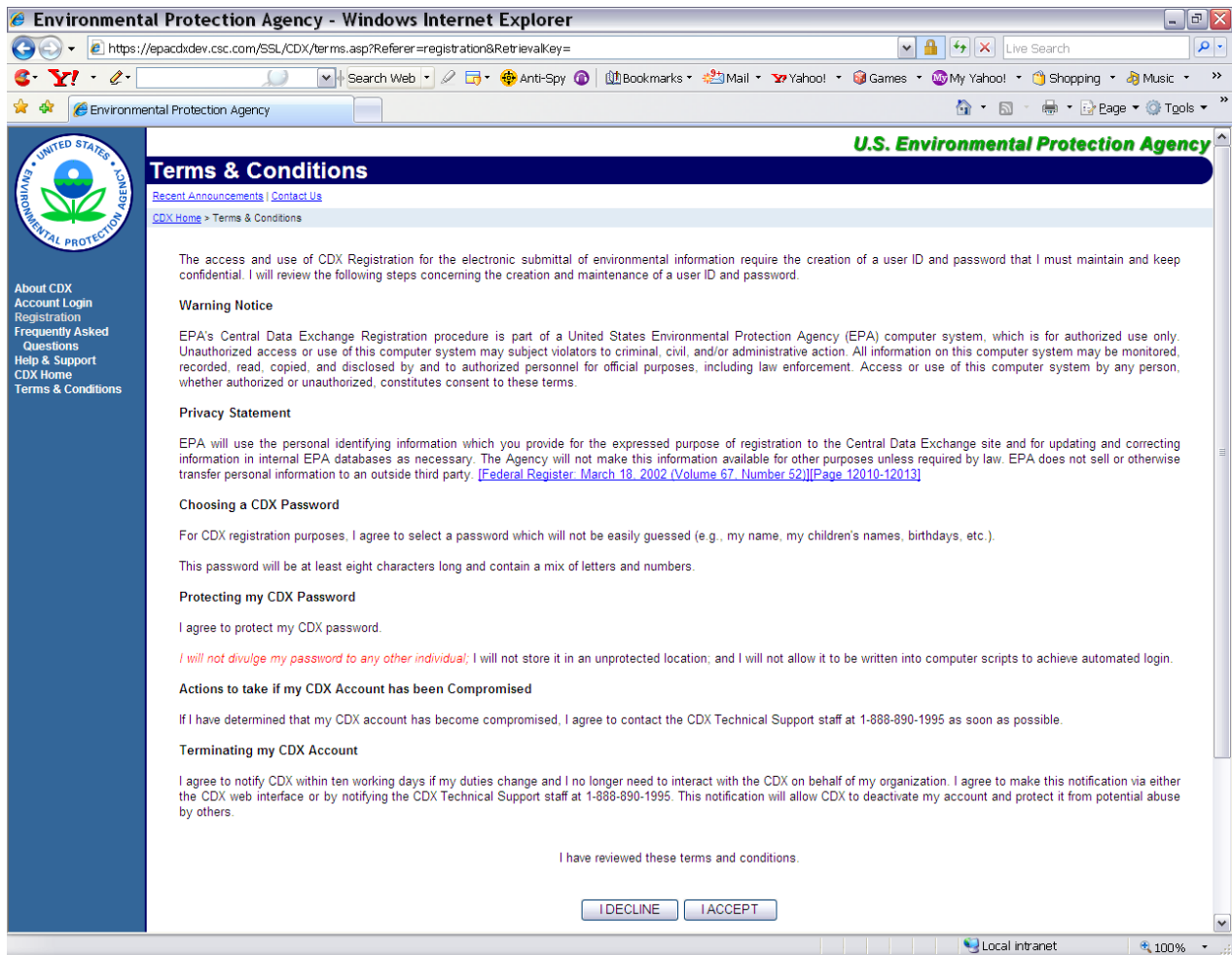


Figure 3-3. Terms & Conditions Agreement Form

The user can accept the terms and conditions by clicking the "I Accept" button or cancel the registration by clicking the "I Decline" button.

Once the user has accepted the registration agreement, he or she will be redirected to the personal information form as shown in Figure 3-4.

The screenshot shows a web browser window with the URL <https://epacdxdev.csc.com/SSL/CDX/pre-reg-userinfo.asp>. The browser's address bar and toolbar are visible at the top. On the left side of the page, there is a blue navigation menu with the following links: About CDX, Account Login, Registration, Frequently Asked Questions, Help & Support, CDX Home, and Terms & Conditions. The main content area is titled "CDX Registration: User Information" and contains the following text and form elements:

Use the TAB key to move from field to field. \* = REQUIRED FIELD

First Name: Mr.  \*

Last Name:  \* Suffix:

Please choose a user name and password—the password must be at least 8 characters long and contain at least one number. Both passwords and user names are restricted to alpha-numeric characters and may not begin with a number or contain spaces or symbols, e.g. \$ # . " or @. Your user name should not be a part of your password. If you enter a user name which is in use, you will be asked to select a new user name.

User Name:  \*  
(More than 7 characters; Don't use \$ # . " or @)

Password:  \*

Re-enter Password:  \*  
(More than 7 characters w/1 number; Don't use \$ # . " or @)

The Help Desk will use the Secret Question and Answer to authenticate you if you forget your password. Please enter a secret question which has relevance to you and has an answer which is not easily guessed by others.

Secret Question:  \*

Secret Answer:  \*

Next >>

You are in an encrypted secure session.

The browser's status bar at the bottom shows "Done" on the left, "Local intranet" in the center, and "100%" on the right.

Figure 3-4. CDX Registration: User Information



After choosing a login, password and secret question, the user will be asked for his or her Organization information as shown in Figure 3-5.

The screenshot shows a web browser window displaying the 'CDX Registration: Organization Information' form. The browser's address bar shows the URL: <https://epacdxdev.csc.com/SSL/CDX/pre-reg-organizationinfo.asp?RetrievalKey=>. The browser's toolbar includes a search bar, 'Anti-Spy', 'Bookmarks', 'Mail', 'Yahoo!', and 'Games' buttons. The page header features the Environmental Protection Agency logo and the text 'Registration'. A navigation menu on the left includes links for 'About CDX', 'Account Login', 'Registration', 'Frequently Asked Questions', 'Help & Support', 'CDX Home', and 'Terms & Conditions'. The main content area is titled 'CDX Registration: Organization Information' and includes the instruction: 'Use the TAB key to move from field to field. \* = REQUIRED FIELD'. The form fields are: 'Organization Name' (text input, required), 'Registrant's Work Mailing Address 1' (text input, required), 'Registrant's Work Mailing Address 2' (text input), 'City' (text input, required), 'State/Province' (dropdown menu, currently set to 'Alabama', required), 'Zip/Postal Code' (text input, required), 'Country' (dropdown menu, currently set to 'UNITED STATES', required), 'E-mail' (text input, required), and 'Phone Number' (text input, required) with an 'Ext.' field. Below the phone number field, there are instructions for phone number formats: 'U.S., Canada & Caribbean Islands Phone Format: ###.###.####' and 'International Phone Format: 011 + Country Code + City Code<sup>1</sup> + Local Number'. A footnote states: '<sup>1</sup>As necessary.'. A 'Next >>' button is located at the bottom right of the form area. The browser's status bar at the bottom shows 'Done', 'Local intranet', and '100%' zoom.

Figure 3-5. CDX Registration: Organization Information

The user will have to provide his or her Organization name, address, e-mail, and phone number. Clicking the “Next” button will lead to the Add CDX Web Program page. On this page the user will be able to choose the “TSCA” dataflow as shown in Figure 3-6.

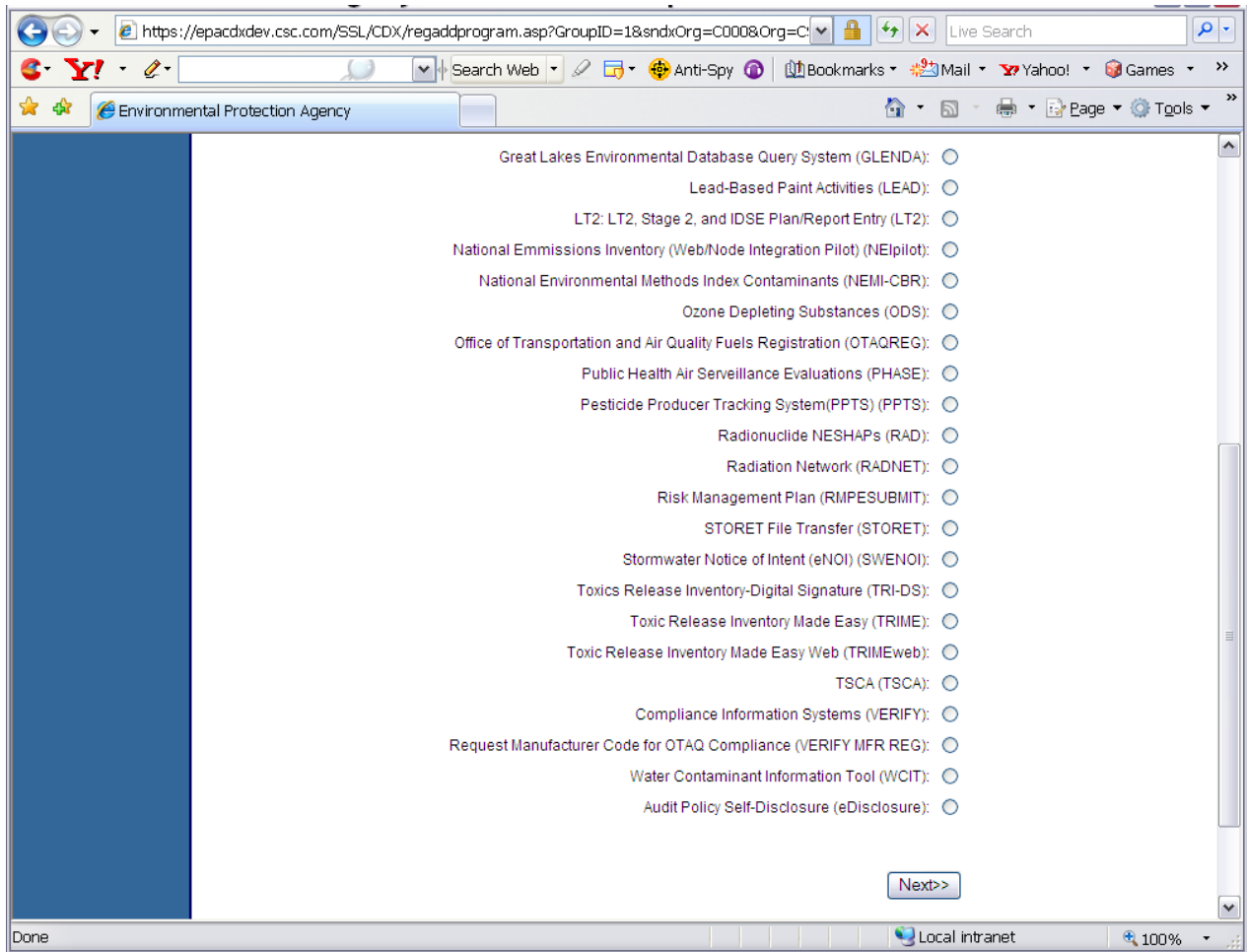


Figure 3-6. CDX Registration: Add Program

After adding the “TSCA” program to the new user account, the user will have to choose between the roles “Authorized Official” and “Support Registrant” for the Program ID type on the Add Program ID page as shown in Figure 3-7. Enter N/A for the ID field (this field is not used for the eTSCA workflow).



Figure 3-7. Add Program ID

If registering as a Support Registrant, the user will need to specify who their authorized official is on the eTSCA Support Registrant page as shown in Figure 3-8. Enter the UserID of the under which the authorized official is registered and approved.



Figure 3-8. eTSCA Support Registrant Page

Once the authorized official is specified, the user is then prompted to select the Authorized Official's organization with which they'll be associated as shown in Figure 3-9.



Figure 3-9. eTSCA Support Registrant Page – Select Organization

For authorized officials and support registrants, if the user has not previously provided an electronic signature agreement (ESA) for eTSCA and been their account has not been approved, they will be prompted to print, sign and mail an ESA to the EPA as shown on figure 3.10. A copy of the ESA form will be saved in the user’s MyCDX Inbox for future reference and reprinting, if needed.



Figure 3-10. CROMERR ESA page

The user clicks on the “Create ESA & Continue” button to proceed with the Electronic Signature Agreement (ESA) generation process. The resulting agreement form is shown in Figures 3-11, 3-12 and 3-13.

Environmental Protection Agency - Windows Internet Explorer

## U.S. Environmental Protection Agency ELECTRONIC SIGNATURE AGREEMENT

In accepting the electronic signature credential issued by the U.S. Environmental Protection Agency (EPA) to sign electronic documents submitted to EPA's Central Data Exchange (CDX), and as an employee of:

**Electronic Signature Holder Company Information**

Company Name:	
Address:	New Carllton
City, State, Zip:	New Carllton, MD 20850
Province:	
Country:	US
Phone Number:	1111111111
E-mail Address:	
Registrant's Name:	
CDX User Name:	TESTTSCA3

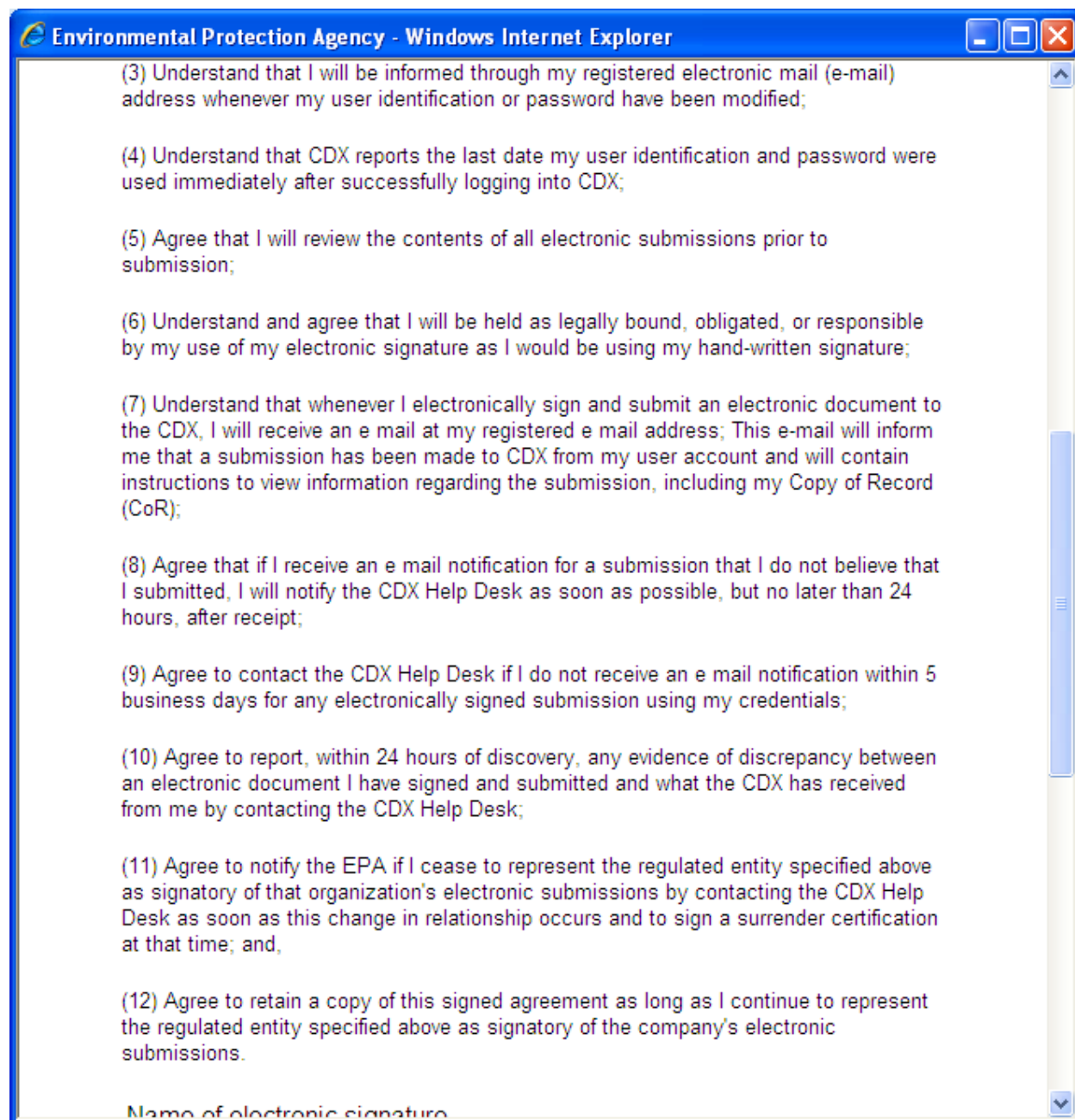
I, \_\_\_\_\_ ,  
(Name of Electronic Signature Holder)

(1) Agree to protect the electronic signature credential, consisting of my Central Data Exchange (CDX) user identification and password, from use by anyone except me. Specifically, I agree to maintain the secrecy of the password; I will not divulge or delegate my user name and password to any other individual; I will not store my password in an unprotected location; and I will not allow my password to be written into computer scripts to achieve automated login;

(2) Agree to contact the U.S. EPA CDX Help Desk at 1-888-890-1995 as soon as possible, but no later than 24 hours, after suspecting or determining that my user name and password have become lost, stolen or otherwise compromised;

(3) Understand that I will be informed through my registered electronic mail (e-mail)

**Figure 3-11. Electronic Signature Agreement Form**



**Figure 3-12. Electronic Signature Agreement Form (Cont'd)**



the regulated entity specified above as signatory of the company's electronic submissions.

Name of electronic signature holder: Mr. Lev Yarmovsky

Signature of electronic signature holder: \_\_\_\_\_

Date: \_\_\_\_\_

NOTARY PUBLIC:

Please click PRINT & CLOSE to get a hard copy of this agreement.

PRINT & CLOSE

*Figure 3-13. Electronic Signature Agreement Form (Cont'd)*

The user will be asked to print the resulted ESA as part of the ESA procedure.

Once the user clicks to view and print the ESA, they will be prompted to print, sign and mail a verification form as shown on figure 3.14. Like the ESA, the verification form will be saved to the user’s MyCDX Inbox for future reference.



Figure 3-14. eTSCA Verification Form Page

The user clicks on the “Create Form & Continue” button to proceed with the Verification Form generation process. The resulting agreement form is shown in Figures 3-15 and 3-16.

Below is top half of the verification form for a Support Registrant.

**Authorized Official Signature**

I am an authorizing official and an electronic signature holder in U.S. EPA's CDX for the organization listed below, and verify that the person identified as the electronic signature holder below is authorized to submit **only** supplemental PMN documents (i.e., all support documents except for a Letter of Support) on behalf of my organization.

CDX User ID:	TESTTSCAAO
Name of Authorized Official:	Mr. TSCA AOTester
Company Name:	AO Testing, Inc.
Address:	123 Any St.
City, State, Zip:	York, PA 17406
Signature	Date

**Electronic Signature Holder for Submission of Supplemental Information**

I acknowledge by my signature below that the accuracy of the statements in all electronic submissions reflect my best prediction of the anticipated facts regarding the chemical substance(s) described therein. Any knowing and willful misrepresentation is subject to criminal penalty pursuant to 18USC 1001.

I also acknowledge that I am authorized to submit **only** supplemental PMN documents (i.e., all support documents except for a Letter of Support) on behalf of the organization listed above.

CDX User ID:	TESTTSCA3
Name of Electronic Signature Holder:	
Company Name:	CSC
Address:	New Carliton
City, State, Zip:	New Carliton, MD 20850

Figure 3-15. eTSCA Verification Form

Below is the bottom half of the verification form for a Support Registrant.

submissions reflect my best prediction of the anticipated facts regarding the chemical substance(s) described therein. Any knowing and willful misrepresentation is subject to criminal penalty pursuant to 18USC 1001.

I also acknowledge that I am authorized to submit **only** supplemental PMN documents (i.e., all support documents except for a Letter of Support) on behalf of the organization listed above.

CDX User ID:	TESTTSCA3		
Name of Electronic Signature Holder:			
Company Name:			
Address:	New Carliton		
City, State, Zip:	New Carliton, MD 20850		
Country:		Province:	
Signature			Date

PLEASE SEND THIS DOCUMENT AS SOON AS POSSIBLE TO:

<b>By U.S. Postal Service:</b>	<b>By Hand Delivery or Courier:</b>
PMN CDX Registration Coordinator (7407M)	PMN CDX Registration Coordinator
U.S. Environmental Protection Agency	U.S. EPA- OPPT/CBIC
Office of Pollution Prevention and Toxics	EPA East Building, Room 6428
Ariel Rios Building	1201 Constitution Ave, NW
1200 Pennsylvania Ave, NW	Washington, DC 20004-3302
Washington, DC 20460	202-564-8930; 202-564-8940

Please click PRINT & CLOSE to get a hard copy of this agreement.

Figure 3-16. eTSCA Verification Form (Cont'd)

This completes the initial user registration process.



**Figure 3-17. Registration Complete**

After hitting the “Finished” button, the user will be redirected to the CDX Web home page screen as shown in Figure 3-18.

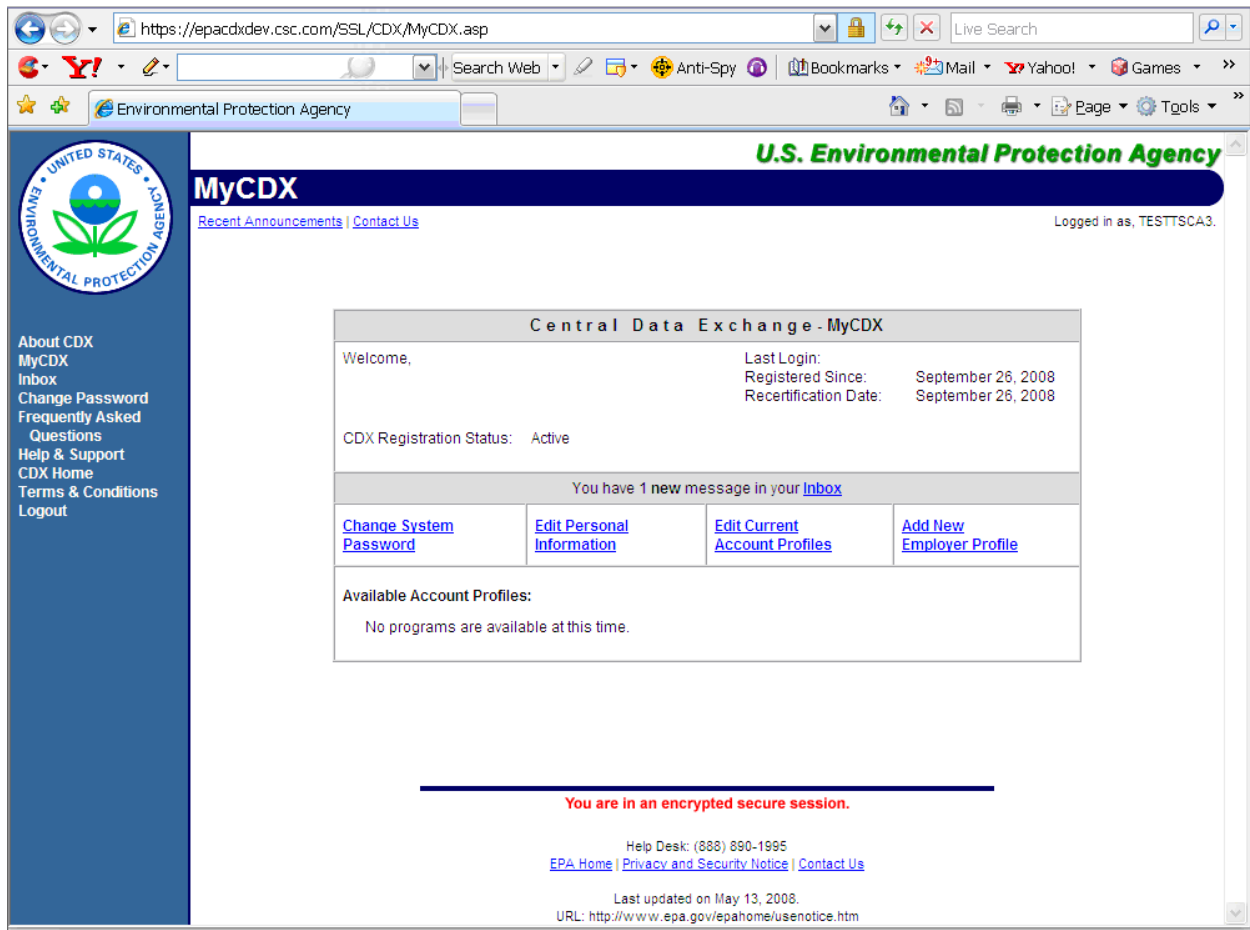
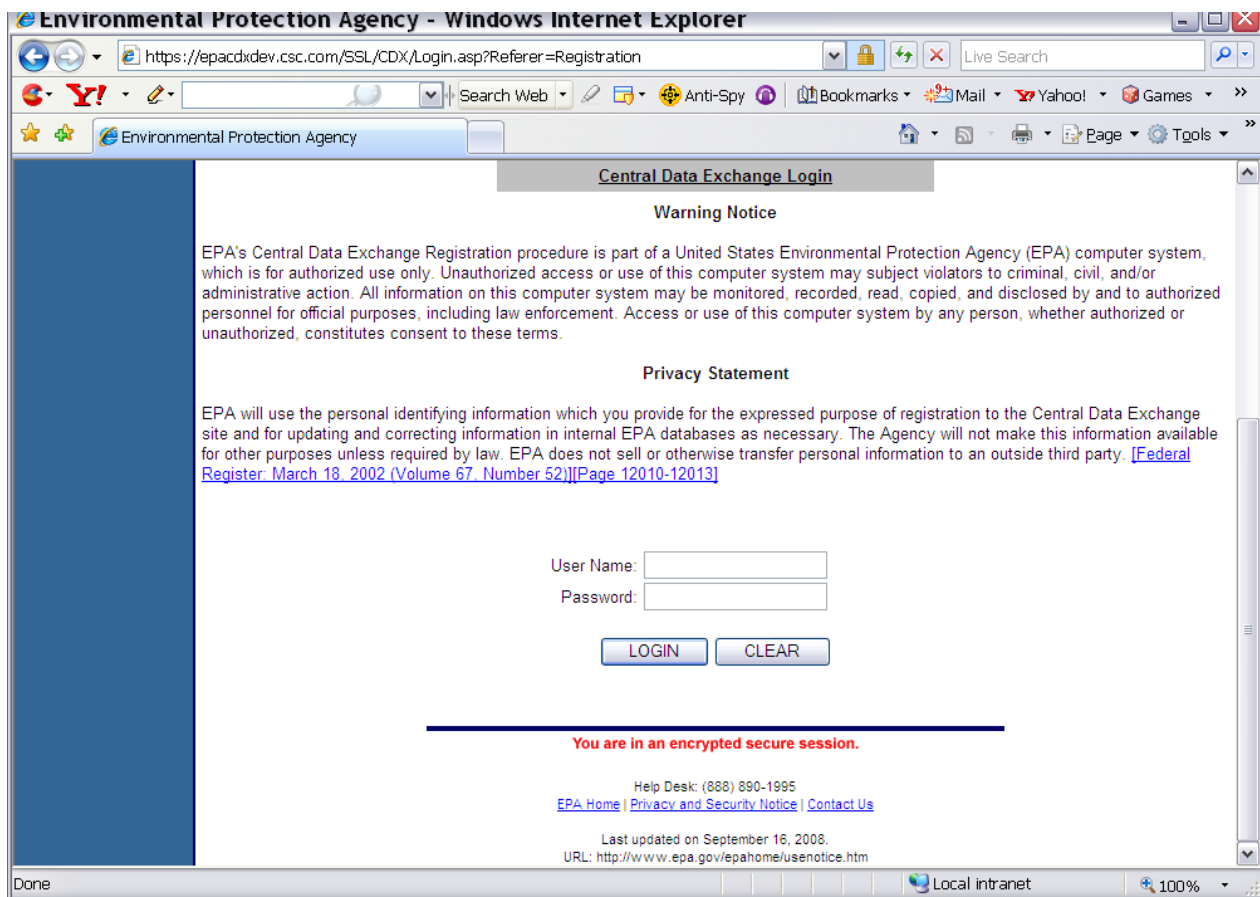


Figure 3-18. Empty CDX Web Home Page

The user's ESA and verification forms will be reviewed by the eTSCA approver and if the user credentials are confirmed, the user will be notified via e-mail that his or her account has been activated.

Upon receiving the approval letter, the user will be able to login to the CDX Web application as shown in Figure 3-19.



**Figure 3-19 Central Data Exchange Login**

The first time a user logs into CDX Web, he or she will be asked to provide answers to 5 out of 20 questions. Each time the user enters CDX Web thereafter one of the answered questions will be used to confirm the identity of the submitter to satisfy the 20-5-1 CROMERR requirement. The questions are shown in Figure 3-20.

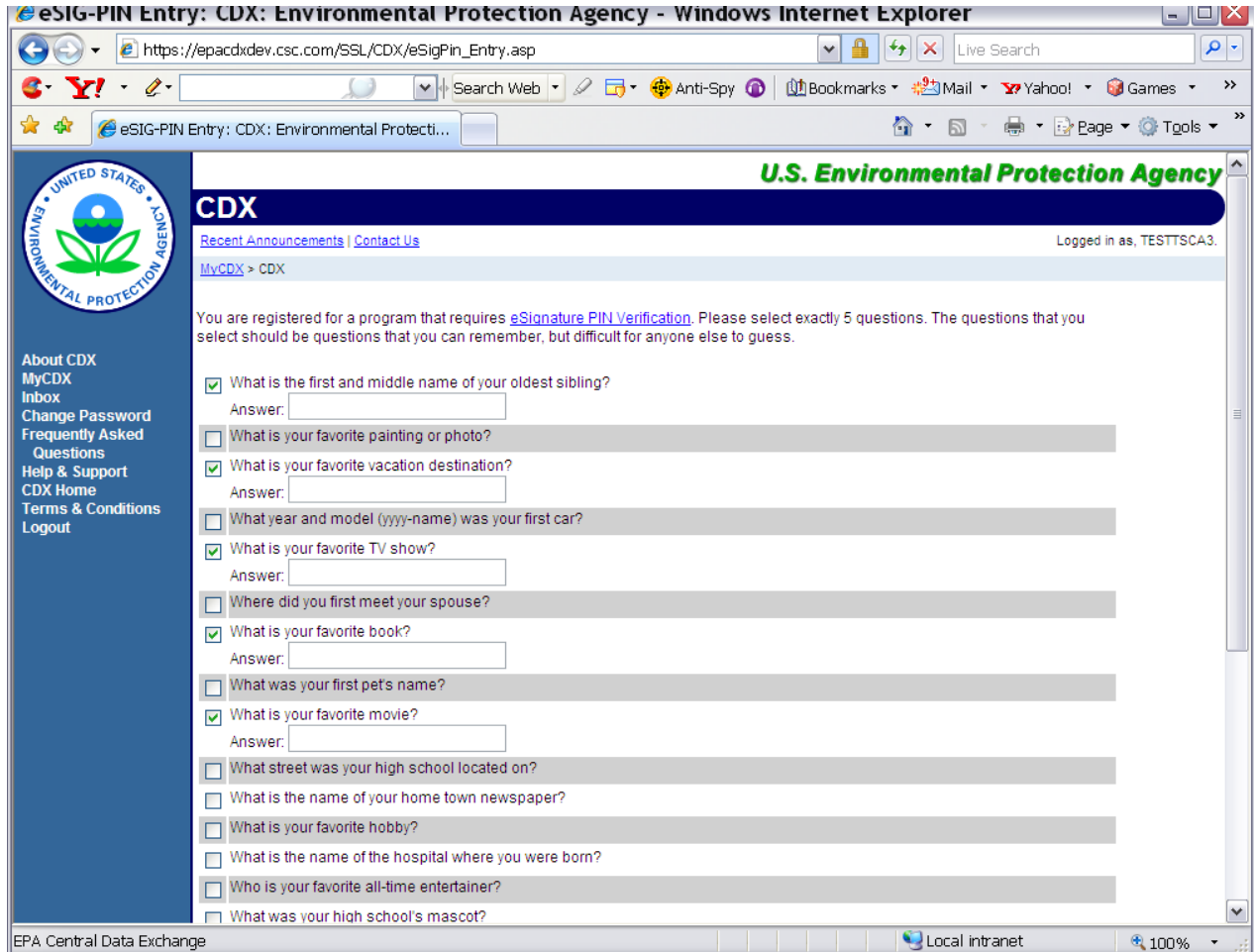


Figure 3-20. 20-5-1 CROMERR Questions Page



A Confirmation Page will be displayed to a user after he or she have answered the verification questions and saved the desired answers, as shown in Figure 3-21.

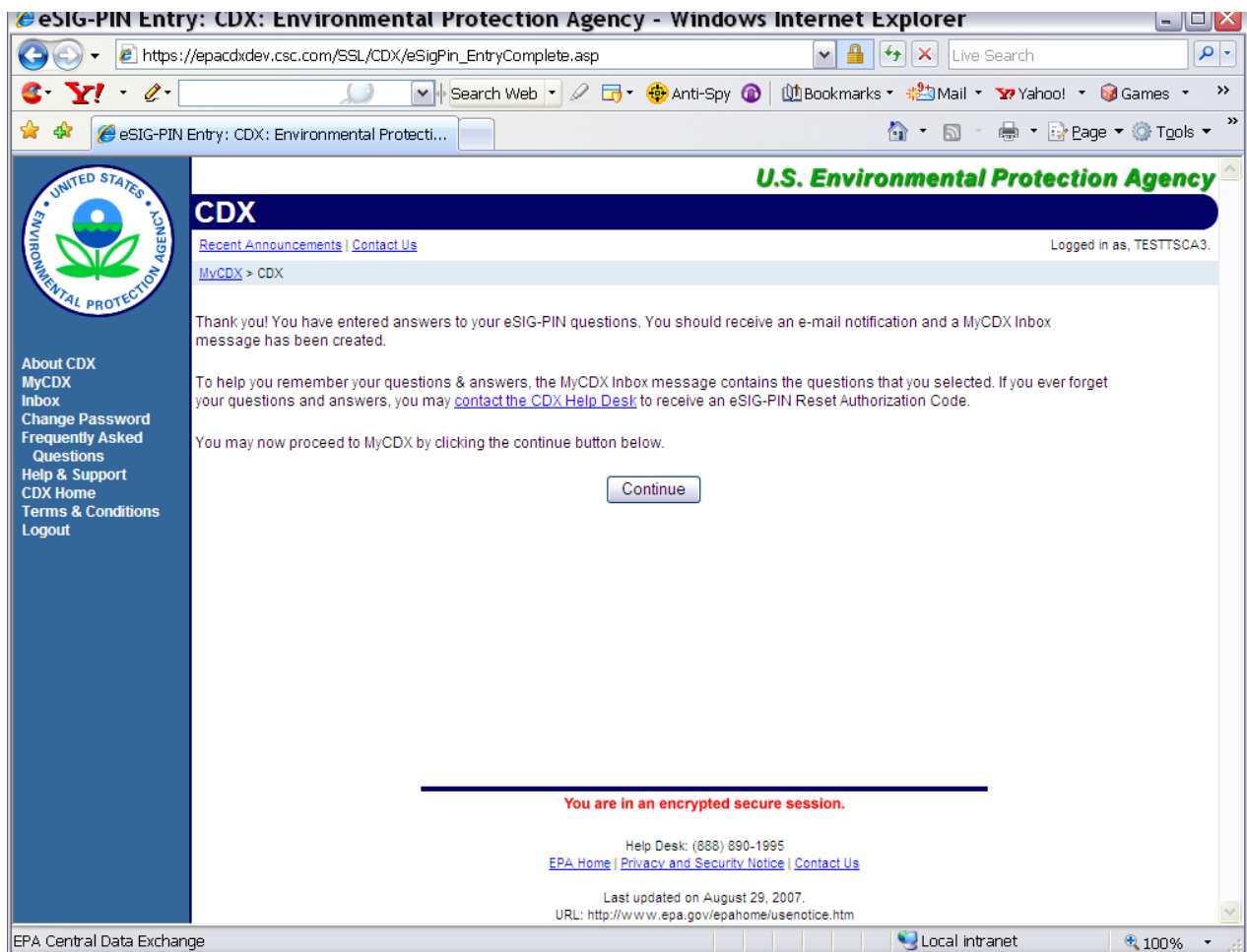


Figure 3-21. Answers to Your eSIG-PIN Questions

After the account has been activated, the user will have a “TSCA” program link on his or her CDX Web home page as shown in Figure 3-22.



Figure 3-22. TSCA Program Link

The Authorized Official users are shown a link to download the eTSCA/ePMN software and view their support registrants. (Shown in Figure 3-22)

The Support Registrant users are shown a link to download the eTSCA/ePMN software. (Not shown)

CDX Web will send a confirmation letter for 20-5-1 e-signature questions as shown in Figure 3-23.

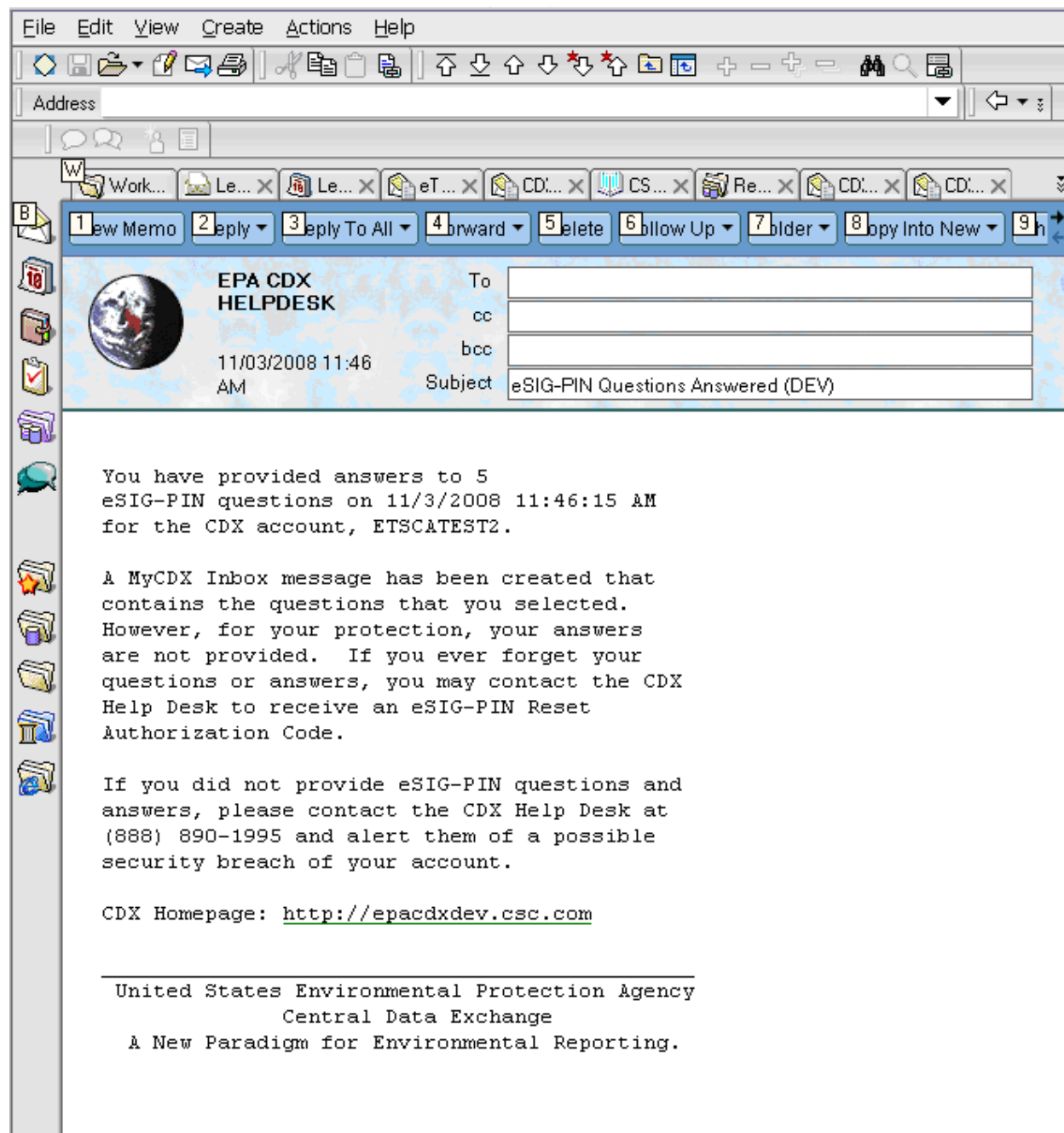


Figure 3-23. eSIG-PIN Questions Answered Confirmation Letter

## Section 4. User Certificate and Key Pair Generation

A user certificate and Private/Public Key pair is used to digitally sign and encrypt the submitted documents, providing security protection for eTSCA submissions. The certificate and key pair will be automatically obtained by the eTSCA/ePMN software after the first login. When the document submission function of report tool is accessed, the eTSCA/ePMN software dialog login screen will be displayed as shown in Figure 4-1.

**U.S. Environmental Protection Agency**

**Warning Notice**

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**Environmental Protection Agency  
Central Data Exchange**

**Warning Notice**

EPA's Central Data Exchange Registration procedure is part of a United States Environmental Protection Agency (EPA) computer system, which is for authorized use only. Unauthorized access or use of this computer system may subject violators to criminal, civil, and/or administrative action. All information on this computer system may be monitored, recorded, read, copied, and disclosed by and to authorized personnel for official purposes, including law enforcement. Access or use of this computer system by any person, whether authorized or unauthorized, constitutes consent to these terms.

**Privacy Statement**

EPA will use the personal identifying information which you provide for the expressed purpose of registration to the Central Data Exchange site and for updating and correcting information in internal EPA databases as necessary. The Agency will not make this information available for other purposes unless required by law. EPA does not sell or otherwise transfer personal information to an outside third party.

[Federal Register: March 18, 2002 \(Volume 67, Number 52\)\[Page 12010-12013\]](#)

If you have forgotten your password, or if your password doesn't work, you may re-establish your password via:

[Production Environment Password Reset](#)  
[Test Environment Password Reset](#)  
[Development Environment Password Reset](#)

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Help Desk: (888) 890-1995  
[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)  
 Last updated on February 23, 2007.  
 URL: <http://www.epa.gov/epahome/usenotice.htm>

User Name:

Password:

Node:

*Figure 4-1. eTSCA/ePMN software Login and Warning Notice*

On this screen the user will be presented with a warning notice, privacy statements and links to CDX Web resources for account management. The user enters his or her user name and password and chooses between the Production, Test, and Development environments. This

choice will determine the destination for all document submissions and queries that will be performed through the eTSCA/ePMN software during the current login session. After successful login, the user key pair and certificate will be created automatically and managed by the eTSCA/ePMN software, without requiring user interaction.

The eTSCA/ePMN software stores the following data into a keystore under the user home directory:

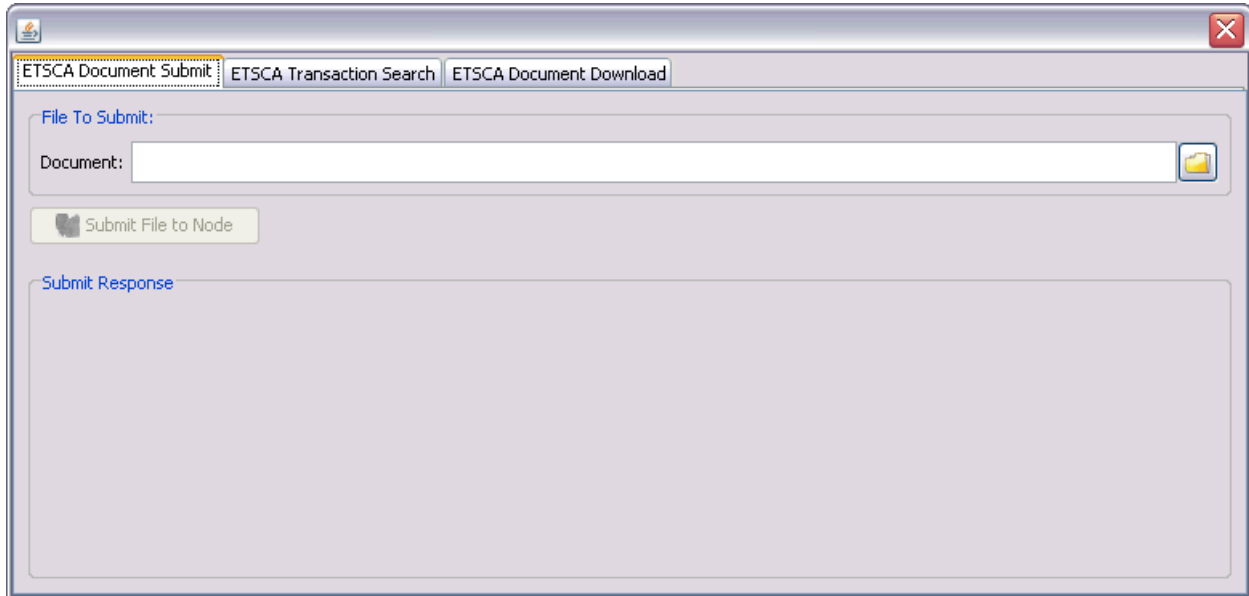
- user ID
- user private key
- user certificate
- creation time

The following file will be created: \<userHome>\.<userId>-cromerr-keystore.jks

Where <userHome> is a local user home directory (C:\Documents and Settings\myuser) and <userId> is an eTSCA user ID, registered with CDX Web. The user can copy this file to another safe location for backup, if desired.

## Section 5. Data Submission

The user will prepare the desired document for submission using the eTSCA/ePMN software Submit dialog. Upon successful login, the following dialog will be presented to the user:



*Figure 5-1. Submit Dialog, Before Submission*

The document path will be automatically populated for the user by the Report Tool. The user has the option to submit Original or Support documents through this dialog. Support documents require a valid Transaction ID, corresponding to an original submission. The user can click on a “Submit File to Node” button to initiate the transaction. The following confirmation dialog will be displayed to the user:

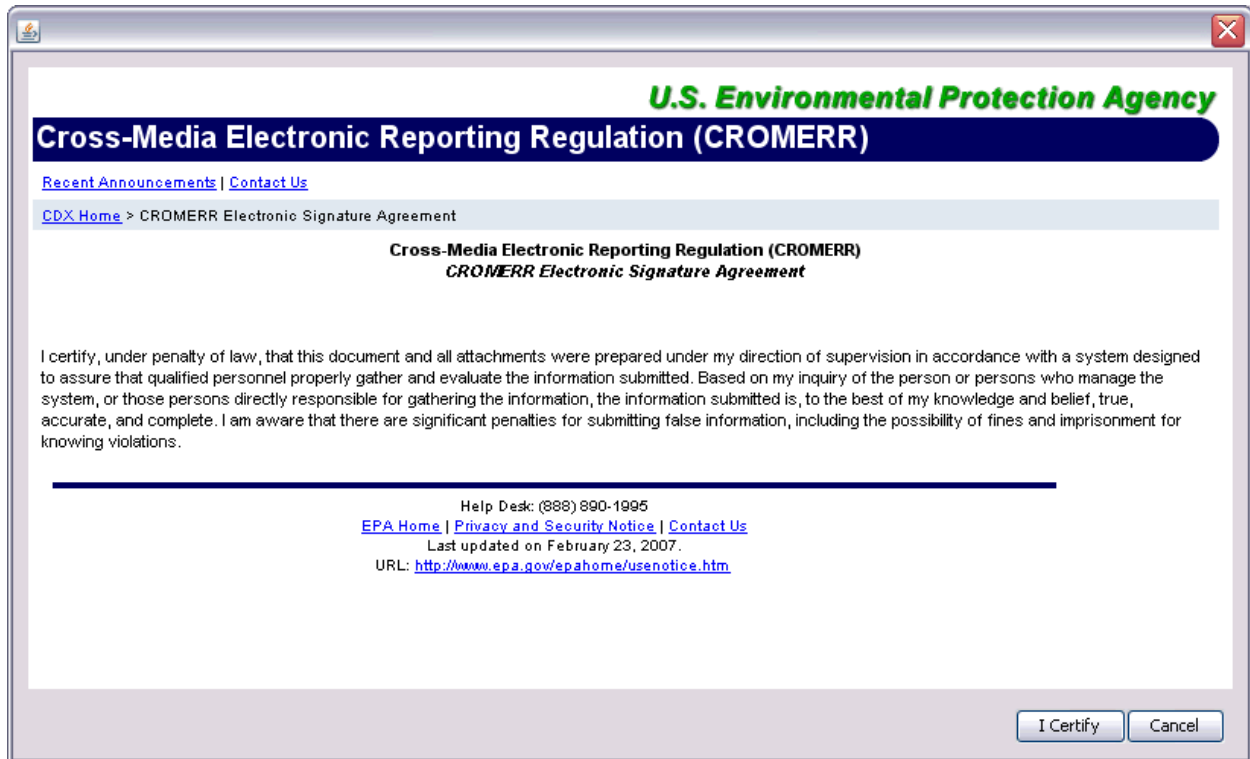


Figure 5-2. Confirmation dialog

After the user confirmation one of the 20-5-1 questions will be presented to the user to verify his or her identity.

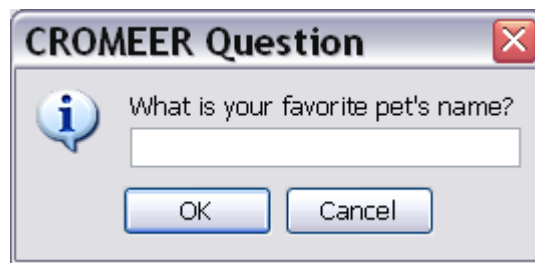
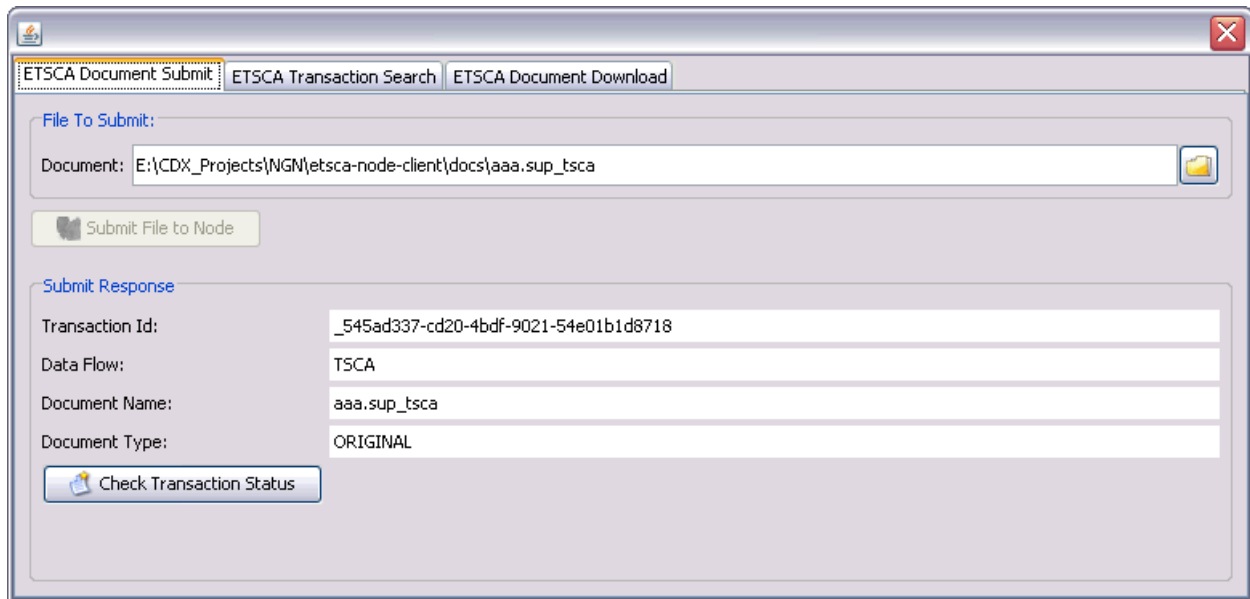


Figure 5-3. 20-5-1 CROMERR Question

The system will then encrypt the desired document with the Public key of the back-end server and transmit the encrypted document with related metadata to CDX. The CDX Transaction ID will be presented to the user on a submit dialog for the user's reference.



**Figure 5-4. Document Submitted to CDX**

The user can click on a “Check Transaction Status” button to check the status of submitted document and download any document related reports. CDX will also send an email confirmation of the submission as shown in Figure 5-5.



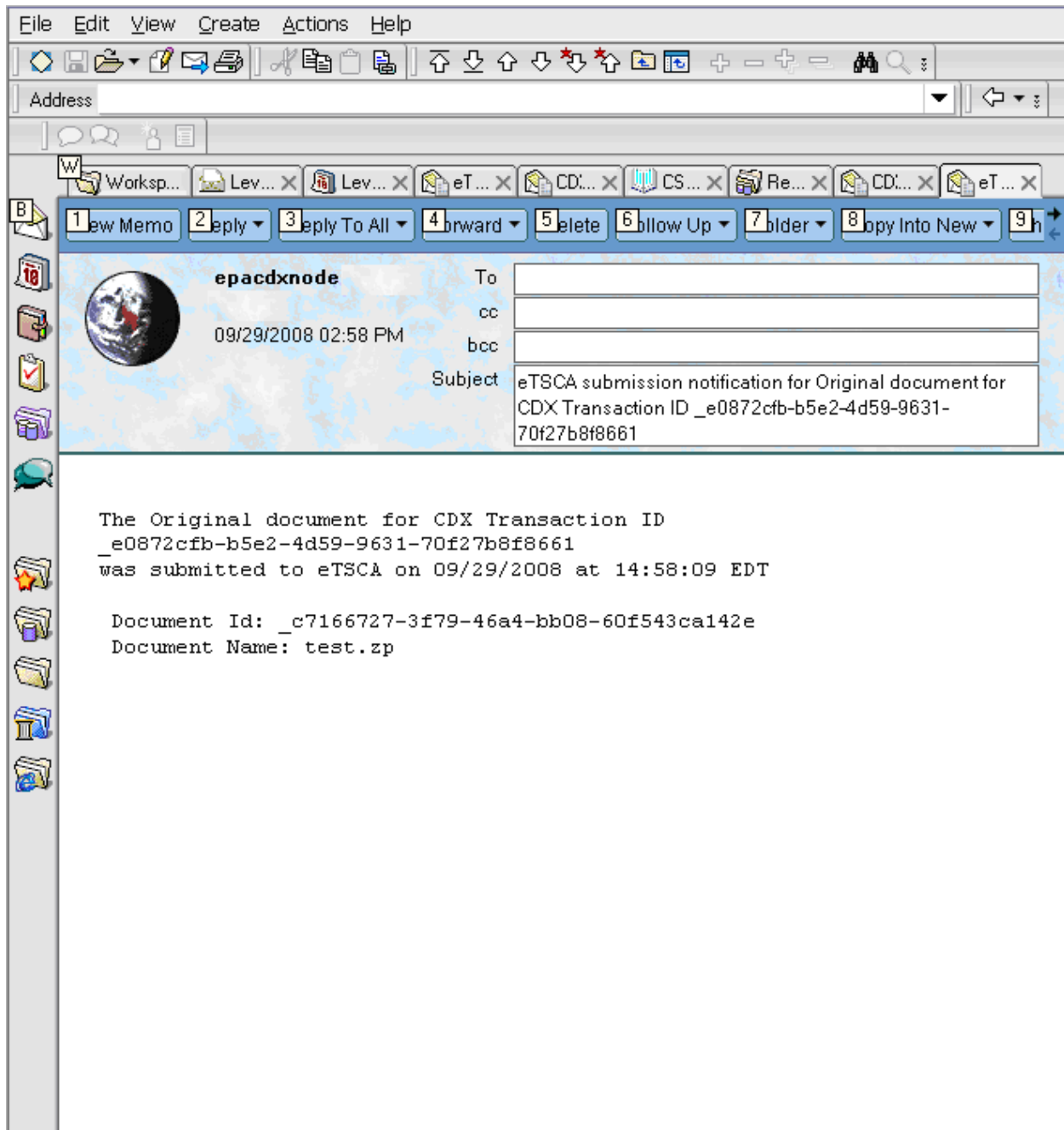
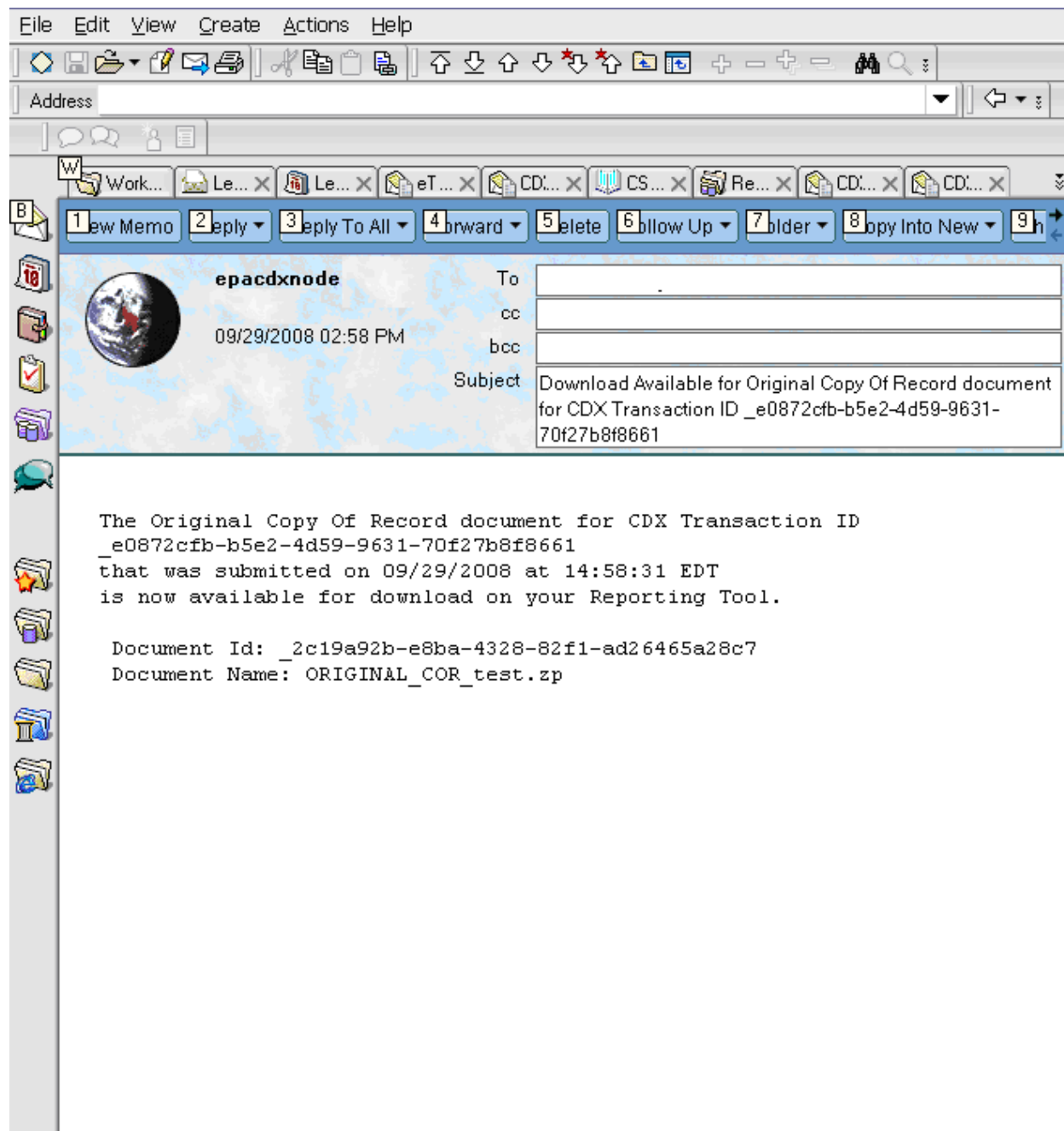


Figure 5-5. Submission Confirmation E-mail

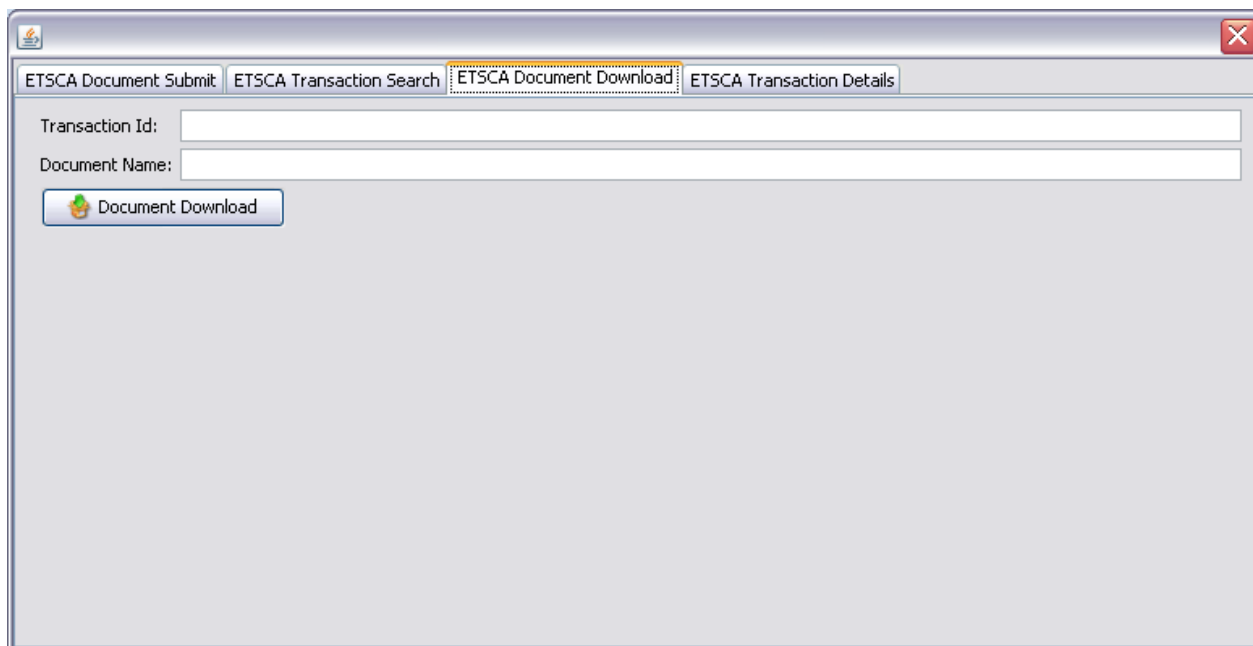
## Section 6. Download Reports

CDX will send notification e-mails (see Figure 6-1) in case any transaction related reports are available for download through the eTSCA/ePMN software.



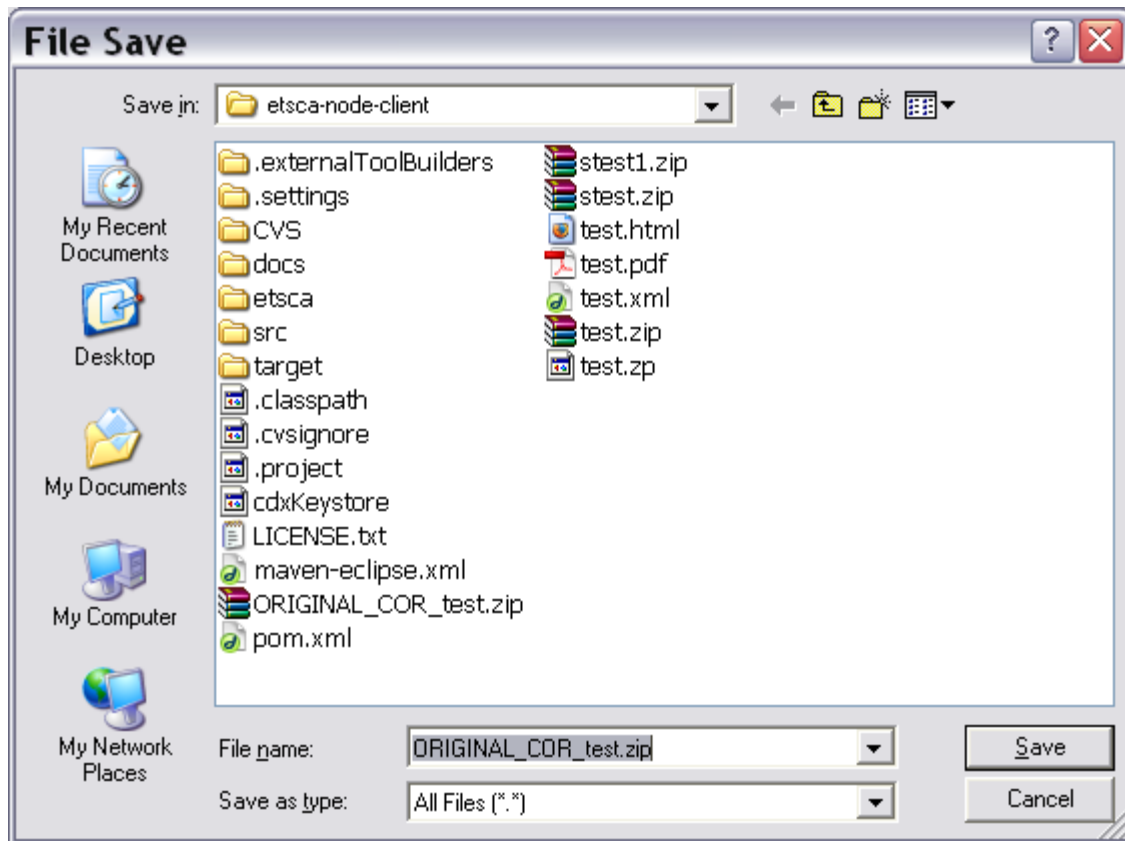
*Figure 6-1. Report Notification E-mail*

The user can open the eTSCA/ePMN software and click on the eTSCA Document Download tab.



**Figure 6-2. Document Download tab**

The user can copy the transaction ID and a report name from an e-mail notification and click on the “Document Download” button. The system will attempt to download the requested file and decrypt it using the private key of the currently logged in user. The file save dialog will be presented to the user as shown in Figure 6-3.



**Figure 6-3. File Save Dialog**

All transaction related reports are also available for search and download through the transaction details dialog, discussed later in this guide.

## Section 7. Transaction History

The transaction history search dialog will be presented to a user upon clicking the “ETSCA Transaction Search” tab as shown in Figure 7-1.

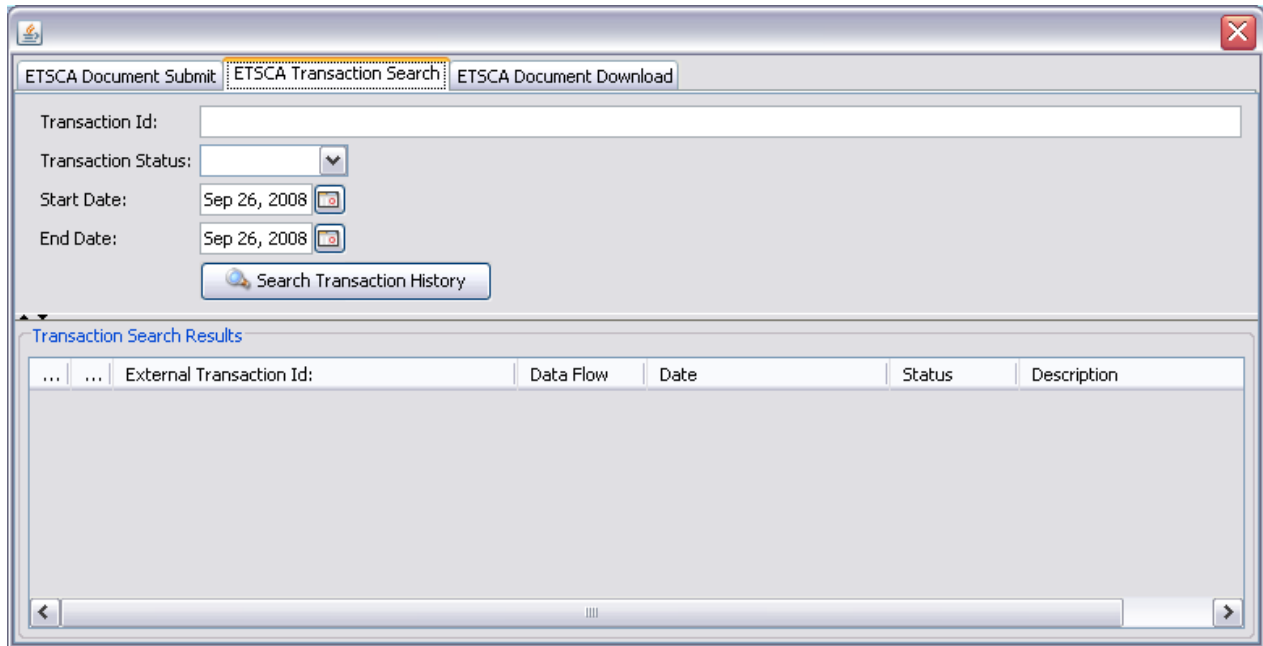
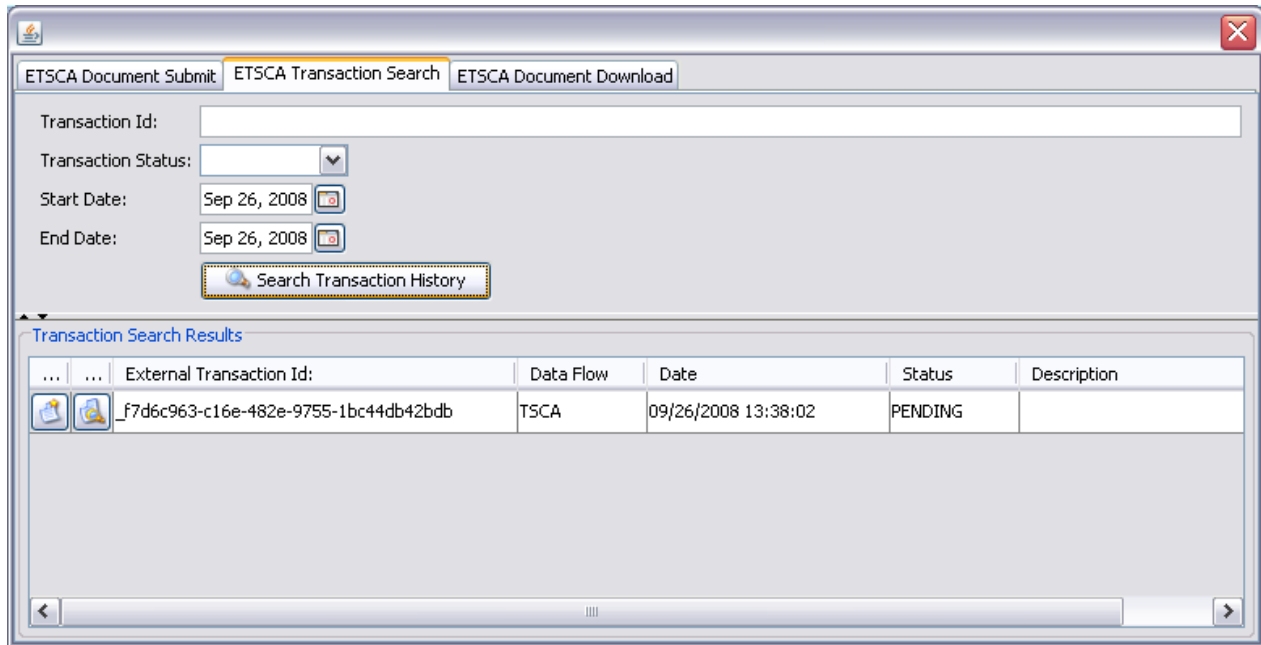


Figure 7-1. Transaction Search

The user can search for a specific transaction within a given time period using transaction ID and/or status, or request a complete list of transactions during this time period. Transaction search results will be presented to the user in the “Transaction Search Results” panel.

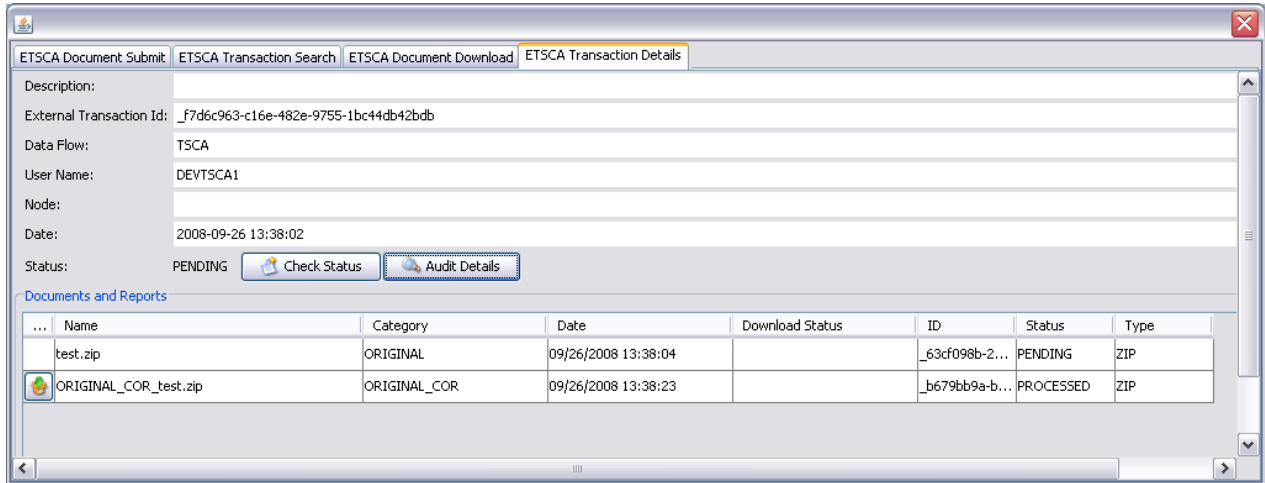


**Figure 7-2. Transaction Search Results**

Two buttons are available for each transaction; “Check Status” and “Details”. The Check Status button will refresh the status column of a given transaction with a new CDX status. This way the user can quickly check if a given transaction failed on the server. The Details button will open the transaction details dialog.

## Section 8. Transaction Details

The Transaction Details dialog displays the detailed transaction information, including all of the documents and reports associated with the current transaction.



**Figure 8-1. Transaction Details Dialog**

The user can check the transaction status by clicking the “Check Status” button and can review the audit information by clicking on the “Audit Details” button as shown in Figure 8-2.



**Figure 8-2. Audit Details dialog**



The user can close the dialog by clicking the “Done” button.

The user can also download available reports by clicking the “Download” button related to a desired report. This will automatically initiate the download procedure. The document will get decrypted with the current user private key and the Save File dialog will be presented to a user. Reports can be saved on a local hard drive and accessed with the appropriate application.

## Abbreviations and Acronyms

<b>Acronym/Term</b>	<b>Definition</b>
CDX	Central Data Exchange
CoR	Copy of Record
ECMS	Enterprise Content Management System
EPA	Environmental Protection Agency
ESA	Electronic Signature Agreement
eTSCA	Electronic Toxic Substances Control Act
IE	Internet Explorer
OPPT	Office of Pollution Prevention and Toxics
OPPTS	Office of Prevention, Pesticides, and Toxic Substances
PMN	Pre-manufacturing Notice
SRN	Submission Report Number
SSL	secure socket layer
TSCA	Toxic Substances Control Act
UI	user interface
WSDL	Web services description language