



PREPARED FOR

Iowa Department of Nature Resources (DNR)

**Electronic application submission and tracking
system for air quality permits**

RFP No. 1217542003

Technical Proposal

NOVEMBER 7, 2016



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1. Transmittal Letter

enfoTech & Consulting, Inc. (enfoTech) is pleased to submit this proposal to provide a turn-key Solution and associated services to meet Iowa Department of Nature Resources (DNR) e-Application project requirements (RFP# 1217542003). enfoTech specializes in environmental compliance and e-Government solutions at the Federal, State, and local municipalities. We have carefully reviewed the RFP and propose a Solution to meet project requirements. All RFP requirements will be met.

Since 1994, enfoTech has implemented databases and online submittal systems for government agencies. Our clients include authorities from over 20 states, 100 major municipalities, and Federal agencies across the nation, and international countries. In addition, enfoTech is a major contributor to the National Environmental Information Exchange Network since 2002. We help developed core technologies adopted by the data exchange consortium to automate data exchange and to flow environmental data from-applicant-to-agency, from-agency-to-federal, and eventually to publish the data for public use.

We are very passionate about this project for the following reasons:

1. We have successfully implemented air quality systems (for permitting, emission reporting, and air quality monitoring) at multiple states to support projects with similar nature, scale and complexity as required by the project
2. enfoTech offers GovOnline, a mature COTS product, as the base for the project. Our out-of-the-box product features offer a high-degree of functional fit to meet the project needs (88% match of 697 RFP requirements, right out of the box without coding). In addition, GovOnline has also been used as the one-stop e-Permit Portal by multiple sates and is highly extensible to support other environmental permits in the future.
3. enfoTech specializes in environmental IT systems and offers values added domain expertise and comprehensive project experiences. We will bring our technical know-how to work with the DNR side-by-side to ensure a smooth transition to the new System.

In our proposal, we have included:

- **Project Facilitation Services:** manage project activities in accordance with the Capability Maturity Model Integration Level 3 (CMMi-3) compliant procedures
- **Product:** use the GovOnline as the base system to support the project needs
- **Implementation Services:** perform requirement verification, system configuration/customization to tailor the System to meet project needs and support DNR's business processes. We have included suggestions to assist in positive adoption of the system at DNR (see Section 3.1.5)
- **Quality Assurance:** CMMi-3 process-oriented QA to provide quality deliverables on time, within budget, and meet DNR's expectations
- **Ongoing System Maintenance & Support Services:** offer comprehensive services to support DNR and maintain the new system
- **Additional Services:** enfoTech operates 3 Data Centers and has been providing hosting services to all our clients since 2009. We will provide hosting survives to the DNR, if requested. In addition, we will respond to DNR's requests for additional services. A separate change request with work scope/cost will be presented to the DNR for approval prior to engaging in new work.

enfoTech acknowledges receipt of all RFP amendments (dated 10/18, 10/20, 11/1). The enfoTech contact for this proposal is: Tony C. Jeng, Executive Vice President, Phone: (732) 839-1688 ext. 107, Email: tony_jeng@enfotech.com.

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3. Mandatory Specifications and Scored Technical Specifications

3.1.1 Understanding of Project Requirements

The DNR has provided a clear vision and detailed requirements for the e-Application project. enfoTech has reviewed the RFP and subsequent amendments, understands the project needs and feels confident that we could complete the project before 1/1/2018 and meet/exceed DNR expectations. This section will recap our understanding of project objectives and requirements.

Project Objectives

1. Acquire a COTS product to support business needs that will

- Replace its legacy SPARS system for electronic permit application submission and tracking. The Air Quality Bureau plans to use the new system to accept and process applications for Air Quality Construction Permits, PSD Permits, Non-attainment permits, and Title V Operating permits.
- The new System must collect the information requested in the current DNR permit application forms (Attachments 7a, 7b, 7c, 8a & 8b).
- Allow Air Quality staff to perform technical review of the equipment and emissions in order to write and issue permits for Air Quality Construction Permits and Title V Operating Permits. In addition, support tracking of permit application review process.
- Meet functional requirements specified in the “RFP-DNR_eApp-Attach_6-Software_Requirements_Specs-SRS” document
- Meet CROMERR requirements
- Support DNR current user base and to accommodate future growth for other permit types
 - DNR current system has 4,914 facilities with a minimum of one user per facility.
 - The DNR has approximately 100 internal users that will also need access to the system.
- Is sharable, configurable, and scalable for other environmental permitting media

2. Meet DNR IT Technical Standards

- Meet IT technical requirements specified in the “RFP-DNR_eApp-Attach_6-Software_Requirements_Specs-SRS” document
- Preferable in SQL Server database and .NET environment
- Meet DNR’s Standards For Third Party Applications
- Support online payment and meet Payment Card Industry Data Security Standard (PCI DSS)

3. System Integrations

- One way data flow from the e-Application to the Facility Explorer
- One way data flow from the e-Application to the Stack Test Database
- One way data flow from the e-Application to the Construction Permit Search Database
- One way data flow from the e-Application to the SLEIS Database

4. End-to-end Implementation Services

- Project facilitation
- System configurations
- Data migration (or DNR will migrate the data and enfoTech will provide assistance to DNR.)
- Training
- Documentation

5. The DNR desires to have the e-Application in production use by January 1, 2018.**3.1.2 Responses to Minimum & Mandatory Requirements**

In this Section, enfoTech demonstrates our compliance with the RFP minimum mandatory requirements.

1. Comprehensive

[enfoTech]: enfoTech has reviewed the RFP, amendment, and associated attachments. We confirms receipt of the entire RFP package and will comply with the RFP terms. All RFP provisions for all necessary permitting information have been included in our proposed solution.

2. Financial Information

[enfoTech]: enfoTech certifies the following financial information is correct.

None of the following apply to the enfoTech's business during the past three (3) years:

- Vendor has become subject to any bankruptcy or insolvency proceeding under federal or state law;
- Vendor has terminated or suspended its business;
- Vendor has become insolvent or unable to pay any of its obligations as they accrue consistent with applicable federal or state law.

3. Security Scan

[enfoTech]: enfoTech certifies that the proposed System will pass a security scan by the State of Iowa Office of Chief Information Officer. Any security issue identified as critical or high or within that range of vulnerabilities will be fixed by enfoTech.

4. EPA Compliant

[enfoTech]: enfoTech certifies that the proposed System, GovOnline, has been adopted by multiple sates and the System has received USEPA's approval for meeting EPA's Cross-Media Electronic Reporting Rule (CROMERR). In addition, USEPA has issued a GovOnline CROMERR template for enfoTech clients to use and to obtain a streamlined CROMERR approval review from EPA.

5. Application Testing

[enfoTech]: enfoTech acknowledges that all application testing will occur on the DNR test server hosted by the Office of the Chief Information Officer.

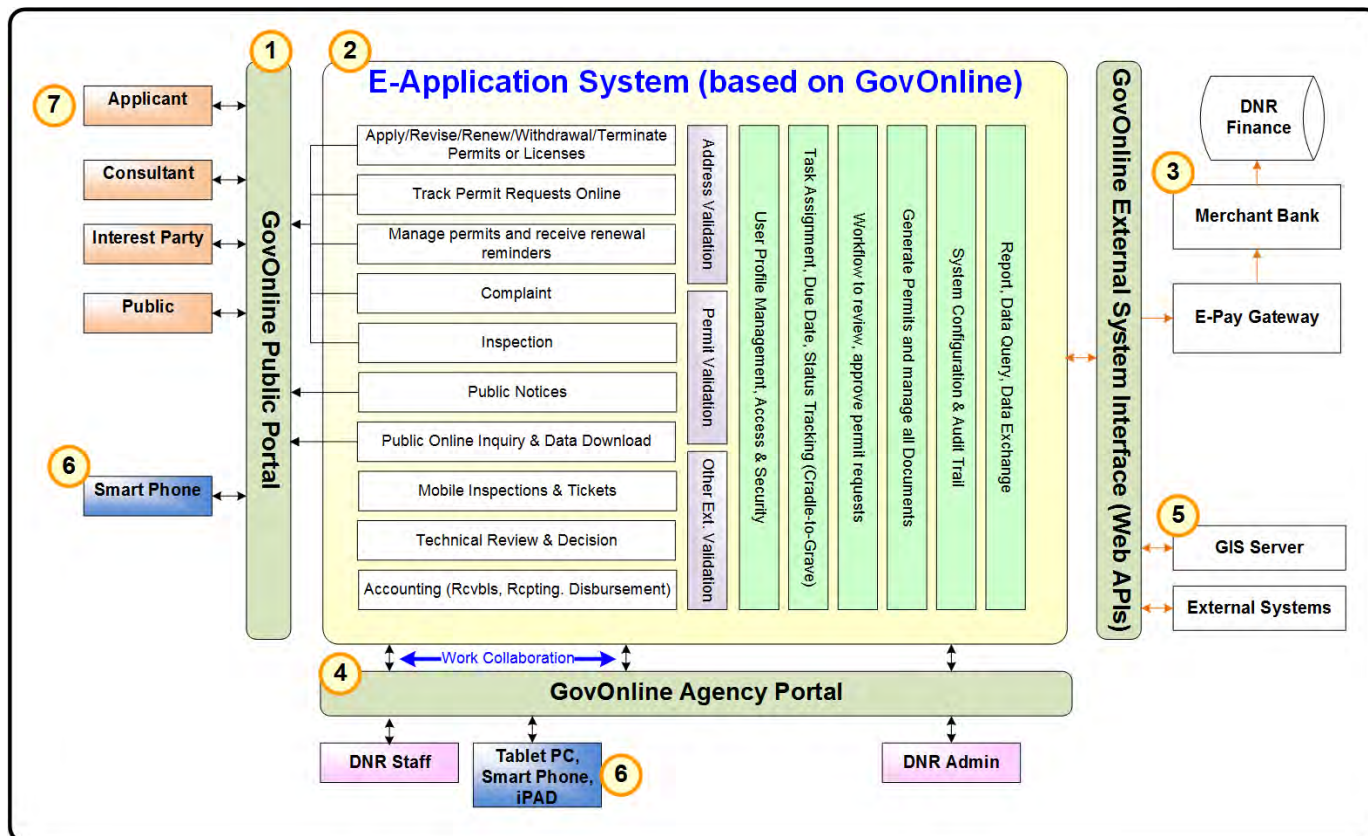
6. Post Development Warranty

[enfoTech]: enfoTech agrees to provide 12 months of warranty beginning upon the date the application goes to production. During this 12-month period, enfoTech shall fix any application errors or bugs. Optional enhancements specified in this RFP may be requested during this period and may be paid for on an hourly basis up to the amount specified in any resulting Contract.

3.1.3 Overview of the Proposed Solution**(A) E-Application System**

enfoTech proposes the GovOnline system, a COTS product, to provide comprehensive functions to automate data collection, facilitate workflows, streamline business processes, and provide a central data repository to support state-wide e-Application programs. For this project, we will focus on air permit applications as required in the RFP.

GovOnline supports online permitting, technical review, Workflow Management, Inspection, revision, renewal, and code enforcement. The Solution will meet all RFP requirements (RFP-DNR_eApp-Attach_6-Software_Requirements_Specs-SRS). The following diagram provides a high level functional overview.



1 Public Module (Business or Residents Fill Out Submittals): For any online submittals such as permit, grant and loan, financial incentive requests, emission reporting, they will be listed on the GovOnline menu. The legal entity will be able to fill out and submit their requests online.

2 Data Management Module (Secure Information Storage): All submittals will be securely stored at a SQL Server database backend. GovOnline offers “cradle-to-grave” tracking for each submission from its original submission, review comments, correspondence, final decisions, and revisions.

3 e-Payment Module: The GovOnline system accepts online payments and will seamlessly integrate with the merchant account (through a secured Gateway service provider) to deposit the end-user’s e-Payments into the DNR’s merchant account.

4 Agency Module: DNR staff will access GovOnline to process external requests, generate permits, manage inspections, record internal activities, and track compliance & enforcement. GovOnline also allows the DNR staff to enter/track requests received in paper.

5 GIS Interface Extension: Based on implementation requirements, GovOnline can be configured to the GIS services.

6**Mobile Inspection Module:** GovOnline supports mobile inspection. Inspection features include:

- Inspectors publish availability for inspection
- Applicant requests inspection and reserves the inspection time online
- Inspector confirms the inspection schedule
- Inspector conducts inspections using mobile devices (such as iPad, smart phone or tablet PC)
- Inspector issues violation notices on the spot and captures the owner's acknowledgement signature electronically
- Inspection results are automatically uploaded to the GovOnline central database

7**Public Inquiry Module:** GovOnline provides a public inquiry module that:

- Allows the Agency to publish issued permits
- Allows the Agency to publish draft permits for public comment
- Allows the general public to search permits and view basic data
- Allows the general public to comment on draft permits during the public comment period
- Allows the general public to submit complaints

Portals: The solution will include two Portals. They are:

- 1. Public Portal: (One-stop portal for online permitting, compliance reporting, request financial aids, etc.)**
 - For the Regulated Entity: Single Sign-on for a Responsible Official (RO). Register an account, establish RO privilege for an Entity, manage consultants, certify submittals, receive renewal alerts, pay fee, track DNR review status, and make revisions. Submit compliance reports.
 - For the Consultant: Register an account, prepare draft submittals for RO, review progress
 - For General Public: Search permits, reports published by DNR and contain no confidential business information. No account will be required. Submit complaints/incidents online and track resolution progress.
- 2. Agency Portal:** Single Sign-on. For DNR staff to receive alerts on assignments, perform work, track review comments, generate draft permits, finalize and issue permits, conduct data analysis, data mining, and generate reports. It will also support work collaboration with sister agencies in conjunction with the DNR work flows and to receive alerts on assignments, perform review, and provide comments.

The System is scalable to accommodate simultaneous access by a large user base and is also extensible to support adding new submittal types to meet future business requirements. The System also maintains a system log for security, audit trail, and performance optimization. GovOnline provides a suite of web APIs for bi-directional data exchange with external databases.

(B) Implementation Services

enfoTech will provide end-to-end implementation services to work with DNR side-by-side to configure GovOnline, support data migration, complete user acceptance testing, deliver trainings, and system documentation. Our services will include:

- Project facilitation services for communications, regular web meetings, track actions, follow ups, and progress reports
- Work with DNR to develop a Project Plan with milestones and dates. Monitoring project progress and keep the Plan current.

- Conduct a comprehensive Gap Analysis workshop to document configuration settings required for the project
- Installation, Design, Configuration, Testing, Deployment, Training and Post Implementation Support
- Migrate data from the existing systems into the new e-Application (or provide advice to DNR if DNR decides to perform data migration)
- Training & Change Management to ensure positive adoption of the new system

Details of implementation services are provided in Section 3.2 "Project Plan".

(C) Maintenance and Support Services

The e-Application system shall be hosted at DNR server hosted by the Office of the Chief Information Officer.

enfoTech agrees to provide 12 months of warranty beginning upon the date the application goes to production. During this 12-month period, enfoTech shall fix any application errors or bugs. Optional enhancements specified in this RFP may be requested during this period and may be paid for on an hourly basis up to the amount specified in any resulting Contract.

After the 12-month warranty period, enfoTech will offer system maintenance and support services to DNR with fees mutually agreeable.

(D) Flexibility to Accommodate Changes and Extension for Future Submittal Types

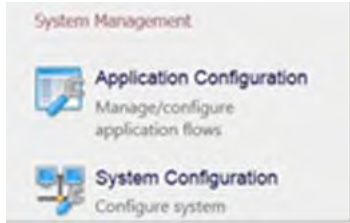
GovOnline system has been installed at multiple states and has demonstrated records to support thousands users.

In addition, GovOnline offers many configuration options to allow the DNR administrator to extend the online submittal types to meet future business requirements. It supports the following configurations

- Controls the global system configuration settings
- Change or Add new Submittal Types
- Configure online data entry properties, attachment requirements, fee structure
- Configure workflow required for each submittal type including review, approval, revision, renewal
- Configure renewal cycle, expiration date calculation, termination rules
- Configure inspection requirements, if required
- Configure reference data (for dropdown list values) and data validation rules
- Manage properties for the Public Inquiry module
- Monitor system performance and event logs

Each submission type could be managed separately under the new EIS system, with its own properties.

(1) Configuration Options (for each Submittal Type):

	Option	Description
	General	<ul style="list-style-type: none"> ▪ Submittal type, description ▪ Dashboard/kiosk settings ▪ Mailing address for mail-in supporting documents ▪ Payee name and address for check payment
	Package Setting	<ul style="list-style-type: none"> ▪ Required documents ▪ Fee ▪ Inspection requirements ▪ Insurance requirements

Option	Description
	<ul style="list-style-type: none"> Reviewer and review process
Form Setting	<ul style="list-style-type: none"> XML file to define data entry forms
Message Templates	<ul style="list-style-type: none"> Email templates used for each event in the license/permit life cycle
Notification	<ul style="list-style-type: none"> Person(s) who should receive a notification for each event Message template to be used for each notification type
Flow Properties	<ul style="list-style-type: none"> Disclaimer statement Security precaution statement Certification statement Receipt
Sub System	<ul style="list-style-type: none"> External system interface

1. **Data Entry Forms (Dynamic Form)**

The Solution offers the Dynamic Forms Feature to allow modifications of data entry screens without coding changes. Each online data form specifications will be saved in an XML file. GovOnline will process the XML file and translate the XML into online data entry forms. User input will be saved together with the XML file.

2. **GIS Interface**

If geospatial analysis is required, the Solution can be configured to provide address/parcel validation and geospatial analysis.

3. **Mobile Inspection Module**

The Solution supports mobile inspection. Inspection features include:

- Inspector conducts inspections using mobile devices (such as iPad, smart phone or tablet PC)
- Inspector issues violation notices on the spot and captures the owner's acknowledgement signature electronically
- Inspection results are automatically uploaded to the central database

4. **Public Inquiry Module**

The Solution provides a public inquiry module that:

- Allows the DNR to publish draft permits (for Public Notice)
- Allows the general public to search permits and view basic data (non-confidential data)
- Allows the general public to submit comments to draft permits

5. **e-Pay**

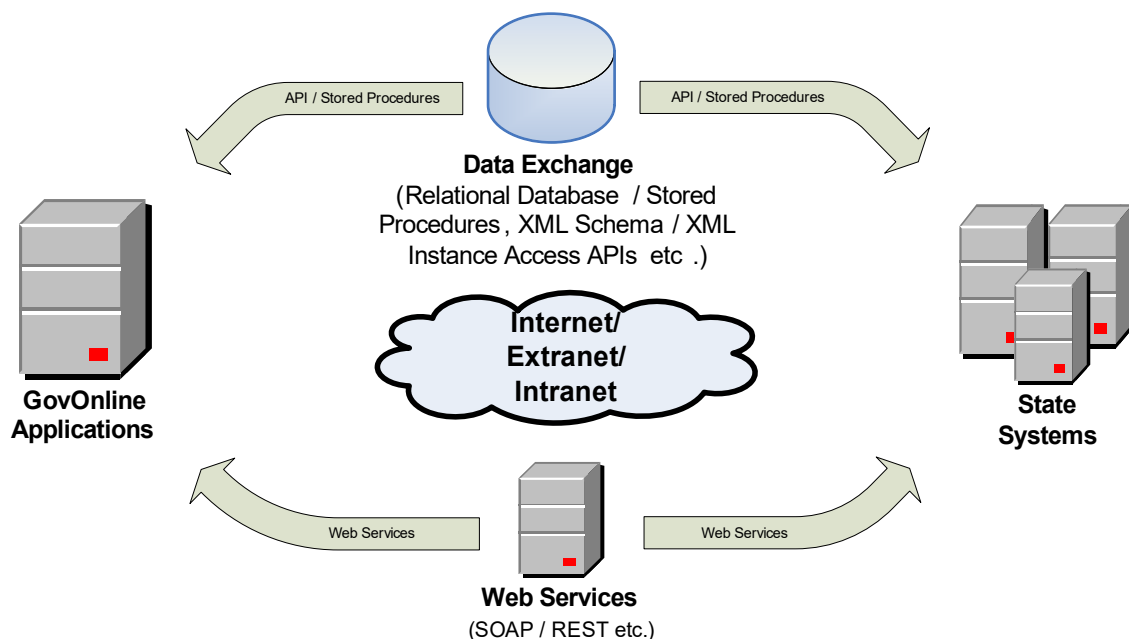
The Solution accepts payment by Credit Cards, ACH, money order, or checks.

3.1.4 **System Integration Approach**

GovOnline offers three mechanisms to support external system interfaces.

1. **Web APIs** (Open Protocol, SOAP, RESTful)
2. **Table-to-Table Data Exchange** (with staging tables and APIs)
3. **EDI** (external data file transfer)

A diagram below illustrates a high-level architecture for data/system interfaces.



enfoTech will explore interface options and work with the DNR to select the best interface option for each external system during the “Requirement Verification and Gap Analysis” stage. If required, enfoTech will also create a testing environment at enfoTech server environment that mimics the DNR environment. Simulation of DNR operation for thorough testing is essential for system interface. enfoTech will perform testing to ensure no problems prior to releasing the interface package(s) to DNR.

3.1.5 Strategy to Manage Changes to Successfully Transition to New e-Application System

The project will revolutionize the data management practices for air permitting. The paradigm will change from the paper submission into online submittal Portal and will integrate seamlessly with other existing data systems to ensure good data quality, encourage data sharing, improve business processes, and offer accurate and timely information for making informed decisions. enfoTech has over 22 years of successful experiences to work with large organizations (ranging from 50 to 2,000 staff) to transition their environmental data system to a new IT platform. Although challenges vary among projects due to different project nature, we find they could all be addressed with a proper planning and proactive follow-ups. We offer the following draft recommendations to the DNR for consideration.

During the Implementation Stage:

1. Potential Culture Changes that Will Require Organization Support

- **Challenges:** the project should deliver an enterprise system to improve data quality, enhance work collaboration, eliminate duplicate data entries, and streamline business processes. It will require an organization support to succeed.
- **Recommendations:** Establish a core project team with representatives from program areas and task the Team to: (1) provide overall project guidance; (2) share project vision and provide regular progress updates to end users; (3) explore business process improvement opportunities and promote data standards, data reuse, and work collaboration.

2. Data Quality is the Corner Stone for Good Environmental Management and Informed Decision-making

- **Challenges:** Maintaining same data differently at multiple databases will require extra effort to enter duplicate data, create errors and hinder the ability to effectively administer environmental compliance.
- **Recommendations:** (1) Charge the project Team to develop a SOP to establish the “who” and “procedures” to maintain the core common data such as “Legal Entity”, “Contacts (Responsible

Official)", "Location", and "Environmental Interests". (2) enfoTech will work closely with the DNR to migrate data from existing database at the early project stages. DNR will review their data in the new system and make comments. Data migrations will be iteratively and be continuously improved throughout the project. (3) After the data are migrated, GovOnline offers data Wizards to help the DNR to enforce data quality checks to eliminate duplicate data entry. (4) Promote business practices to maintain common data, track change history, and share common data across all business areas. (5) Establish data exchange mechanisms to send data captured by e-Application to downstream systems and maintain good data integrity.

3. Streamline TO-BE Business Processes through Data Sharing and Work Collaboration

- **Challenges:** The project, in some cases, will change current business processes. Process changes, even for good changes, will require clear communication and strong organizational support to succeed.
- **Recommendations:** During the requirement verification and system configuration stages, enfoTech will work with the DNR to identify opportunities for process improvements, present draft TO-BE process options with PRO-and-CON for evaluation. The project core Team shall communicate potential changes to end users at the early stages, listen to their comments, work through comments to reach consensus. Once agreed upon by the program areas, we will include them in the system and document them in the DNR's internal SOPs.

4. Successful Management of Organizational Changes will be Essential to the Project Success

- **Challenges:** The project will introduce new data management practices. Successful management of organizational changes will be essential to the project success.
- **Recommendations:** (1) Clear communication and continuous education have been built into the project work plan. (2) enfoTech will walk through every deliverable with the DNR prior to turning them to the DNR for review. (3) enfoTech will hold bi-weekly GoToMeeting with the DNR to follow up action items, be on time to complete good quality deliverables, and maintain project schedule.

At the Stage of Preparing the e-Application to Go-live:

5. Pilot (User Acceptance Testing)

- enfoTech has included a pilot (UAT) to allow the DNR to expand testing group to include both internal staff and representatives from external organizations. enfoTech will deliver a UAT plan and provide support to ensure success Pilot. After a successful Pilot, the DNR will approve the System for production use.

6. Training and Technology Transfer

- enfoTech has included a comprehensive training plan, multiple process-oriented training sessions, and system documentations to ensure a smooth transition to the new system. enfoTech will perform heavy lifting on delivering all trainings. We request the DNR to provide comments on a draft training plan to ensure meeting training expectation. Please see Proposal section 3.2.2.4 for additional details.
- enfoTech will deliver a Training database populated with data for various training scenarios. The Training database will be used for initial training and be kept for remedial training after e-Application goes live.

After the System Goes live and is in the Maintenance Stage:

7. Responsive System Maintenance & Support

- enfoTech has included a comprehensive system maintenance and support plan. In addition, we have included a SharePoint project Team website, GoToMeeting, and operating procedures to track requests and monitor our services to ensure we are responsive to the DNR service requests.

- enfoTech will offer remedial training to the DNR through GoToMeeting sessions after the System goes live. Remedial trainings will be helpful in the initial months of production use to ensure a smooth transition.
- enfoTech PM will continue monitor our services and meet with the DNR PM to align our efforts with DNR's priority and incorporate DNR's feedback to improve our service delivery.

8. A Committee to Oversee e-Application Operation

- A System Committee will continue engage and meet regularly to provide organization support and system management to achieve high return-on-investment results after system goes live. The Committee will manage work priority and address potential change requests.

3.2.1 Project Strategy

enfoTech has carefully reviewed project requirements and would like to propose a “turn-key” Solution that consists of a configurable COTS product (GovOnline) and end-to-end implementation services. The Project strategy includes the following:

1. **Product:** begin with enfoTech's “configurable” commercial-off-the-shelf GovOnline product as the base and conduct gap analysis, perform system configurations to tailor the Solution to meet project needs. GovOnline offers the following advantages to the project:
 - A web-based, n-tier, and services-oriented Application and has been in production use at multiple regulatory authorities to support e-environmental since 2010
 - Meets majority of DNR's functional requirements straight from the box (88%). They include:
 - A Public-Portal to enable online transaction; and An Agency-Portal to support DNR staff workflows and permit generation
 - Permitting (cradle-to-grave data tracking from online application, to inspection, review, approval, and post issuance compliance management)
 - Inspection (inspection request, inspection results, and mobile inspection capability)
 - Emission calculations (AP-42 emission factors)
 - Fee calculation
 - Online payment
 - Meets DNR's technology standards
 - Meets EPA's CROMERR requirements
 - Includes document management and search functions
 - Modular design and could be configured to meet all project needs with extensibility to support additional online submittals and accommodate new business processes in the future
2. **Services:** provide end-to-end implementation services to bring the System to live
 - Project facilitation to bring the new System to production use
 - Requirement verification, system configuration design, system configurations, testing, and UAT
 - System installation and knowledge transfer
 - System documentation and training
3. **Additional Innovative Features (they are product standard COTS features included for the Project)**
 - **Work Flow Management:** allows the DNR to manage work flows and tailor work flows for each online submittal type (i.e., task name, person, due date.) Based on the submittal type, a workflow could vary such as: Admin review for completeness, technical review, approval, issuance, etc.
 - **Form Engine & Data Validation:** allows DNR to expand online forms to include data elements and validation logics needed for each online submittal to ensure good data quality.

- **Web-services Architecture:** supports system integrations with external systems for bi-directional data exchange. The architecture is loosely-coupled among systems and tightly-integrated for information sharing. It will support the RFP requirements and accommodate future needs after implementation.

Details of our services are provided in Section 3.2.2 of this Proposal (The Work Plan).

3.2.2 The Work Plan

enfoTech proposes to adopt the Agile system development model with a 6-stage work plan. The implementation is a full service plan that shall include project facilitation, software configuration/customization, installation, training, site visits, Webinars, and technical support. For this project, enfoTech proposes to perform most of the work at our NJ offices. Sufficient onsite visits have been budgeted for requirement verification, multiple system walk-throughs, installation and training. In addition, we have included ample Webinars throughout this project to ensure that we maintain a close and clear line of communication with the DNR project team members. Regular project status updates with the DNR management are also included.

3.2.2.1 Stage 1: Project Start-up, Planning and Management

3.2.2.1.1 Technical Approach

Establish enfoTech's internal development and project management environments, develop the Project Plan, and conduct project kick-off meetings. Coordinate project, conduct bi-weekly conference calls, follow up on issues and action items, develop and deliver monthly reports, and maintain schedule and project documents.

(1) Project Management Processes

1. Project Plan: enfoTech will develop a draft Project Plan and submit to DNR for review. The draft Plan shall contain, at a minimum, the following topics: (1) Project overview, purpose and objectives; (2) Project scope; (3) Work products and deliverables, Deliverable acceptance criteria; (4) Work breakdown structure and schedule; (5) Relationship with other projects; (6) System development and project life cycle management; (7) Resource management; (8) Quality assurance procedures; (9) Configuration management; (10) Communication management; (11) Change management; (12) Risk management. enfoTech will walk through the Project Plan with DNR during a project Kickoff meeting. Incorporate DNR's comments and issue a version 1 Project Plan
2. Project Kickoff meeting: enfoTech will facilitate a Project kickoff meeting via GoToMeeting. The kickoff will introduce project procedures, Project Team Website, and schedule an onsite Requirement Verification workshop, and walk through the draft Project Plan with WBS and schedule.
3. Single Point of Contact: A single Point-of-Contact will be established to work with the DNR to facilitate communication between the DNR project manager and various enfoTech resources. The Contact will also play a key role in project implementation.
4. Conduct Bi-Weekly Conference Calls: enfoTech will host bi-weekly project calls with DNR, establish call logistics for project discussions, record meeting minutes and post them at the PTWS, follow up all action items from the calls.
5. Project Monitoring & Progress Reports: The enfoTech Project Manager will monitor project:
 - Monitor project progress, adjust the schedule accordingly, and keep the DNR PM up to date
 - Monitor risk and implement mitigation measures, if needed
 - Monitor project cost & Manage changes in accordance with procedures stated in the Project Plan

enfoTech PM will host regular project GoToMeeting conference calls with the DNR's Project Manager (and other required members) to review project activities for the previous week, and outline accomplishments and tasks planned for the following week. In addition, monthly project reports will be submitted to the DNR for review. The enfoTech Project Manager will work closely with the DNR's Project Manager and his/her representatives to consolidate input from task coordinators, include enfoTech task leaders' input, prepare project status updates monthly and submit them to the DNR Project Manager for review. The status report will contain accomplishments, tasks planned for the next reporting period, and the overall project status.

6. Cost Management: Project scope and deliverables will be carefully tracked. The DNR's Project Manager must approve any potential out-of-scope items. enfoTech will submit monthly invoices (including fees for approved deliverables and expenses) to the DNR for review and approval. A project spending tracking procedure will be implemented to measure spending against the deliverables.
7. Scope Management: Our project goal is to complete the Project within budget, on time, and meet/exceed project requirements. Any additional services (or cost items) will be communicated to the DNR's Project Manager prior to engagement of such services and costs.

(2) Project Management Tools

In addition to the standard face-to-face project review sessions and using Microsoft Project to manage milestones and schedules, enfoTech will configure SharePoint server and tailor it to use as a project repository. The following table lists the possible features available for the SharePoint site, and indicates those that will be enabled for this project:

SharePoint Features	Description	Used On This Project?
1. Document Repository	Central storage of all project documents (unless restricted by limitation of the physical storage space of the project website, in which case the file will be provided on the enfoTech FTP site). Any documents managed on the project website will track of the document type, last modified user and last modified date/time.	<input checked="" type="checkbox"/>
2. Project Contact List	A listing of all project team members, their primary role on the project team, phone number, and email address.	<input checked="" type="checkbox"/>
3. Software Issue Tracking	A listing of any software bugs or enhancement requests identified during gap analysis, requirements gathering, or acceptance testing phases of the project.	<input checked="" type="checkbox"/>
4. Task Assignment Listing	In addition to tracking software bugs / enhancement requests, any project task assignment and/or action items along with assigned resource can be managed.	<input checked="" type="checkbox"/>
5. Discussion Forum	Allows project team members to report any questions or concerns in a general discussion forum. This allows core team members to promptly identify discussion items as issues and log them into the website with the appropriate priority and categorization specified. This does not preclude regular email communications amongst the project team.	<input checked="" type="checkbox"/>
6. Project Events	A calendar listing key project events such as training, acceptance testing, or other onsite visits.	<input checked="" type="checkbox"/>

Project team members are responsible for logging into the website to view updates to information indicated in the table above.

enfoTech will establish user accounts for the DNR project members to allow the members to access the Team web site to share information and to monitor project progress

Conference Call Bridge: Periodically, conference calls will be held which will include Project Team members. A conference call bridge will be set up for each of these calls, hosted by enfoTech.

Web Conferencing Tool: Web conferencing capabilities will be available for project conference calls. This will allow all project team members to view presentations as they are being presented. enfoTech currently uses GoToMeeting.

(2) Project Roles and Responsibilities

enfoTech proposes the following general project roles and responsibilities for the project Team.

enfoTech Responsibilities

- enfoTech will provide a single point of contact for providing overall project facilitation services
- Create and host a Project Team Web site (SharePoint server) to serve as a central repository for project documents, shared technologies, and project updates.
- Develop a project plan, monitor progress, coordinate resources to complete all deliverables, and update the Plan accordingly.
- Throughout the project period, host project status conference calls, on bi-weekly basis, as necessary, for project members to discuss project-related issues and follow up on action items from project calls.
- enfoTech's project manager will submit monthly project reports to the DNR's project manager. The monthly project report shall include accomplishments, upcoming tasks, project schedule updates, action items, issues, and proposed resolutions for the issues.

DNR Responsibilities

- DNR will provide a single point of contact for (1) all project-related communications, (2) coordinate the attendance of representatives from applicable member agencies at project meetings, and compile and deliver consolidated comments on deliverables, and (3) provide overall direction during the execution of the project.
- DNR will provide subject matter experts (SME) and provide overall project requirements.
- Unless SaaS service is requested by the DNR, DNR will provide related hardware/software, hosting environment, and Internet capacity required to support the project. Secured VPN be provided.
- DNR will review deliverables and provide enfoTech with consolidated written comments on all of the draft deliverables within 10 business days of receipt for documents that are less than 100 pages, and within 15 business days of receipt for documents that are more than 100 pages. Feedback on System review should be completed within 15 days of delivery or time mutually agreed by both parties.

3.2.2.1.2 Stage 1 Deliverables

Deliverable	enfoTech's Responsibility	DNR's Responsibility
1.1 A project kickoff meeting to review the project plan	<ul style="list-style-type: none"> ▪ Prepare kickoff meeting agenda ▪ Hold a project kickoff meeting via a GoToMeeting conference call 	<ul style="list-style-type: none"> ▪ Review and approve kickoff meeting agenda ▪ Coordinate subject matter experts to attend the kickoff meeting
1.2 Solution Installation in DNR environment (or hosted at enfoTech Data Center)	<ul style="list-style-type: none"> ▪ Recommend hardware and software (pre-kickoff) ▪ Installation of core Solution systems at DNR TEST server for review (Alternatively, enfoTech may provide interim Solution hosting service for the DNR) 	<ul style="list-style-type: none"> ▪ Determine servers to be used for Test and Production use ▪ Install Solution at Test server ▪ Begin preparation for VPN support (create VPN user account for enfoTech) ▪ Observe the installation process to learn

Deliverable	enfoTech's Responsibility	DNR's Responsibility
	<ul style="list-style-type: none"> Coordinate with DNR IT staff to implement appropriate security and backup measures 	<ul style="list-style-type: none"> the process Approve completion of installation
1.3 A web-based project team website	<ul style="list-style-type: none"> Set up a project team website Create user accounts for project team members Create shared file library directories required for the project Introduce project team members to the website, its structure, and alert setting options 	<ul style="list-style-type: none"> Log into team website with given account Set up alert on the relevant directories and issue lists Approve team website accessibility
1.4 A project plan document	<ul style="list-style-type: none"> Issue draft project plan Revise project schedule based on project kickoff discussions Perform risk analysis based on known DNR infrastructure, timeline, and resource availability Develop scope management and acceptance criteria Finalize project plan 	<ul style="list-style-type: none"> Review project plan Approve project plan
1.5 Host GoToMeeting calls for up to 24 phone calls (12 months)	<ul style="list-style-type: none"> Bi-weekly calls Up to 24 project status GoToMeeting conference calls (1 hour/call) Setup call logistics Prepare call agenda Issue meeting minutes 	<ul style="list-style-type: none"> Coordinate participation of the appropriate SMEs for the project status conference calls Prepare projector and laptop for GoToMeeting conference calls Review meeting minutes
1.6 Up to 12 monthly project reports	<ul style="list-style-type: none"> Prepare monthly project report 	<ul style="list-style-type: none"> Review monthly report Approve monthly report and process invoice

3.2.2.2 Stage 2: Requirements Verification and System Configuration Design

3.2.2.2.1 Technical Approach

Verify user requirements, document gaps between GovOnline and project requirements, develop system configuration specifications, and develop a data migration plan. The Stage 2 will produce a set of baseline specifications, requirement matrix, and test plan to serve as the basis for the DNR to track progress, review interim work results, and accept deliverables.

(A) Requirements Verification Techniques

enfoTech has developed a set of requirement elicitation techniques, and has successfully applied these techniques in many projects that are similar to DNR's project scale and complexity. Our goal in interviewing DNR staff will be to verify the DNR's core business processes; identifying how the **Solution** will support them as well as possible business process improvements. The methodologies we will use include the following techniques:

- **Document Analysis:** Document analysis includes reviewing material such as the DNR's existing system documentation or reporting forms, statements of work, existing guidelines, and procedures. Requirements coverage will be for all relevant sources within the project scope.
- **Requirements Workshop:** Requirements meetings will bring stakeholders together in a group setting facilitated by enfoTech to reach consensus on the business needs and/or customer/product requirements and produce a system configuration that all participants will support. Any required customization will also be documented.

- **Use Cases and Workflow:** A use case is a statement of the user's goals and actions to reach that goal, described by a sequence of interactions between a system and an external actor. Actors are basically users of the system. The objective of the use-case approach is to describe all tasks that users will need to perform with the system. Use cases provide a context for the requirements by expressing sequences of events and a common language for end users and the software development team.
- **Infrastructure Assessment:** During the onsite Requirement Verification meeting, enfoTech will perform an infrastructure assessment to support the new System. The assessment will include the capability and potential cost options, if required, to host e-Application.
- **Prototyping:** Prototypes are a valuable tool for clarifying unclear requirements; we believe it will be very effective in this case to use a functional system as the base. Prototyping is a technique for building a quick and rough version of a product. Prototypes can make it easier to interpret the requirements' meaning and give useful feedback. Prototypes are especially useful in determining user interface requirements because they allow the users to see and interact with a dynamic representation of the system.
- **Requirement Matrices:** will be established with numbering and will serve as the basis to cross-reference user requirements with system functions throughout all project stages.
- **GoToMeeting Conference Calls:** enfoTech will capture all onsite discussion and follow up with action items via GoToMeeting calls to make sure all open issues are resolved.

(B) 3-Day Onsite Requirements Verification Workshop

enfoTech will facilitate the Workshop. Work activities shall include:

(B.1) Before the 3-Day Workshop:

- **Document Analysis:** review workflow, data elements, business logic, and final outputs relating to project requirements.
- **Solution:** host the Solution with example data at DNR Test Server or enfoTech Data Center. enfoTech proposes to install the core GovOnline system at a QA server immediately following the project kickoff (or host GovOnline at enfoTech if the DNR is not ready for installation.) By installing the core system, DNR staff will have an opportunity to review the current system functionality and use it as a reference for requirement verification and system design activities.
- **Verification & Configuration Design:** We propose to use the core **GovOnline** as the tool to facilitate the requirement verification, help the DNR to visualize how the end product will work, and map it to future business processes. We feel that using the COTS product(s) to perform the gap analysis will give end-users the advantage to validate their business processes during the early stages of the project, gaining users buy-in, maintain ownership of the desired functions, and will increase users' acceptance for the system.
- **Agenda, Presentations, and Example Outputs:** work with DNR to develop an agenda to align topics with major business processes, ensure sufficient discussion of core components and TO-BE business processes, and external system interface requirements. Prepare meeting presentations and compile example outputs.

(B.2) During the 3-Day Workshop:

- **Workshop:** interview project stakeholders, develop TO-BE processes, simulate TO-BE processes in Solution, reviews form entry validation logic, "Dashboard", user/system security, and produce a Requirement Matrix and System Configuration Document.
- **Key project requirements** to be discussed shall include:

- Technical Requirements, IT environment, server sizing
 - Account Registration and CROMERR compliance
 - Online Application, Wizard, data validation, and confirmation of receipt
 - DNR workflow to process application and issue permits
 - Air permit life cycle management
 - Permit fee calculation and payment tracking
 - External System Integrations
 - Data migration
 - Standard reporting and ad-doc reports
 - Identify process improvement opportunities & incorporate them in SCD
- **Infrastructure Assessment:** evaluate DNR's IT infrastructure in preparation for hosting the Solution and suggest adjustments if needed. General practices to support future system/database backup, restore, and system releases will be discussed. If enfoTech hosting is used, the discussion will be tailored to assist DNR to access enfoTech Data Center.

(B.3) After the 3-Day Workshop:

- **Follow up action items:** post action items at the PTWS, conduct web calls to follow up
- **A Requirement document:** will include
 - Core requirements and optional needs
 - Detailed description for requirements (end-to-end processes from application to permit issuance). Document all business processes with details from the starting point, work tasks and sequence, data captured, output, and the end point. Cross-functional data sharing and process interactions will also be documented.
 - Establish an enterprise-wide SOP to identify core data elements among all systems, procedures to maintain core data (Facility, Contacts, Control equipment, etc.), and data sharing protocols
 - Data exchange procedures from e-Application to downstream data systems
 - A requirement matrix that will include
 - Business processes
 - Functional Requirement: link all requirements to business process
 - Non Functional Requirements
 - Hardware and Server requirements
- **A System Configuration Document (SCD):** will include
 - Detailed system configuration descriptions to meet requirements
 - Detailed system customization specification to meet DNR specific requirements
 - External system interfaces
- **A Data Migration Plan:** will include
 - Data migration scope
 - Source data identification
 - Data mapping from the source data to GovOnline database
 - Data translations
 - Data gap filling

To achieve the maximum return-on-investment (ROI) for the DNR, enfoTech aims to configure the COTS **Solution** wherever possible to meet the DNR's business needs, keeping the final **Solution** in line with the core COTS product. Keeping the production version in line with the COTS product will offer the DNR future system upgrades at a very minimum cost.

After the Requirement Verification and System Configuration Design stage, enfoTech will deliver the following Reports:

1. **System Requirements Document (SRD):** will provide business processes, detailed requirements for each process, use cases, and a requirement matrix. The requirement matrix will be used for system configuration, test plan, and system verification during the User Acceptance Testing (UAT) stage. The document will verify that all requirements are in the RFP/Proposal scope and will make recommendations to adjust project scope if needed. If there are any scope adjustments affecting the project cost, DNR must approve the changes before enfoTech engages in new work.
2. **System Configuration Document (SCD):** will provide configuration settings, enhancements, and external system interface specifications required to change the System to meet each of the requirements.
3. **Data Migration Plan (DMP):** will provide a Plan with steps to complete data migration from existing databases to the new database, including data cleansing, data gap filling, and migration testing. The DMP will be a joint effort and enfoTech will work with the DNR as a team to develop a Plan to include:
 - Develop a data migration Plan with Source database, tables, and contents
 - Map data elements from the source database to the new database
 - Identify potential data gaps that will require data collection to fill in the gaps
 - Identify potential data issues for data cleansing before data migration
 - Identify the freeze-current-database and cut-off-to-new-database procedure
4. **Test Plan:** will provide is process driven Test Plan with testing conditions based on the requirement matrix and SCD. The Plan shall include the following:
 - Testing environment (server, client computer, connection, etc.)
 - Procedures to setup testing environment
 - Business Processes and Test scenarios
 - Test scenarios
 - Business process
 - Actors
 - Screen flows
 - Input data
 - Expected results & reports
 - Acceptance criteria
 - Stress testing procedure, simulation, and acceptance criteria
 - Database scripts to setup testing environment
 - Test Execution: auto script testing vs. manual tests
 - Test result documentation
 - Report issues, track resolution, re-verification, and issue close-out
5. **System Hosting Plan:** will provide hardware/software requirements to support the e-Application hosting at the DNR data servers.

3.2.2.2.2 Stage 2 Deliverables

Deliverable	enfoTech's Responsibility	DNR's Responsibility
2.1 A 3-day onsite requirement verification & configuration workshop	<ul style="list-style-type: none"> • Prepare agenda • Requirement confirmation and system gap analysis • Conduct system configuration and data migration workshop meetings • Recommend system configuration options • Review DNR's current database 	<ul style="list-style-type: none"> • Approve meeting agenda • Coordinate SMEs to attend the workshop • Based on the required business, suggest system configuration options • Provide source files of current data to be migrated

Deliverable	enfoTech's Responsibility	DNR's Responsibility
2.2 System Requirements document (SRD)	<ul style="list-style-type: none"> Organize meeting notes and business process analysis outputs to develop a draft requirements document that will include: <ul style="list-style-type: none"> Business process scenarios that should be supported by the Solution Requirement matrix Review DNR's input and revise system requirements document Issue final system requirements document 	<ul style="list-style-type: none"> Review draft system requirements document and mark up comments and required modifications to the document Approve final system requirements document
2.3 System Configuration Document (SCD)	<ul style="list-style-type: none"> Organize meeting notes and business process analysis outputs to develop a draft SCD External system interface specifications Incorporate DNR's input and revise system configuration document Issue final SCD 	<ul style="list-style-type: none"> Review draft system configuration document and mark up comments and required modifications to the document Approve final system configuration/customization document
2.4 Data migration plan and mapping document	<ul style="list-style-type: none"> Organize meeting notes and data analysis results to develop a draft data migration plan and data mapping document Incorporate DNR's input and revise data migration plan and mapping document Issue final data migration plan and mapping document 	<ul style="list-style-type: none"> Review draft data migration plan and mark up comments and required modifications to the document Review data mapping document and comment on any mapping changes that need to be made Approve final data migration plan and mapping document
2.5 Test Plan	<ul style="list-style-type: none"> Develop a test document with test scenarios based on the requirement matrix and SCD Incorporate DNR's comment and issue a revision Finalize the Test Plan 	<ul style="list-style-type: none"> Review and comment the Test Plan Insert DNR-specific test scenarios if required Approve final Test Plan
2.6 System Hosting Plan	<ul style="list-style-type: none"> Develop a draft with HW/SW requirements, required IT infrastructure, etc. Revise the Plan based on the DNR's input Finalize the Hosting Plan 	<ul style="list-style-type: none"> Review and comment the draft Plan Approve final Hosting Plan

3.2.2.3 Stage 3: Iterative System Configurations and Improvements (Agile Model)

3.2.2.3.1 Technical Approach

enfoTech proposes to adopt the Agile development model to complete all system configurations and provide incremental system improvements through iterative system releases and reviews. That includes:

1. Migrate DNR data at early stage and bring them into e-Application in stages, starting with Facility, Permit, and Equipment. Incremental improvements will improve final data migration quality and also allow DNR sufficient review time to experience his own data and system configurations prior to production.
2. Users will have sufficient time to get familiar with the new system and be able to take advantage to the new system features upon system production
3. Minimize project risk and DNR work interruption during the Go-live transition

This Stage will include four (4) iterations. enfoTech will configure the GovOnline, tailor reports, migrate data, perform internal testing, and establish data flows to downstream data systems. Multiple interim

releases will be provided to allow DNR ample opportunity to verify system features against requirements and make incremental improvements. All configurations will be completed by process and be managed holistically as an enterprise-wide repository to ensure good quality of the final system.

(A) Iterative System Configurations and Improvements

“Four-Iteration” Approach: enfoTech will work closely with the DNR to deliver 4 major iterations of e-Application, plus many interim releases. The scope of each major iteration is described in the table below.

Itr.	Objectives	Major System Functions
1	Beta Release <ul style="list-style-type: none"> A platform for managing account registration meeting CROMERR requirements A central data repository to capture all air permit application data, DNR review comments, permit documents, etc. Air permitting life cycle management from the application, to review, to amend, to public notice, to issuance. Renewal and termination will also be included. GIS interface 1st round of data migration 	<ul style="list-style-type: none"> Facility User Account Registration Online air permit applications GIS address validation DNR user account management GovOnline Dashboard to support data management DNR air permit workflow, assignments, due dates Track DNR review comments Generate air permits Task alerts and Notification <ul style="list-style-type: none"> Track notification sent Track confirmation of receipt Take actions for those do not respond
2	QA Release <ul style="list-style-type: none"> Enhancements to incorporate DNR’s review comments to iteration #1 A one-way exchange to push data to the Facility Explorer to maintain good data integrity for Facility and Contacts A one-way exchange to push data to the Stack Test Database A one-way exchange to push data to the Construction Permit Search Database A one-way exchange to push data to the SLEIS Database for sharing emission processes, equipment, activities, etc. Online payment integration 2nd round of data migration 	<ul style="list-style-type: none"> A data exchange between the e-Application and the Facility Explorer A data exchange between the e-Application and the Stack Test Database A data exchange between the e-Application and the Construction Permit Search Database A data exchange between the e-Application and the SLEIS Database Online payment capability Check-payment tracking
3	UAT Release <ul style="list-style-type: none"> Enhancements to incorporate DNR’s review comments to iteration #2 Walk through iteration #3 with DNR Support DNR’s review to approve the System for User Acceptance Testing Support DNR to complete the UAT 3rd round of data migration 	<ul style="list-style-type: none"> Enhanced e-Application system based on DNR’s comments to previous iterations Manage DNR comments and provide interim releases to resolve issues Provide user training Support DNR to complete the UAT
4	PROD Release <ul style="list-style-type: none"> Provide a pre-production release to DNR for final review Final data migration DNR approves the System for production use System Go-live 	<ul style="list-style-type: none"> Address and close out UAT comments Support DNR to install final release at DNR server Support DNR to complete the final system review Make final system adjustments if necessary Provide post production support after system goes live

Each system iteration will be business process oriented. System functions delivered in previous iterations will be refined multiple times in conjunction with new functions provided at later iterations to validate business processes and to achieve cross-functional data sharing and offer functions to support cross-functional business process streamlining.

(B) Online Form Implementation Strategy

Existing Title V and Air Construction Permit application forms have 278 pages in total. They are listed below.

Form	Pages	Nature	Comments and Preliminary Design Idea
Form 7a	66	Forms + Instruction	<ul style="list-style-type: none"> For Construction permit application AF: Fee Page FI: Facility Information CP: Application Cover Page CP: Project Cover Page EU & EU1 to EU5: Emission Unit Information data specific for 5 different equipment types CE & CE1 to CE6: Control Equipment Information data specific for 6 different equipment types EP: Emission point EC: Emission calculation at each Emission Point EC: Facility-wide emission inventory by Emission point & Emission Unit GHG: Greenhouse Gas Emission Inventory MD: NON-PSD MODELING DETERMINATION FORM MI-1: MODELING INFORMATION FOR NON-PSD PROJECTS MI-2: MODELING INFORMATION (EMISSION SOURCE CHARACTERISTICS)
Form 7b	4	Instruction	<ul style="list-style-type: none"> For Construction permit application A check list
Form 7c	88	Permit Templates	<ul style="list-style-type: none"> Permit Templates for Air Equipment Construction Project Aggregate Processing Plant Hot Mix Asphalt Plant Concrete Batch Plant Large Bulk Gasoline Plant Small Bulk Gasoline Plant Registration for Group 1 Grain Elevators Group 2 Grain Elevators Emit by Rule for Spray Booth
Form 8a	41	Form + Instruction	<ul style="list-style-type: none"> For Title V Operating Permit 1.0: FACILITY IDENTIFICATION 1.2 SCHEMATIC – PROCESS FLOW DIAGRAM 1.3 INSIGNIFICANT ACTIVITIES – POTENTIAL EMISSION 1.4 POTENTIAL TOXIC EMISSIONS - SIGNIFICANT ACTIVITIES 1.5 POTENTIAL EMISSIONS - SIGNIFICANT ACTIVITIES 2.0 EMISSION POINT INFORMATION 3.0 EMISSION UNIT DESCRIPTION – POTENTIAL EMISSIONS 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS 5.0: TITLE V ANNUAL EMISSIONS SUMMARY/EMISSIONS FEE CE-01: POLLUTION CONTROL EQUIPMENT DATA SHEET ME-01 CONTINUOUS MONITORING SYSTEMS Part 2 - General Facility Requirements Part 2 – Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP) Information Part 2 – Boiler and Process Heater Information Part 2 – Engine Information Part 2 – Emission Point Information

Form	Pages	Nature	Comments and Preliminary Design Idea
			<ul style="list-style-type: none"> Compliance Assurance Monitoring (CAM) Calculations Form (User input emission data. E-Application will calculate total Sum. No emission calculation based on process data and emission factors.) PART 3: APPLICATION CERTIFICATION EZ MOD: MINOR MODIFICATION TO EXISTING OPERATING PERMIT
Form 8b	80	Instruction	<ul style="list-style-type: none"> Title V Permit Application instructions

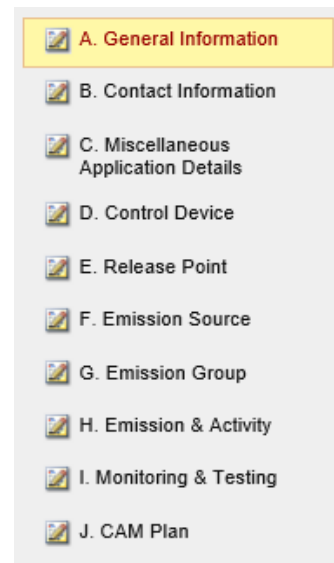
For DNR consideration, enfoTech presents some high-level draft recommendations in an effort to streamline online permitting processes and make the System easy to use. We will work with the DNR during the Configuration Design stage to explore all options, evaluate the PRO-and-CON of each option, finalize the option based on DNR's guidance, and implement ones approved by DNR.

B.1 Streamlined Online Application Presentation

- **Forms:** Create online forms in modular fashion so that each form will capture data independently and also work cohesively with other forms to represent a complete application package.
- **Decision Tree:** incorporate a decision tree style for the construction permitting. Capture the project type at the early stage and use the data to automatically present Forms relevant to the project. In this case, the user will only need to complete the relevant forms, improve accuracy and data quality.
- **Online Help:** integrate instructional text with each data entry field to provide users with proper help right at each of data entry spot. Form 7b and 8b texts will be integrated with the data entry forms.

B.2 Data Entry Wizard

- Use the data entry Wizard to guide the user through the application process. The Wizard could be used as a "map" to allow the user to jump from one section to another section. An example Wizard is shown on the right.
- Include data validation for each field, when applicable, to improve data quality.
- Include a final application package check to ensure that the package has met the minimum requirements (including attachments) before allowing the user to submit.



B.3 Emission Calculations

- **Emission Factors:** Store AP-42 emission factors in reference tables to support emission calculation feature needed for the Construction permit. This design will allow DNR to update emission results, without coding changes, based on EPA's AP-42 factors updates.
- **Data Import:** For Title V facility-wide emission or equipment inventory, provide a copy-and-paste feature to copy data from Excel file. Emissions will be input by the user and could be prepared in Excel outside of the e-Application.

B.4 Workflow

- **Workflow Types:** Develop a list of workflows required to support permit reviews for various project types
- **Workflow Templates:** For each workflow, develop a workflow template (in XML file) to define standard review tasks, default resource(s) (could be multiple persons), default duration, and task

sequence. DNR Admin will be able to change the workflow template to accommodate process changes.

- **Decision-Tree:** Include a decision-tree at the 1st technical review Task to allow DNR to select “which permit review workflow” to use based on the application data. Once selected, the corresponding workflow template will be used to trigger the workflow tasks, assign resources, send reminders, track status, and facilitate work within the DNR.

B.5 Permit Documents

- **Permit Templates:** For each permit document type, use GovOnline’s Word merge function to include a permit template with the boiler plate language and “book marks” to merge data from the e-Application database. The Template will be used by DNR staff to generate a “draft” permit. After a draft is generated, DNR staff could modify the permit to add additional terms/conditions required for each permit case. DNR Admin will be able to change the permit template to accommodate future changes.
- **Decision-Tree:** Include a decision-tree at the “generate a draft permit” Task to allow DNR to select “which document template” to use. Once selected, the System will generate a draft document based on the template and save it in the database.
- **Final Permit:** DNR staff could use the document “check-out” and “check-in” functions to modify the draft. A potential work task could be added to allow the permit supervisor to approve the permit. Once a permit is approved, a PDF version could be generated by the System. After a permit is approved, the applicant will be automatically alerted and receive their permit in PDF format.

(C) Data Migration

It will require a team effort to successfully accomplish the data conversion. enfoTech proposes to start data migration at the system iteration #1 so that the DNR could evaluate the interim system with its own data, verify the data migration contents/accuracy, and use its own data to verify system configurations to ensure meeting project needs. We propose the following technical approach to accomplish the data conversion:

1. Conduct Data Migration discussion with DNR during the 3-Day Workshop and document consensus in a Data Migration Plan that will include:
 - Tables from 8 datasets to be converted as listed in RFP
 1. Construction and Title V permit project tracking database information (MS Access)
 2. Facility information from SPARS
 3. Most recent equipment list from SLEIS
 4. Any equipment in SPARS with insert date > 12/21/15 (cut-off date for SLEIS migration)
 5. Insignificant activities from SPARS
 6. Potential Emissions from all equipment even if there is a cease operations date
 7. Attachments from most recent Title V application
 8. Project Tracking from SPARS
 - Evaluate whether there is a need to perform a “data cleansing” service prior to the data migration
 - Identify the missing data gaps, if any. Develop required data as needed
 - Establish a general rule for assigning “field default”, “counter”, “internal ID” during the data migration
2. enfoTech will provide *GovOnline* entity relationship (ER) diagrams and a data dictionary to the DNR during the data migration meeting
3. Develop scripts and use the SQL Server migration assistant (SSMA) to manage scripts (or provide support to DNR if DNR elects to perform the migration)

4. enfoTech to perform internal testing of data migration, and document the data conversion prior to release the data to DNR for testing
5. Support the DNR to test the data migration
6. Run data migration multiple times and make adjustments
7. Final Data Migration: rerun all scripts to perform final data migration before the PROD use

During the 3-Day Workshop, enfoTech will work with the DNR to develop a mutually agreeable arrangement on the data migration scope, and responsibility for and data migration script development, data cleansing.

(D)Product Quality Assurance

enfoTech will perform internal peer-review of all document deliverables and complete internal testing of all software deliverables before delivering them to the DNR for review. We utilize the Capability Maturity Model Integration (CMMI) level 3 quality assurance procedures to manage quality of all deliverables throughout the product development life cycle.

(C.1) System Testing by enfoTech:

DNR Reviews of interim system releases: Before the UAT, the DNR will have many opportunities to review and comment on draft work products before the UAT stage. enfoTech will perform internal testing before turning the interim releases to DNR for review. enfoTech will support DNR's reviews and address DNR comments. Our standard testing will include:

- **Unit testing:** to verify functionality
- **Integration testing:** to validate that the Solution will support the intended business processes
- **Deployment Package testing:** to verify that the deployment package and database update scripts are accurate and suitable for the Client's production version
- **Deployment testing:** after deploying the new release at the Client server, enfoTech will perform additional testing to ensure that the release scripts are applied successfully at the client's servers.

All testing will be based on the testing scenarios defined in the Test Plan approved by DNR. After passing enfoTech's internal testing, the Solution will be turned over to DNR to begin the User Acceptance Testing (UAT).

(C.2) Test Report:

enfoTech will produce a Test Report to document test results and to demonstrate that the System has met all testing scenarios specified in the Test Plan.

(C.3) Preparation for UAT:

After DNR approves the System for UAT, enfoTech will deliver a UAT version for DNR to conduct user acceptance testing. The UAT version will include:

- All DNR staff accounts with proper system access privilege based on the business group(s) and role they belong to
- DNR data migrated from the existing systems
- Example public user accounts and test email addresses to verify notification functions
- Dashboard
- Standard reports

(E) Conduct System Walkthrough and Support DNR on Interim System Reviews

enfoTech will provide hand-holding with the DNR during all system configuration iterations and provide full support to assist the DNR to perform detailed review of interim releases. Our support will include:

- Provide a Testing environment for the DNR to verify interim releases and provide comments.
- Provide system walk through to DNR on each interim system release.
- Provide a support hotline to answer questions, host ad-hoc GoToMeetings to support DNR's reviews
- Track DNR's comments, respond to issues, incorporate DNR's comments in next system releases
- If receptive to the DNR, expand the reviews to include representatives from the regulated community for online permitting and emission reporting.

3.2.2.3.2 Stage 3 Deliverables

Deliverable	enfoTech's Responsibility	DNR's Responsibility
3.1 e-Application Beta Release (Iteration #1)	<ul style="list-style-type: none"> ▪ Configure GovOnline based on the SCD approved by the DNR ▪ Perform internal QA 	<ul style="list-style-type: none"> ▪ Provide templates and data required for system configurations
3.2 Data Migration Iteration 1	<ul style="list-style-type: none"> ▪ Develop data migration scripts based on the data migration Plan approved by DNR ▪ Perform internal QA 	<ul style="list-style-type: none"> ▪ Provide templates and data required for data migration
3.3 A 2-Day onsite System Walk-through for Beta Release	<ul style="list-style-type: none"> ▪ After system configurations, conduct a 2-day onsite system walk-through with DNR to verify business processes vs. system configurations ▪ Capture DNR comments and record at the Team Website 	<ul style="list-style-type: none"> ▪ Review configuration results and provide comments at the Team Website ▪ Review data migration and provide comments at the Team Website
3.4 e-Application QA Release (Iteration #2)	<ul style="list-style-type: none"> ▪ Enhance configurations and provide the QA release ▪ Perform internal QA 	<ul style="list-style-type: none"> ▪ Provide info needed for configuration. ▪ Review Release #2
3.5 Data Migration Iteration 2	<ul style="list-style-type: none"> ▪ Enhance data migration scripts and provide iteration #2 ▪ Perform internal QA 	<ul style="list-style-type: none"> ▪ Provide info needed for migration. Review Release #2
3.6 A System Walk-through for Release 2 via GoToMeeting	<ul style="list-style-type: none"> ▪ After system configurations, conduct a system walk-through with DNR via GoToMeeting ▪ Address DNR comments 	<ul style="list-style-type: none"> ▪ Review configuration results and provide comments at the Team Website ▪ Review data migration and provide comments at the Team Website
3.7 e-Application UAT Release (Iteration #3)	<ul style="list-style-type: none"> ▪ Deliver a deployment package ▪ Install UAT version at DNR's Test server ▪ Verify installation before turning the Solution to DNR for user training and Pilot/UAT 	<ul style="list-style-type: none"> ▪ Provide support to allow enfoTech to access the Test server for installation
3.8 Data Migration Iteration 3	<ul style="list-style-type: none"> ▪ Enhance data migration scripts and provide iteration #3 ▪ Perform internal QA 	<ul style="list-style-type: none"> ▪ Provide info needed for migration. Review Release #3
3.9 Test Report	<ul style="list-style-type: none"> ▪ Complete internal testing and document test results ▪ Submit the Test Report to DNR to be used as a reference during the UAT 	<ul style="list-style-type: none"> ▪ Comment the Test Report ▪ Approve Test Plan

3.2.2.4 Stage 4: UAT, Training, Documentation

3.2.2.4.1 Technical Approach

(A) User Acceptance Testing (UAT)

After the DNR is satisfied with the system functions and approves the System for the UAT, enfoTech will provide support to the DNR to complete the UAT. Our support will include:

(A.1) Prepare DNR for UAT

- Work with the DNR to develop a Plan to perform system acceptance testing (UAT). The UAT plan will include the following contents
 - UAT personnel, role, and responsibility
 - UAT preparation
 - Pre-UAT abbreviated user training
 - System access to the UAT site
 - Scope of UAT testing
 - Procedure to submit UAT comments
 - Test Plan
 - Test Report
- Provide an abbreviated system training to the DNR's UAT persons prior to UAT
- Establish a procedure with resources to support DNR to successfully complete the UAT

(A.2) Support DNR to Complete the User Acceptance Testing

- Provide a hotline to respond to issues, answer questions, and ad-hoc GoToMeeting sessions to DNR
- Monitor issues reported on the SharePoint Project Team website
- Resolve issues and deliver system patches to DNR to resolve issues
- Establish weekly GoToMeeting calls to review UAT progress. Work with the DNR PM to determine the readiness and timing for system training.

All major UAT comments shall be resolved before the System is used for end user training.

(B) Training and Knowledge Transfer

(B.1) Training Plan

enfoTech will develop a Training Plan to recommend training classes, contents, and delivery methods. We will provide necessary trainings to the DNR for effective utilization of the new system. All trainings will be conducted onsite. enfoTech will submit a draft training plan to the DNR for comment prior to the training. A draft training plan might include the following contents:

1. Introduction
2. Strategy and Approach
 - Methodology
 - Audience
 - Types of Training
 - Trainer Role and Responsibilities
 - Preparation (Materials, Equipment, Administration, hand-on Practice, Setup, Training database)
3. Training Courses
4. Schedule

(B.2) User Training

Training courses will be business process oriented. enfoTech proposes four types of training course.

Training Course	Duration	Audience	# of Classes
1. DNR User Training <ul style="list-style-type: none"> ▪ e-Application System Overview (General functions) ▪ Online Permitting (public access) 	2.5 Day	DNR Staff	1

Training Course	Duration	Audience	# of Classes
<ul style="list-style-type: none"> Permit Review Work Flow and Permit Generation (DNR access) 			
2. Facility Users and Consultant Training <ul style="list-style-type: none"> Train-the-trainer training to train DNR staff to provide support to the Facility users and consultants Online Tutorial Outreach Plan to provide announcements and Webinars 	0.5 Day	DNR Staff	1
3. Advanced User Training <ul style="list-style-type: none"> update forms and managing content of drop down lists ad-hoc reporting 	0.5 Day	DNR Supervisor	1
4. System Admin & IT Technical Training <ul style="list-style-type: none"> System installation and patch releases System monitoring Security management Database training 	0.5 Day	DNR IT	1

(B.3) Training Database and Online Tutorial

Training Database: enfoTech will deliver a training database that will pre-populate data with use cases and example data. The training database will be used for the user training and post-production refresher training. enfoTech will provide a database script to refresh the training database to allow the DNR to reset the database for each training session.

Online Tutorial: enfoTech will deliver an online tutorial video that will include basic training sessions for e-Application system. The Tutorial will be placed at the e-Application login page to allow new users to self-learn the system. An example of the Tutorial for Michigan State Air Emission Inventory System is available at:

http://www.enfotech.com/enfoWebApp/pages/Gallery/lib/swf/MAERS_Tutorial_Video_Final2.swf

(C) Documentation

The following documents will be delivered.

- User Guide**
- Online Help:** be included with the System.
- Training Guide:** tailored to the DNR's workflows.
- Admin Guide:** technical details and reference manual about the system for the System administrator
- Installation Guide:** be tailored to the DNR's IT environment. Server requirements and step-by-step system installation instructions.
- Technical Manuals:** Technical Reference Manuals (E-R diagrams and the Data Dictionary). This documentation will include external system interfaces.

All documentations will be delivered to the DNR in both the hard copy and electronic versions. System documentations will be updated if applicable when system upgrades are made. All system documentations pertinent to the e-Application operations will also be available online.

3.2.2.4.2 Stage 4 Deliverables

Deliverable	enfoTech's Responsibility	DNR's Responsibility
4.1 A 2-Day onsite abbreviated training	<ul style="list-style-type: none"> After the UAT release, conduct an abbreviated user training to prepare DNR 	<ul style="list-style-type: none"> Attend the UAT training Arrange resources to conduct UAT

Deliverable	enfoTech's Responsibility	DNR's Responsibility
to prepare DNR for UAT	for UAT <ul style="list-style-type: none"> Address DNR comments 	
4.2 UAT Support	<ul style="list-style-type: none"> Support DNR to complete the UAT Manage reported problems on the project team website Deliver system patches Resolve all major issues prior to system Go-Live 	<ul style="list-style-type: none"> Test the solution based on the Test Plan Review data migration Log bugs found to the project team website Test system patches Approve Systems for go-live
4.3 System Documentations	<ul style="list-style-type: none"> Deliver the following documentation incorporating DNR comment: 	<ul style="list-style-type: none"> Review documentation, provide comments, approve documentation
4.4 Training Agenda	<ul style="list-style-type: none"> Prepare training agenda Finalize the training agenda 	<ul style="list-style-type: none"> Review training agenda Approve training agenda
4.5 User Training for DNR users	<ul style="list-style-type: none"> Deliver Training Guide Deliver training 	<ul style="list-style-type: none"> Provide training facility and work stations to accommodate each user Coordinate schedule with trainees Participate in training
4.6 Admin & IT Technical Training	<ul style="list-style-type: none"> Deliver documentation: <ul style="list-style-type: none"> Admin Guide ER diagrams & Interface Technical manual System Initialization guide System Patch guide Deliver training Onsite training trip to be combined with 4.5 	<ul style="list-style-type: none"> Provide training facility and work stations to accommodate each user Coordinate schedule with trainees Attend the training

3.2.2.5 Stage 5: Go-Live

3.2.2.5.1 Technical Approach

A good Go-live Plan will be essential to achieve a smooth system transition and obtain high participation rate of e-submittals from the regulated entity. The System Go-Live (Transition) Plan shall consider a few factors including:

- DNR's Acceptance of the System functions after the UAT
- DNR's User readiness after user trainings
- DNR's server IT environment be sufficient and installation of pre-production release (not needed if SaaS model is used)
- Successful execution of final data migration
- DNR's successful verification of migrated data and pre-production release
- enfoTech stand-by technical resources during the system production roll-over

enfoTech will work with the DNR to develop a system Go-Live plan which might include the following activities:

Go-Live Plan

1. Organization Support

- Experienced Staff (for internal staff):** form a small group of SME to provide help for DNR users.
- Help Desk (for external users):** establish a hotline to assist the regulated entity users in using the new system. Based on our past experiences, majority of initial questions will be on account, access, and system navigation. We expect the demand for technical support will gradually fade away after a few months.

- **Standard Operating Procedures (SOPs):** shall be developed to help DNR personnel to manage TO-BE processes, maintain core datasets for data sharing, and to render services to the regulated entity users

2. **Pre-Production System Deployment**

- Successful conclusion of UAT and verification of meeting all project requirements
- Final data migration: verify that all facility, contacts, permit, emission, and other data are properly migrated
- DNR completes a “Landing Page” at the DNR website to introduce the e-Application System

3. **Outreach**

- **Plan:** develop a plan to introduce the new system to the regulated community
- **Webinar or Regional Training**

4. **Post Production Support**

- Establish procedures to provide post production support
- Provide system maintenance and updates after the System goes live

At least 5 days will be reserved for the DNR team members to browse through the system before opening the System to end-users for production use. After the System is in production, enfoTech will provide support through system maintenance stage. An emergency deployment schedule will be implemented for any production show-stopping issues.

3.2.2.5.2 Stage 5 Deliverables

Deliverable	enfoTech's Responsibility	DNR's Responsibility
5.1 Deliver Go-Live (transition) Plan	<ul style="list-style-type: none"> ▪ Draft Go-Live Plan for DNR review ▪ Incorporate DNR comments and issue final Go-Live Plan 	<ul style="list-style-type: none"> ▪ Review and provide comments on the Go-Live Plan ▪ Approve Go-Live Plan
5.2 Deliver Production-ready System & Final data migration	<ul style="list-style-type: none"> ▪ Import extraction files after data freeze to the data migration environment ▪ Execute data migration scripts ▪ Provide the database backup for the migrated data ▪ Restore backup file to the Production database ▪ Deliver production-ready system 	<ul style="list-style-type: none"> ▪ Freeze data entry into the existing system ▪ Provide support to allow enfoTech to access the Production server for installation ▪ Review migrated data in the Production environment ▪ Log any issues to the team website to be resolved in parallel with production data entry
5.3 System Go-Live	<ul style="list-style-type: none"> ▪ Support DNR for system Go-live 	<ul style="list-style-type: none"> ▪ Perform final verification prior to Go-live
5.4 1-Year System Warranty	<ul style="list-style-type: none"> ▪ Provide system patches or upgrades for immediate production show-stoppers ▪ Provide email or phone technical support ▪ Provide any system review process via VPN or GoToMeeting for complex issues ▪ Manage reported issues on the team website 	<ul style="list-style-type: none"> ▪ Log system issues to the project team website ▪ Prioritize issues and assign appropriate delivery phase

3.2.2.6 **Stage 6: System Maintenance and Support**

After the System is promoted to the PROD use, enfoTech will provide 1 year of system warranty. enfoTech will provide email, phone, and VPN support when necessary. An emergency deployment schedule will be implemented for any production show-stopping issues.

Thereafter, enfoTech will offer system maintenance and technical support services via our annual support and maintenance program.

(A) Technical Support

(1) Issue Tracking Website (Project Team website site):

enfoTech will expand the project team web site to manage issues reported after the Go-live. The project team web site will provide the following features:

- The Website will assign a unique Issue ID for each issue
- DNR could report issues and monitor issues till closure
 - Issue reporter could record issue description, input, output, and error messages, screen shots
 - Issue reporter will receive an email alert when the issue status is changed
 - Issue reporter will an email alert when the issue is resolved and ready for retest
 - Issue Reporter could change/monitor the issue until it is closed
- enfoTech Investigation of Reported Issues
 - enfoTech staff will automatically receive email alert when a new issue is reported at the website
 - If the issue is a bug, create a Work Item at the enfoTech MTFS server and assign resources to fix the bug. The MTFS work item will record the corresponding Issue ID from the Project Team Website to maintain one-to-one traceability. Each bug will be monitored by enfoTech PM until it is satisfactorily resolved and closed by DNR.
 - If the issue is data related, enfoTech will develop a database script to fix the data
 - If the issue is training related, provide proper operation instructions to the user
 - If the issue is an addition/change to the approved requirements, it will be handled through change request procedure
- enfoTech provides ad-hoc GoToMeeting with DNR (based on DNR PM request)
 - For technical support on emergency issue
 - For technical discussions on issues that cannot be properly conveyed at the PTWS
 - For other maintenance items deemed necessary by PMs from both parties
- If Manage interim system patches to DNR which will include:
 - What's new
 - Change the status of "Issues" to "Resolved & Return to DNR for Retest" at the Project Website
 - If the Issue successfully passes the Retest, the original Issue Reporter will change the status of Issue to "Resolved". If Retest fails, the status will be changed to "Return to enfoTech" for investigation for which enfoTech will repeat the Issue resolution process until the Issue is resolved.

(2) Support Hotline

enfoTech will maintain a support hotline staffed with technical persons to provide technical services to the DNR via phone, emails, ad-hoc GoToMeeting sessions, and documentations. In addition, the enfoTech PM will host routine conference calls with the DNR's PM, when necessary, to review progress on completing service requests.

(3) Remedial Training

The e-Application system will be a paradigm shift from the paper submission to online application with system integrations to exchange data with 4 external systems. If remedial training is needed for certain user groups or business processes, enfoTech will provide ad-hoc GoToMeeting sessions to help end users to ensure smooth transition to the new system.

(B) System Updates & Release

Services included in the Agreement shall include:

1. **System updates:** enfoTech will continue maintaining the Solution and all the customization and interface modules delivered to the DNR and provide new system updates to the DNR. In general, we will have two types of updates.

- a. **Regular updates:** are on a 6-month release frequency. enfoTech maintains a master list of the enhancement items and prioritizes them based on the critical nature and popularity of the user requests. The regular updates will include all of the issues approved for the release.

All updates will be fully compatible with the external system interface modules developed for the DNR. enfoTech will take extra care at the time of design for the interface modules to ensure that the data exchanges are accomplished via a common data exchange file specification. As long as the data exchange file specifications remain the same, the interface should continue to function even if *System* has been upgraded to a newer version.

Updates will include: (1) a what's new document, (2) installation instructions, (3) database change scripts, (4) automatic system installation files, and (5) revised documentation. All updates will be delivered to the DNR via a secured FTP site.

- b. **Emergency Patches:** provided on an "as needed" basis; enfoTech may issue certain emergency patches to address critical issues reported by the client.
2. **Issue tracking and resolution:** We will provide a standard issue tracking procedure and use the project team web site to report the issues. Issue resolution will also be tracked on the project web site.
3. **Help Desk:** enfoTech will provide a Help Desk hot line to the client for reporting system related questions and issues. The Help Desk will serve as the 1st line of technical support for the end-users. When needed, GoToMeeting conference calls can be used to streamline our technical support service.
4. **Secured VPN support:** enfoTech will provide secured VPN support services to the client as requested. The secured VPN service will allow enfoTech to bring in the product development team and utilize our entire technical resources to address special issues reported by the client. Our technical expertise enables enfoTech to provide technical services similar to those that would be provided on site.

System updates will not include enhancements. Enhancement shall be handled through a Change request procedure with additional fee.

3.2.2.7 Summary of Proposed Deliverables

enfoTech will provide the following deliverables to the DNR.

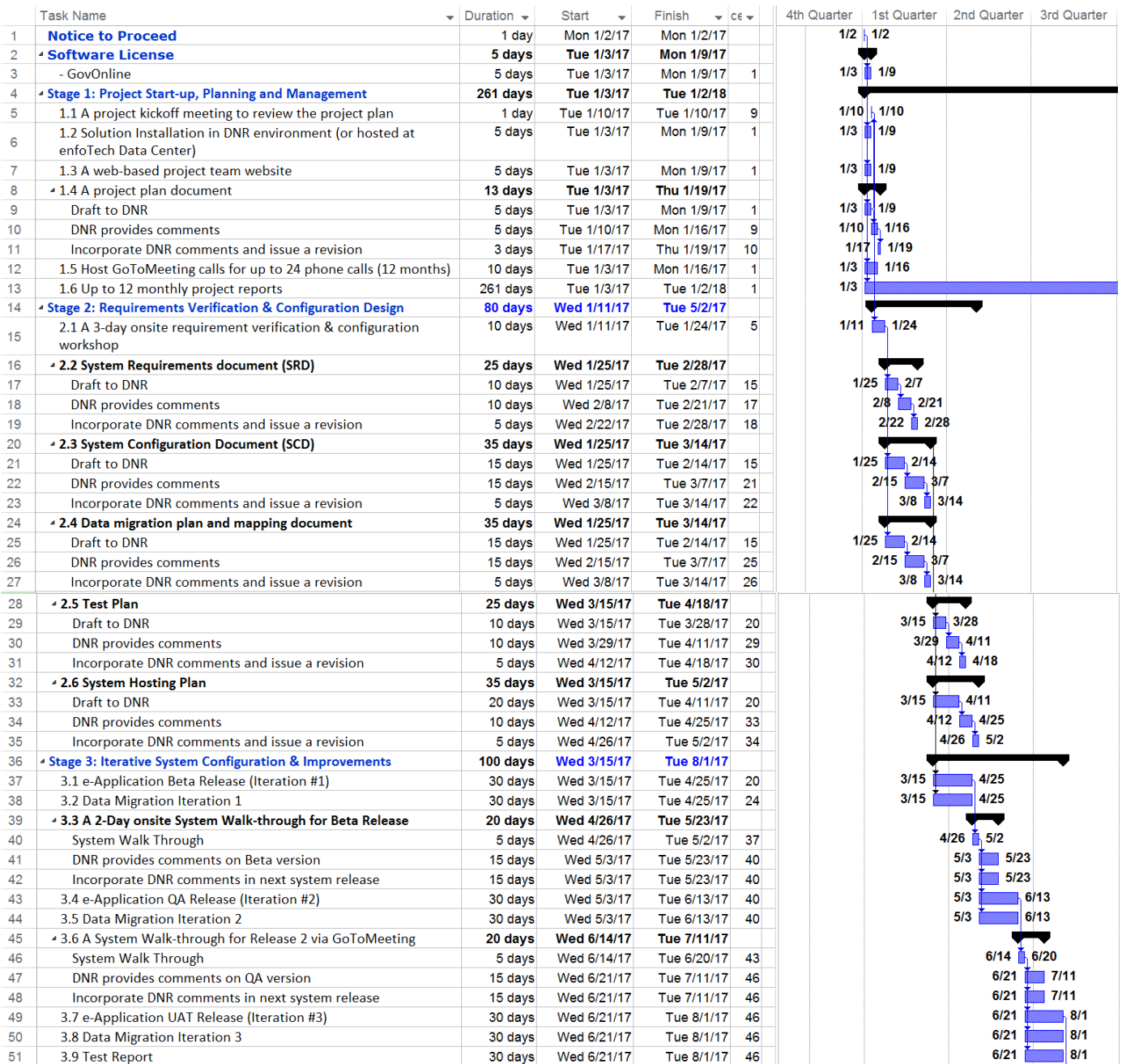
Deliverable	Type
Stage 1: Project Start-up, Planning and Management	
1.1 A project kickoff meeting to review the project plan	Meeting
1.2 Solution Installation in DNR environment (or hosted at enfoTech Data Center)	Software
1.3 A web-based project team website	Software
1.4 A project plan document	Document
1.5 Host GoToMeeting calls for up to 24 phone calls (12 months)	Meeting
1.6 Up to 12 monthly project reports	Document
Stage 2: Requirements Verification & Configuration Design	
2.1 A 3-day onsite requirement verification & configuration workshop	Services
2.2 System Requirements document (SRD)	Document

Deliverable	Type
2.3 System Configuration Document (SCD)	Document
2.4 Data migration plan and mapping document	Document
2.5 Test Plan	Document
2.6 System Hosting Plan	Document
Stage 3: Iterative System Configuration & Improvements	
3.1 e-Application Beta Release (Iteration #1)	Software
3.2 Data Migration Iteration 1	Software
3.3 A 2-Day onsite System Walk-through for Beta Release	Services
3.4 e-Application QA Release (Iteration #2)	Software
3.5 Data Migration Iteration 2	Software
3.6 A System Walk-through for Release 2 via GoToMeeting	Services
3.7 e-Application UAT Release (Iteration #3)	Software
3.8 Data Migration Iteration 3	Software
3.9 Test Report	Document
Stage 4: UAT, Training, Documentation	
4.1 A 2-Day onsite abbreviated training to prepare DNR for UAT	Services
4.2 UAT Support	Software/Services
4.3 System Documentations	Document
4.4 Training Agenda	Document
4.5 User Training for DNR users (3-Day onsite)	Services
4.6 Admin & IT Technical Training (1-Day)	Services
Stage 5: Go-live	
5.1 Deliver Go-Live (transition) Plan	Document
5.2 Deliver Production-ready System & Final data migration	Software
5.3 System Go-Live	Software
5.4 1-Year System Warranty	Software/Services
Stage 6: System Maintenance & Support	
6.1 1-Year Technical support and maintenance (Renewable each year at DNR's discretion)	Software, Document, Meeting

3.2.2.8 Project Schedule (draft)

The DNR has indicated January 2018 as a desirable date for the new system to go live. enfoTech estimates the Project could be completed in 9 months. Assuming 1/2/2017 as the project kickoff date, the target Go-live date will be 10/4/2017. The schedule has budget onsite requirement verification, design, 4 iteration of system walk-through, data migration reviews, training, and etc. For each iteration, the DNR shall have 15 to 20 days of review time.

For planning purpose, enfoTech presents a draft schedule with WBS and major milestones. We will work with DNR to refine the schedule to accommodate DNR resources constraint, offer phase-in production strategy, or to extend the schedule if necessary.



Task Name	Duration	Start	Finish	ce	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
• Stage 4: UAT, Training, Documentation	28 days	Wed 8/2/17	Fri 9/8/17					
4.1 A 2-Day onsite abbreviated training to prepare DNR for UAT	5 days	Wed 8/2/17	Tue 8/8/17	49			8/2 8/8	
• 4.2 UAT Support	20 days	Wed 8/9/17	Tue 9/5/17					
DNR conducts UAT	20 days	Wed 8/9/17	Tue 9/5/17	53			8/9 9/5	
enfoTech supports DNR to complete UAT	20 days	Wed 8/9/17	Tue 9/5/17	53			8/9 9/5	
• 4.3 System Documentations	25 days	Wed 8/2/17	Tue 9/5/17					
Draft to DNR	10 days	Wed 8/2/17	Tue 8/15/17	49			8/2 8/15	
DNR provides comments	10 days	Wed 8/16/17	Tue 8/29/17	58			8/16 8/29	
Incorporate DNR comments and release revisions	5 days	Wed 8/30/17	Tue 9/5/17	59			8/30 9/5	
• 4.4 Training Agenda	25 days	Wed 8/2/17	Tue 9/5/17					
Draft to DNR	10 days	Wed 8/2/17	Tue 8/15/17	49			8/2 8/15	
DNR provides comments	10 days	Wed 8/16/17	Tue 8/29/17	62			8/16 8/29	
Incorporate DNR comments and release revisions	5 days	Wed 8/30/17	Tue 9/5/17	63			8/30 9/5	
4.5 User Training for DNR users (3-Day onsite)	2 days	Wed 9/6/17	Thu 9/7/17	54			9/6 9/7	
4.6 Admin & IT Technical Training (1-Day)	1 day	Fri 9/8/17	Fri 9/8/17	65			9/8 9/8	
• Stage 5: Go-live	307 days	Wed 8/2/17	Thu 10/4/18					
• 5.1 Deliver Go-Live (transition) Plan	25 days	Wed 8/2/17	Tue 9/5/17					
Draft to DNR	10 days	Wed 8/2/17	Tue 8/15/17	49			8/2 8/15	
DNR provides comments	10 days	Wed 8/16/17	Tue 8/29/17	69			8/16 8/29	
Incorporate DNR comments and release revisions	5 days	Wed 8/30/17	Tue 9/5/17	70			8/30 9/5	
5.2 Deliver Production-ready System & Final data migration	10 days	Mon 9/11/17	Fri 9/22/17	66			9/11 9/22	
• 5.3 System Go-Live	8 days	Mon 9/25/17	Wed 10/4/17					
Pre-PROD Package to DNR	1 day	Mon 9/25/17	Mon 9/25/17	72			9/25 9/25	
DNR Installs the Pre-PROD at the PROD Server	1 day	Tue 9/26/17	Tue 9/26/17	74			9/26 9/26	
DNR review the Pre-PROD release and make comments	5 days	Wed 9/27/17	Tue 10/3/17	75			9/27 10/3	
Final Adjustments to the Pre-PROD release	5 days	Wed 9/27/17	Tue 10/3/17	75			9/27 10/3	
System Go-live	1 day	Wed 10/4/17	Wed 10/4/17	77			10/4 10/4	
5.4 1-Year System Warranty	261 days	Thu 10/5/17	Thu 10/4/18	78			10/5	
• Stage 6: System Maintenance & Support	261 days	Fri 10/5/18	Fri 10/4/19					
6.1 1-Year Technical support and maintenance (Renewable each year at DNR's discretion)	261 days	Fri 10/5/18	Fri 10/4/19	79				

Data Model

GovOnline data model is consistent with the EPA's Emission Inventory System (EIS) and Facility Registry System (FRS) data structure. It includes all data elements from the EIS and FRS schema plus additional data elements commonly needed by state air permitting programs. A high-level overview of the proposed data store is illustrated below:

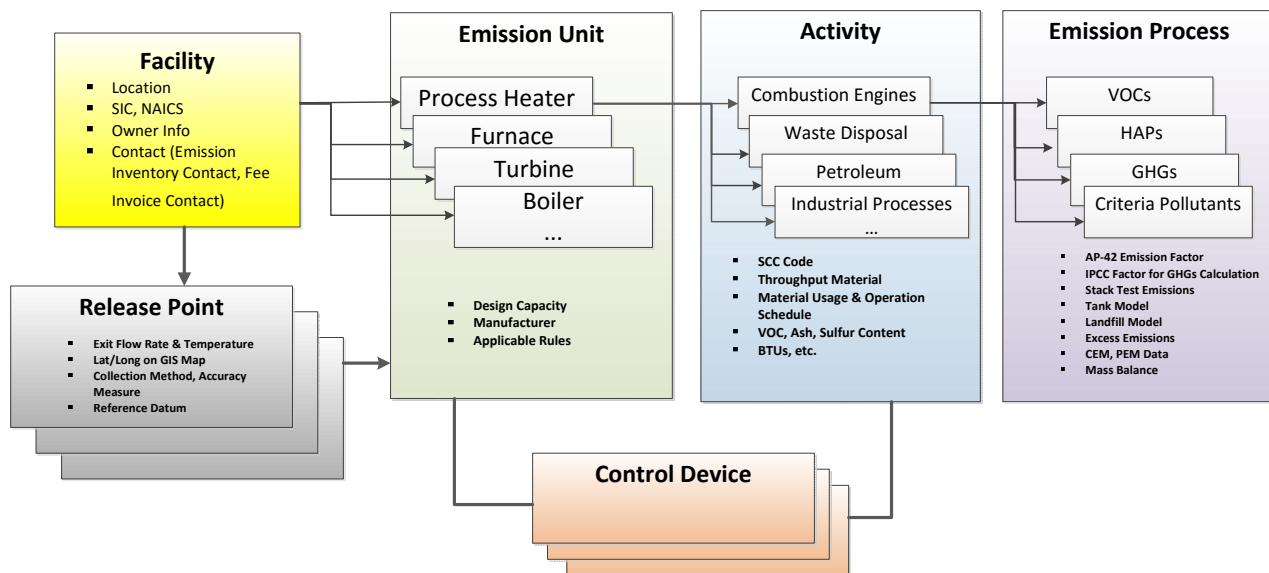


Figure 1 - High-Level EIS Data Model

The data store is extensible to accommodate additional data elements required by DNR. Existing database tracks:

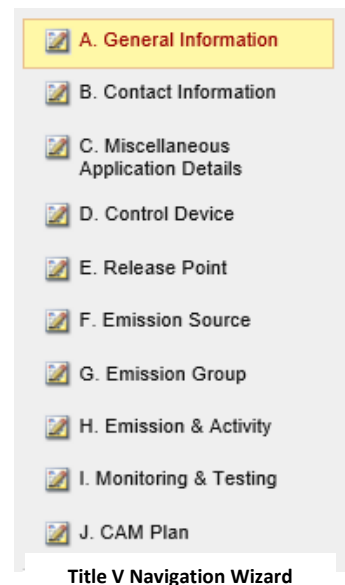
- Facility Basic (name, status, business address, etc.)
- Facility Location (physical address, block, lot, etc.)
- Facility Contacts (Name, address, phone, email, responsibility, status, effective date, expiration date, etc.)
- Facility Environmental Interests (program code such as Title V, PSD, NSR, status, effective date, expiration date etc.)
- Facility SIC Codes (multiple allowed, primary designation)
- Facility business nature, description of operations, products, etc.
- Facility name change history
- Facility GEO Coordinates (Lat., Long, Horizontal Accuracy Measure, Vertical , status, effective date, expiration date, Area,)
- Facility Geo Shape (point, polygon, area, parcel ID, shape ID, buffer zone, etc.)
- Facility Agency Contacts (default DNR contacts for permitting task types)
- Facility-wide Regulatory Applicability
- Facility-wide HAP Emissions
- Facility-wide Specific VOC emission
- Facility Title V Level
- Facility Insignificant Activities and Emissions
- Facility-wide Short-term Activities
- Facility Leak Detection and Repair Program
- And other tables and data elements relevant to Facility data

Online Form

An air permit application will be treated as a submittal type. Each submittal type will have its own XML Form to specify detailed data elements, validation rules and will be saved in the database as a property of the submittal type. Online Forms are configurable to meet DNR form requirements. GovOnline Form Engine will read the XML file and render a data entry form in a Wizard style similar to one shown on the right.

For example, the Title V Application Form could be divided into multiple sections as the following:

- General Information: contains the basic facility information such as rules/regulations and pollutants that are associated with the facility.
- Contact Information: collect facility's contacts and responsibility
- Miscellaneous: store insignificant emission activities
- Control Device: details the control units used for emission equipment and to store control efficiency for each air pollutant
- Release Point: define in the detail the release points of air pollutants
- Emission Source (or Unit): lists the emission sources (or Units) and allows the user to associate the release point, control device, and rule.
- Emission Group: allows the user to group emission sources/units with similar applicable requirements for testing or monitoring or reporting
- Emission & Activity: manages the emission path group and emissions in further detail.
- Monitoring & Testing: manages monitoring and testing requirements for each emission source (unit) or emission group
- CAM Plan: The Compliance Assurance Monitoring is an optional section in which facilities that require a CAM plan can specify the details in this section. Attachments can later be added in the attachments section.



Online Forms are configurable to meet DNR form requirements. GovOnline Form Engine will read the XML file and render a data entry form in a Wizard style. For example, the Equipment information section could include data elements:

Control Device

Each Control Device Type could have its own detailed data elements to further describe the nature of the Control. The System will offer a list of Control Types for user to choose.

Based on the 'Control Device' value selected by the user, the screen will automatically display the data elements relevant to the control type.

Operating Parameters

* Media Type:

* Is the filter medium used in this control device disposable? ☐ Yes ☐ No

* Filter replaced every: Hours

* Pressure Drop: in. w. c.

* Number of Cartridges:

Control Device

Control Device Detail Information

General Information

* Device Type: * Control Unit ID: * Control Unit Name:

* Description:

* Manufacturer: Model Number: Date Manufactured/Reconstruction: Installation Date:

Installation Date Description:

Operating Status of Equipment: Operating Status Date:

* Reason for Operation of this control device: Other operating reason:

Operating Parameters

* Media Type: * Number of Bags(if applicable): * Inlet Dew Point Temperature: Fahrenheit * Inlet Gas Temperature: Fahrenheit

While choosing certain control device options, the input parameters might change dependent on the control device type selected by the user. As in this case, when the media type was changed from 'Bag House' to 'Bin Vent', the input parameters were altered to fit the control device's media type requirement.

For each control device, the user could manage pollutants removal efficiency for each particular pollutant(s).

The user also has the option to 'Batch Update Pollutants'. For control devices with exactly the same pollutants and control efficiency, the user can 'Batch Update Pollutants' and apply the pollutant(s) to all checked control devices instead of having to enter them in one by one.

Control Device

Controlled Pollutant

Pollutant Code: Pollutant Name: Pollutant Type:

1 - 1 of 1 item(s)

	Pollutant Code	Pollutant Name	Pollutant Type	Cas. No.	Unit Code
<input type="checkbox"/>	NH3	Ammonia	CAP1		

* Control Efficiency:

Release Point

The 'Release Point' section tracks stacks or points that emit air pollutants to atmosphere.

The release point will capture data commonly used for air dispersion modeling.

GovOnline allows the user to find the latitude and longitude of each release point using a Map interface. The lat./long is defaulted to the location of the facility.

By clicking on the 'Get Lat./Long' a map will be displayed and the user will be able to move the cursor to the exact position of the release point.

Once the desired position is selected, the user can then click on the 'Update' button to update the lat./long with data from the GIS.

Release Point Information

Release Point Detail Information

* Release Point ID: * Release Point Name: * Release Point Type:

* Stack Height (ft): * Stack Diameter (ft):

* Exit Gas Velocity (ft/min): * Exit Gas Flow Rate (ACFM): * Exit Gas Temperature (Fahrenheit):

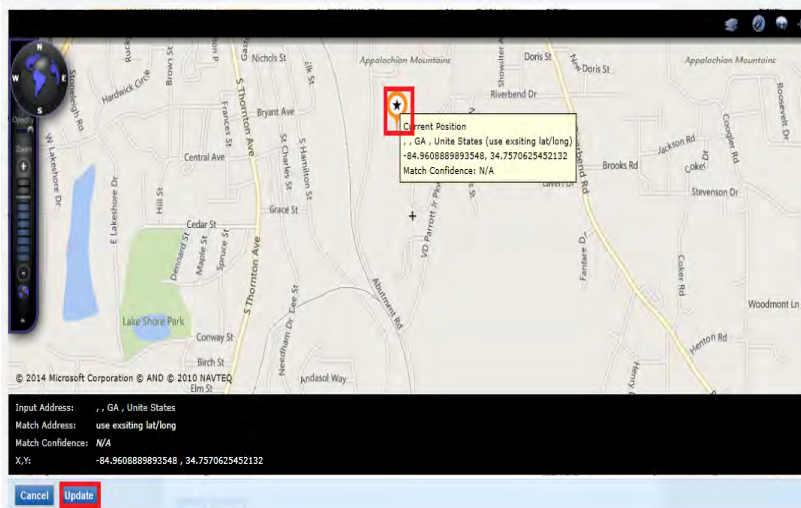
Fence Line Distance (ft):

* Latitude Measure: * Longitude Measure:

* Elevation (ft): Horizontal Accuracy Measure: Horizontal Collection Method: Horizontal Reference Datum:

Geographic Comment:

Comments:



Emission Source (or Unit)

The 'Emission Source (Unit)' entry form is also dynamic and similar to the control devices where the form will change data elements based on the emission unit type selected.

For each emission unit, GovOnline allows the user to:

- Track Fuel Used,
- Associate 'Control Device',
- Associate 'Release Point',
- Associate 'Air Rules'.

Emission Source

Emission Source Detail Information

General Information

* Emission Unit Type: * Emission Source Identifier: * Emission Source Name:

* Description:

Manufacturer: Model Number: Date of Manufacture/Reconstruction/Modification:

Installation Date: Installation Date Description: Operation Status of Equipment: Operation Status Date:

Equipment Type

Choose the crusher, mill, or grinder type: ☐ Hammermill ☐ Jaw ☐ Rod ☐ Roller ☐ Cone ☒ Ball Crusher ☐ Gyratory ☐ Other

* Is the unit heated? ☐ Yes ☒ No

Specific Materials Crushed

Material Name	Material Description	Maximum Hourly Rate (Tons/Hr)	Moisture Content (Percentage)

Comments:

Like control devices, GovOnline provides features for the user to batch update rules to all selected emission sources. The user can also copy a previously entered emission source by checking on an emission source and clicking on the 'Copy Emission Source' button. The user will then be prompted to enter a new emission source ID and name.

Emission Path

GovOnline supports tracking of 'Emission Paths' and to define emission units and release points for each emission path. For each emission path, GovOnline also tracks testing and monitoring that are required to meet compliance.

The image shows two side-by-side screenshots of the GovOnline interface. The left screenshot is the 'Emission Path Group' form, specifically the 'Emission Path Group Detail Information' section. It includes fields for 'Emission Path Group Type' (set to 'Common Control Device and Release Point (CD/RP) Group'), 'Emission Path Group Identifier', and a 'Description' field. Below these is the 'Emission Source List' section with an 'Associate Emission Source' button highlighted in yellow. A red arrow points from this button to the right screenshot. The right screenshot shows the 'Fuels Burned Component List', 'Control Device List', 'Release Point List', and 'Applicable Rule List' sections. The 'Associate Rule' button in the 'Applicable Rule List' section is highlighted in yellow.

The system allows for the same pollutant to be entered in more than once in situations where the emissions path may have different results for the same pollutant. The user can 'Batch Update' the groups if more than one have matching criteria.

Monitoring and Testing

Based on the emission unit (or path), GovOnline supports tracking of 'Monitoring and Testing' as required.

Multiple monitoring and testing requirements could be included for each emission unit.

An example screen is illustrated on the right.

The image shows a screenshot of the 'Monitoring List Information' form. The 'Monitoring Detail for Emission Path Group (1)' section is active. It includes a search bar for 'Pollutant Code', 'Pollutant Name', and 'Pollutant Type'. Below this is a table with 5 columns: 'Pollutant Code', 'Pollutant Name', 'Pollutant Type', 'Cas. No.', and 'Unit Code'. The table contains one row for 'NH3' (Ammonia) with 'CAP1' as the unit code. Below the table are fields for 'Monitoring Method', 'Monitoring Location', 'Monitoring Average Time', 'Data Acquisition Frequency', 'Reporting Frequency', and 'Type of Record'. There is also a section for 'Applicable Regulation' with a table showing 'NSPS(Part 60)' and 'RRR' with a description: 'Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes'. At the bottom, there is a section for 'Applicable Emission Source' with a checkbox for '10768' and a 'Comments/Parameters Monitored/Explanation for Other:' field. The 'Save' and 'Cancel' buttons are at the bottom.

Monitoring and Testing Form Display

CAM Plan

The CAM plan is an optional module dependent on if the facility requires a CAM plan. The emission source selected will populate the available control devices and pollutant based on the control device. This allows the user to accurately select the correct information without having to back track.

CAM Plan

CAM Plan Details

CAM Plan ID: CAM Basis: **Renewal Application** ▼

* Emission Source with Control Device: **E0392** ▼

* Control Device: **FM01** ▼

* Pollutant: **Ammonia** ▼

CAM forms will be uploaded in the Attachments section of the Application.

Comments:

Save **Cancel**

Activity and Emissions (Potential-to-Emit and Actual)

For each emission unit or emission path, GovOnline allows user to manage 'Activity and Emissions'. One Source/Unit could have multiple Activities. Each Activity could be tied to a SCC code that will be used to estimate air emission based on EPA's AP-42 emission factors. For each Activity, GovOnline tracks potential-to-emit and actual emissions.

Emission List for Emission Path Group (SEP E0392)										
1 - 2 of 2 item(s)										
Select	View/Edit	Delete	Edit Apportionment	Pollutant	Emission Limit/Standard	Max. Actual Emissions (TPY)	Potential Emissions (TPY)	Calculation Method	Voluntary limit?	Compliance Status
<input type="checkbox"/>				Ammonia	4			none	N	No
<input type="checkbox"/>				Ammonia	4			none	N	No
Add Pollutants Batch Update Exit										

Emission Activity Grid View

Emission Calculations

Emission Calculation: the Solution automatic calculates emissions based on the SCC codes, material through put, control efficiency, and AP-42 emission factors. Emissions will be presented in the Emission form with the following data elements:

1. Pollutant Code
2. Emission Basis: **CEM** - Continuous Emissions Monitoring, **Site Specific Stack Test**, **PEM** - Parametric Emissions Monitoring, **Mass Balance**, **Tank Model**, **AP-42 Emission Factor**, **Other**
3. Emission Factor/Exponent:
4. Control Efficiency %
5. Annual Emissions:
6. Comment

Activity & Emissions Information

Activity Detail Emissions Attachment

Emission List

Saved successfully

	Pollutant	Annual Emission	Unit	Emission Basis	Emission Factor	Exponent	Emission Factor Unit	Control Efficiency (%)	NAEIS Calculated Value	GWPP	CO2 Eq	Use NAEIS Calculated Value
	CO	398.00	KG	NAEIS EmissionFactor	4.409	1	KG/TONNE	0	398.00 KG	N/A	N/A	<input checked="" type="checkbox"/>
	NMOC	142.00	KG	NAEIS EmissionFactor	1.764	1	KG/TONNE	11	142.00 KG	N/A	N/A	<input checked="" type="checkbox"/>
	NOX	1459.60	KG	NAEIS EmissionFactor	20.723	1	KG/TONNE	22	1,459.60 KG	N/A	N/A	<input checked="" type="checkbox"/>
	PM2.5,PRIMARY	27.00	KG	NAEIS EmissionFactor	0.441	1	KG/TONNE	33	27.00 KG	N/A	N/A	<input checked="" type="checkbox"/>
	SO2	111.00	KG	NAEIS EmissionFactor	2.204	1	KG/TONNE	44	111.00 KG	N/A	N/A	<input checked="" type="checkbox"/>
	NITROUS OXID	0.24	KG	IPCC EF	0.6		KG/TJ	0	0.24 KG	298	70.243364966688 KG	<input checked="" type="checkbox"/>
	METHANE	0.59	KG	IPCC EF	3		KG/TJ	50	0.59 KG	23	13.64524826211 KG	<input checked="" type="checkbox"/>
	CO2	284.37	KG	IPCC EF	71900		KG/TJ	99	284.37 KG	1	284.37488407122 KG	<input checked="" type="checkbox"/>

Save Calculate Emissions

Figure - List of Pollutants and Emissions

GovOnline will track Release Point, Pollutants Venting through Release Point, Emission Amount.

- **Release Point:** the exist point for pollutant emissions
- **Pollutants:** Pollutants are generated from activities in each emission unit. GovOnline tracks all emission units that vent to each Release Point. Therefore, GovOnline could produce a list of all pollutants that vent through a particular Release Point.
- **Emission Amount:** Pollutant emissions are tracked at each emission activity. Emissions could be generated from AP-42 method, engineering calculation, or stack testing, etc. Therefore, GovOnline could generate total emission amount by pollutant at each Release Point.

Release Point Information

Release Point Detail Information

* Release Point ID: RP-01 * Release Point Name: Factory #1 * Release Point Type: Vertical with Rain Cap

* Stack Height (ft): 10 * Stack Diameter (ft): 1

* Exit Gas Velocity (ft/min): 4 * Exit Gas Flow Rate (ACFM): 15 * Exit Gas Temperature (Fahrenheit): 50

Fence Line Distance (ft): 300

* Latitude Measure: 32.1656221 * Longitude Measure: -82.9000750999998 [Get Lat/Long](#)

Elevation (ft): 80 Horizontal Accuracy Measure: Horizontal Collection Method:

Horizontal Reference Datum:

Geographic Comment:

Comments:

Save Cancel

- **Air Dispersion Modeling Input File:** GovOnline could generate air dispersion modeling input files based on the Emission Sources selected and the Model Name.

RFP requires that air dispersion modeling work will be completed outside of the e-Application system. We understand that the project requirement is to produce a model input file from the e-Application system to

allow DNR to conduct air dispersion modeling using a model external to the e-Application system. Therefore, the meteorological data and air dispersion models will be managed outside of the System.

GovOnline supports Windows, iOS, Android platform. GovOnline is compatible with Internet Explorer, Google Chrome, Firefox, and Safari browsers. GovOnline is kept current to be compatible with the latest versions browsers.

(A) Ease To Use for Public Users

GovOnline is easy to use through several system design concepts: Dashboard, Pull-Down Menu, Hyper Links, Data Entry Wizard, Pick List, and Online Help.

1. **Dashboard:** the user can readily see the to-do list of tasks that has been scheduled by the user or the system. Announcement posting capability also enables faster communication among staff of various levels within and outside the DNR.

Dashboard for Public Users

The screenshot shows the GovOnline dashboard for public users. It includes a top navigation bar with 'My Dashboard', 'Submittal', and 'My Account' tabs. The main content area is divided into several sections:

- Start a New Submittal:** Contains buttons for 'Apply New Application' and 'Submit Non-Permit Report'.
- Message Center:** Displays a list of messages, including '18 Recent Email(s) for submitted submittals', '0 payment due submittals', and '23 amend / revised submittals'. A red arrow points to the 'Permits/Licenses' link in the message center.
- Upcoming Submittal Obligations:** A yellow box indicating that the user does not have any upcoming obligations.
- Permits / Licenses:** A table listing issued permits/licenses for 'Tad's Quick Lube Inc.' with columns for Facility, Owner Info, Issuance Info, and Critical Dates.

Numbered callouts 1 through 4 highlight specific features: 1 points to 'Start a New Submittal', 2 points to 'Upcoming Submittal Obligations', 3 points to the 'Message Center', and 4 points to the 'Permits / Licenses' table. A yellow box labeled 'Hyper Links' is positioned below the 'Permits / Licenses' section.

- 1 "Start a New Submittal" provides user with quick links to start: A new permit application, A new report, A financial aid request, or A complaint.
- 2 The 'Message Center' provides a link to any communication done via the system. This provides a shortcut for the user to see e-mails or correspondence messages that are sent to them. The messages are a [hyper-link](#) in order to allow the user to zoom in for more detailed information about the correspondences or announcements.
- 3 The 'Upcoming Submittal Obligations' allows the user to view any submittal obligations they have or compliance reports that need their attention. Upcoming submittal obligations will be automatically generated by GovOnline based on the Permit terms and conditions.
- 4 The 'Permits/Licenses' section lists the different permits/licenses issued to the facility which the User is responsible for. The User can choose to Renew, Amend/Update, or Terminate for the different permits/licenses that are issued to them.

“Inspection Result”: allows user to view inspection result, including inspection report and other supporting documents (i.e. photos, meeting memos, etc.) prepared by the Agency.

2. **Pull-Down Menu:** the user can access each system function through pull-down menus.
3. **Hyper Links:** the user can click on [hyperlinks](#) to jump to the areas of interests
4. **Data Entry Wizard:** see the to-do list of tasks that has been scheduled by the user or the system readily see the to-do list of tasks that has been scheduled by the user or the system

5. **Data Entry Wizard:** The Applicant will be guided by a Wizard to complete the permit/license application. An example screen is illustrated on right:

- **Application:** to complete an application form, the License Administrator could tailor the screen to show online help, required data entry fields, and data validation rules.
- **Attachment:** to upload supporting documents required for this license. The Licensee could choose to mail the support documents. The application will not be deemed completed until after the required supporting documents are received by the licensing entity. The License Administrator could tailor the license to specify required supporting documents.
- **Validation:** to validate the entire application package to ensure that it meets the minimum submission criteria mandated by the permit Administrator.
- **Payment:** to pay the required fee. The Licensee can pay online via credit card, debit card, account transfer, or mail check/money order via postal mail. The application will not be deemed completed until after the required fee is paid in full.
- **Submission:** to certify the application data and submit to the licensing entity. A submission receipt will be automatically generated by the GovOnline. GovOnline will auto-generate an

Begin Submittal

- Start a New Submittal**
Apply new submittal
- My Favorite Submittal Types**
My favorite submittal type list
- Edit Pending Submittals**
Edit unfinished submittal
- Track Submittal**
 - Manage Submitted Cases**
Monitor submitted case
 - Manage Permits/Certs.**
Track permits or licenses
 - Correspondence Msg**
Monitor correspondence Msg
 - Email History**
Track emails for submitted applications
 - Link Paper Submissions**
Link Paper Submissions

My Dashboard Application My Account

Application > Wizard Panel > Major-Title V Application

MAJOR-TITLE V APPLICATION (APP ID: 193)

Please fill out the form below.

Application Type

- * Application Type
 - ☒ Title V Operating Permit
 - ☐ Title V Minor Modification to the Operating Permit
 - ☐ Title V Significant Modification to the Operating Permit
 - ☐ Administrative Amendment

GENERAL FACILITY INFORMATION

1. Company Information

- * Name: CHEMTRADE RFNRY SVC INC
- * Mailing Address: 5201 W 21ST ST
- * City: TULSA * State: OK * Zip: 74107

2. Facility Information

- * Name: fac name
- * Description:

VALIDATION (SUBMISSION ID: 757)

Review your Application and any Attachments. Save any changes you make before returning to this page. Proceed to Submission by clicking NEXT.

Application Form(s) Summary

- ✓ Online A. General Information
- ✓ Online B. Contact Information
- ✓ Online C. Miscellaneous Application Details
- ✓ Online D. Control Device
- ✓ Online E. Release Point
- ✓ Online F. Emission Source
- ✓ Online G. Emission Group
- ✓ Online H. Emission & Activity
- ✓ Online I. Monitoring & Testing
- ✓ Online J. CAM Plan

Attachment(s) Summary

- ✓ Attachment

Exit Previous Next

email confirmation to acknowledge the receipt, completeness determination, technical review status, and the decision.

6. Pick Lists: Online data entry forms support pick lists to reduce data entry and improve data quality.

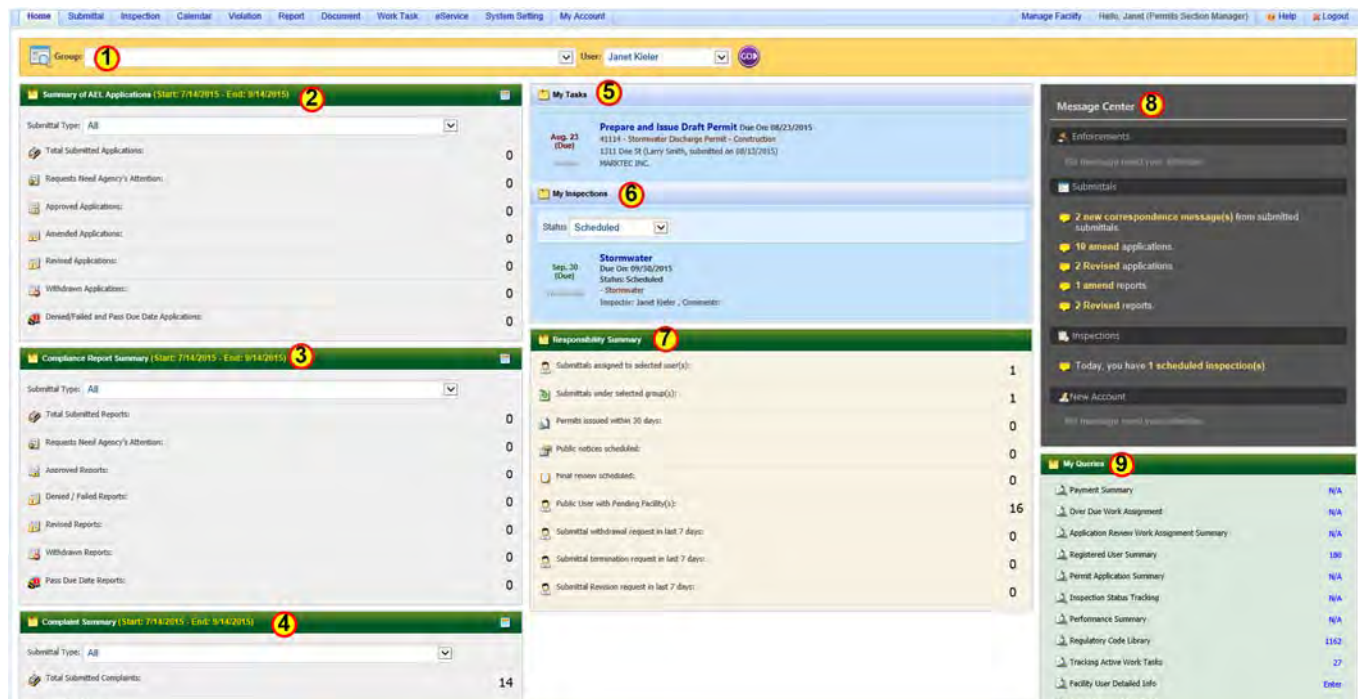
Example pick lists are:

- Drop down list
- Radio button
- Check box
- Conditional Data Entry Area (based on the input from a previous section, the screen will automatically show pertinent data elements.
- Search Box: to search data to select proper values from the library (key word or wild card)
- Select All: to select all records (items) from an area
- Batch Update: batch data update based on selected records
- More...

7. Online Help: GovOnline offers additional online help features:

- **Online screen help text:** the License Administrator could configure screen help specific to each data entry screen
- **Online Video Tutorial:** GovOnline integrates with video tutorial that could be viewed online.
- **Spell check**
- **Audit trail (to track the data change history)**

(B) Ease To Use for DNR Users



The home page for Agency Site gives the user visibility of key features that the system has to offer. The dashboard contains the following configurable elements which display to the user a general overview of current activities associated to them.

- 1** **Search by 'Business Group'**: a drop-down list of all business groups within the Agency for user to select and view the summary of each group. Options of the drop-down list can be controlled based on user's role and business group. This function is provided for a manager to track the performance and work load of each staff under his/her group.
- 2** **'Summary of Submittals'**: provides several breakdown analyses of the system activities. This allows the user to quickly understand current submission status and to prioritize. User can view the number of submissions that have been submitted alongside those that need attention, approved, amended, revised, withdrawn, or denied/failed in the system. The numbers next to each Compliance Summary are a [hyper-link](#) that allows the user to zoom in on those records.
- 3** **'Summary of Compliance Report'**: a statistical summary of all the compliance reports required / expected by the entire Agency, or selected Group, or an individual (based on data filter). The table provides breakdown analysis of the compliance report based on their statuses, such as received but no decision has been made yet, received and reviewed, and more. The numbers next to each Compliance Summary are a [hyper-link](#) that allows the user to zoom in on those records.
- 4** **'Complaint Summary'**: a statistical summary of all the complaints received by the Agency, or selected Group, or an individual (based on the data filter). The table provides breakdown analysis of the complaints based on their statuses, such as received but no decision has been made yet, received and resolved, and more. The numbers next to each complaint are a [hyper-link](#) that allows the user to zoom in on those records.
- 5** The **'My Task'** feature is a useful feature that has been implemented so that the user can see what tasks have been assigned to them. The list is ordered by the 'Due Date' descending so that the activities that have been overdue the longest take priority in the view. Each task name is a [hyper-link](#) to allow the user to zoom into the corresponding task.
- 6** The **'My Inspection'** feature allows the user to see which inspection tasks have been assigned to them. They can choose which inspection items they see by using the options in the drop down menu. Each inspection name is a [hyper-link](#) that allows the user to zoom into the corresponding inspection record and to continue their work.
- 7** **'Responsibility Summary'**: a statistical summary of all the tasks to be completed by the Agency, or selected Group (based on the data filter). The table provides breakdown analysis based on the work status and critical timeframe from regulatory perspective. It presents a useful data view for the manager or director to track the performance and work load of each staff under his/her group. The numbers next to each status are a [hyper-link](#) that allows the user to zoom to those records.
- 8** The **'Message Center'** notifies the user of any sort of communication that requires attention. Clicking on the notification will bring the user to the section where the message is displayed.
- 9** **'My Queries'** is versatile in its approach to provide information to the user. The details of these queries are configured using a Data Query tool provided by the system. This allows the user to customize their results with precision. Unless the user is extremely familiar with the database structure, modification of these queries is not advised.

The home page is a custom view dependent upon the logged-in account. This means that Inspector A will have different information displayed in the home page compared to Permit Writer B, depending upon what the user's responsibilities are. The home page uses a "web part" view similar to widely used applications such as Google or Yahoo, making it easier for first-time users to configure their own home page. An example of the homepage proposed for the project is illustrated below:

(C) Ease To Learn

User help text at the top of each application web page is also configurable. By default, system-defined help and navigation guide text will be pre-populated on all context blurbs at the top of web pages. This text can be modified by the DNR administrator to continuously utilize it as a training tool. For example, once the users are acquainted with the system, the description context can be changed to include "caution", "tip", and "Q&A"-type information.

Built-in security also allows for each staff member to only view information pertinent to his or her role. This eliminates any confusion for the user who only needs to log into the system to view the work to be completed, perform the task, and log out. This user workflow driven feature will ease the training and learning efforts.

Online help will be available to the user from any screen in the application at the click of a button.

GovOnline offers the copy-data feature to reduce data entry effort and improve data quality. Example use of such copy-data feature are listed below.

1. Amend an Application

- User selects an existing submittal and chooses to "Amend"
- GovOnline creates a new application ID record
- GovOnline copies all data from the previous application file to the new application record
- GovOnline links the new application ID to the old version

2. Renew a Permit

- User selects an existing Permit and chooses to "Renew"
- GovOnline creates a new application record
- GovOnline copies all data from the previous application file to the new application record
- GovOnline assigns a new application ID to the new record
- GovOnline links the new application ID to the permit being renewed

3. Terminate a Permit

- User selects an existing Permit and chooses to "Terminate"
- GovOnline creates a new application record
- GovOnline copies relevant facility data from the permit to the new application record
- GovOnline links the new application ID to the permit being renewed

4. Apply a New Permit for an Existing Regulatory Facility

- User searches and selects a Facility record from the Facility Explorer database (that stores Facility data currently regulated by DNR)
- GovOnline copies relevant facility data from the Facility Explorer to the new application record

5. Copy an existing Application

- User searches and selects an Application record from their submittal history
- GovOnline copies all data from the previous application file to the new application record

6. Change Permit Contact

- User initiate a Permit Contact Change form from GovOnline
- User selects a Permit from a list of their permits
- GovOnline copies relevant facility data from the permit to the new application form

7. Submit a Compliance Report to DNR

- User starts data entry with a report obligation from their dashboard
- GovOnline prepopulates relevant data on the form

GovOnline Implements the following data validation rules to ensure data integrity for emission equipment.

Pre-requisite:

- GovOnline maintains a master list of equipment inventory that have been permitted by DNR for each air facility. This will be used to prevent any future duplicates received from the regulated user.
- GovOnline enforce a standard equipment IF naming logic, if desired by DNR. This logic will be used to validate all future new equipment to ensure their names will conform to the naming convention

For New Application:

- Provide online help, auto Prefix, auto sequence #, etc. to guide the user when creating new equipment ID
- Check the data to ensure that no duplicate equipment ID exist on the application form
- Before accepting the Application form, validate equipment IDs against the mater equipment inventory, flag those that do not conform to naming convention or duplicates, provide online error messages, and ask for change before accepting the application

For Permit Renewal:

- Pre-populate the application form with existing permit data from GovOnline
- Provide online help, Prefix, auto sequence #, etc. to guide the user when creating new equipment ID
- Check the data to ensure that no duplicate equipment ID exist on the application form
- User could “de-active” an existing equipment, but cannot delete an equipment from the Master Equipment Inventory
- Before accepting the Application form, validate equipment IDs against the mater equipment inventory, flag those that do not conform to naming convention or duplicates, provide online error messages, and ask for change before accepting the application

(A) DNR to Define Required Attachments

GovOnline will accept any file types that have been permitted by the DNR permit supervisor in the Permit Property configuration screen. The DNR Permit supervisor has the ability to define/change acceptable file types through the configuration screens, without coding change.

An example attachment configuration for Title V submittal type is shown below.

Type: CAA Submittal Type: Title V Application **Load** **Create New**

General Package Setting Form Setting Message Template Notification Submittal Type Property SubSystem

This page allows you configure attachment, payment, inspection, issuance and reviewer for a given Submittal.

Document Fee Inspection Issuance

This page allows you to configure mailing and contact information for the attachments associated with your Submittal. You can also configure the attachment.

Applicable Document(s)

☒ Is Document Required?

Name	Attribute	Methods	Type	
 Validation Rule A complete application must include building layout diagrams.	<input checked="" type="radio"/> Required <input type="radio"/> Optional <input type="radio"/> None	<input checked="" type="checkbox"/> Online <input checked="" type="checkbox"/> Mail <input type="checkbox"/> Other <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> pdf <input checked="" type="checkbox"/> jpg <input type="checkbox"/> bmp <input type="checkbox"/> xls <input checked="" type="checkbox"/> jpeg <input type="checkbox"/> png <input type="checkbox"/> xml <input checked="" type="checkbox"/> txt <input type="checkbox"/> gif <input checked="" type="checkbox"/> Doc <input type="checkbox"/> xls <input type="checkbox"/> cvs <input checked="" type="checkbox"/> docx	Mail-To Contact <input type="text"/> Description <input type="text"/> <input type="checkbox"/> List description information directly?
 Validation Rule	<input type="radio"/> Required <input checked="" type="radio"/> Optional <input type="radio"/> None	<input checked="" type="checkbox"/> Online <input checked="" type="checkbox"/> Mail <input type="checkbox"/> Other <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> pdf <input checked="" type="checkbox"/> jpg <input type="checkbox"/> bmp <input type="checkbox"/> xls <input checked="" type="checkbox"/> jpeg <input type="checkbox"/> png <input type="checkbox"/> xml <input checked="" type="checkbox"/> txt <input type="checkbox"/> gif <input checked="" type="checkbox"/> Doc <input type="checkbox"/> xls <input type="checkbox"/> cvs <input checked="" type="checkbox"/> docx	Mail-To Contact <input type="text"/> Description <input type="text"/> <input type="checkbox"/> List description information directly?

(B) Public User to Submit Attachments

The applicant can provide attachments that are required by each permit application type. GovOnline provides the user to either digitally upload and provides information if the user rather mail their documents to the agency instead.

Attachment

Building Layout (Overhead View) (Required) ☒ Online ☐ Mail ☐ Other N/A

Upload (Please upload one file at a time. Repeat the Upload process if you have multiple files.)

Attachment description:

Plan Site Map (Required) ☐ Online ☒ Mail ☐ Other N/A

Please mail to:

Georgia Department of Natural Resources
 2 Martin Luther King Jr. Drive Suite 1456, East Tower
 Atlanta GA 30334
 Please provide your documentation to the Housing Department

Attachment description:

General Area Map (Required) ☐ Online ☐ Mail ☒ Other N/A

Attachment description:

Title V Supplement Attachments

GovOnline supports the user to flag confidential business information and exclude the data from public disclosure. Based on the project requirements and applicable laws in the state of Iowa, there are two potential implementation methods.

Method #1: One Original e-Copy, and one Redacted e-Copy

- Step 1: Checkmark the box stating that “This application includes Information the Applicant Claims is Protected Under ____ Law from Disclosure to the Public:” Complete the information as usual. This version will be the original copy and not be subject to public disclosure.

A. GENERAL INFORMATION

* This application includes Information the Applicant Claims is Protected Under Georgia Law from Disclosure to the Public: ☒ Yes ☐ No

Construction or Modification Date:

* Project Description:

- Step 2: Initiate a “Redacted Copy” to request GovOnline to generate a duplicate so that the user could flag confidential business information. For those CBI, the phrase [REDACT###] should be used in the entry field.
 - ### should be incremented by the Preparer for each subsequent piece of information that is “not subject to disclosure...”
 - Remember that only items marked * are required to be submitted (if it isn’t a required field and it isn’t necessary for permitting purposes then don’t include it).

General Information

* Emission Unit Type:

* Emission Source Identifier:

* Emission Source Name:

* Description:

Manufacturer: Model Number: Date of Manufacture/Reconstruction/Modification:

- If the Applicant only has attachments to claim for CBI protection, the Applicant does not need to flag any [REDACTXXX] fields and only needs to flag the attachments as CBI.
- Step 3: After the application has been completed, and a redacted version is created (fields labeled as in Step 2), the user could submit the package. GovOnline will allow the DNR staff to access both the original copy and redacted version. Only the redacted version is available for public disclosure.

Method #2: One Original e-Copy and one Redacted Paper Copy

- Step 1: Checkmark the box stating that “This application includes Information the Applicant Claims is Protected Under ____ Law from Disclosure to the Public:”

A. GENERAL INFORMATION

* This application includes Information the Applicant Claims is Protected Under Georgia Law from Disclosure to the Public: ☒ Yes ☐ No

Construction or Modification Date:

* Project Description:

Instead of entering the Protected piece of information, the phrase [REDACT###] should be used in the entry field.

- ### should be incremented by the Preparer for each subsequent piece of information that is "not subject to disclosure..."
- Remember that only items marked * are required to be submitted (if it isn't a required field and it isn't necessary for permitting purposes then don't include it).

General Information		
* Emission Unit Type	* Emission Source Identifier:	* Emission Source Name:
<input type="text" value="Reactor Vessel"/>	<input type="text" value="RX01"/>	<input type="text" value="Reaction Vessel 1"/>
* Description:		
<input type="text" value="[REDACT001]"/>		
Manufacturer:	Model Number:	Date of Manufacture/Reconstruction/Modification:
<input type="text" value="[REDACT002]"/>	<input type="text" value="[REDACT003]"/>	<input type="text"/>

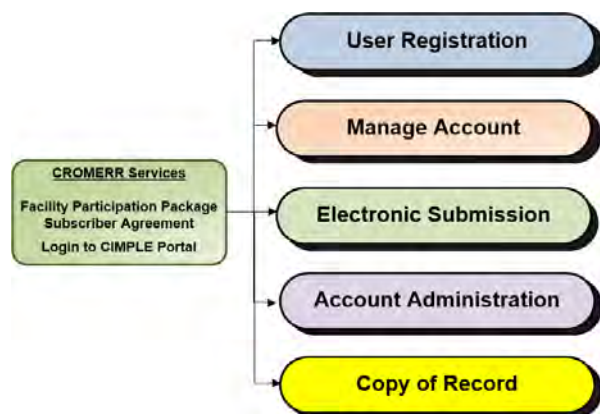
- If the Applicant only has attachments to claim for CBI protection, the Applicant does not need to flag any [REDACTXXX] fields and only needs to flag the attachments as CBI.
- Step 2: With the application complete, and all redacted fields labeled as in Step 2, use GovOnline to generate and download a "Redact Report" listing the items tagged as [REDACTXXX] in the Attachment section. This report will only be able to be submitted by Mail!

Process Flow Diagram (Required)	<input type="radio"/> Online <input type="radio"/> Mail <input type="radio"/> Other <input type="radio"/> N/A
Redacted Information Report (Required) For more information	<input type="radio"/> Online <input type="radio"/> Mail <input type="radio"/> Other <input type="radio"/> N/A
Print Redacted Information Report	

(A) CROMERR Compliance

GovOnline has been verified by USEPA and meet CROMEER requirements. EPA has issues enfoTech a GovOnline CROMERR template that could be used by GovOnline clients to seek CROMERR approval and obtain a streamlined review from EPA.

We provide the following business process diagrams to illustrate how 5 CROMERR requirements will be supported. A detailed CROMERR Checklist (~ 35 pages) with business processes, system functions, supporting documents has also been prepared for multiples states that use the similar system.



(1) Registration (include two components)

1. **User Registration:** including ESA signing, and DNR's approval
2. **Electronic Identity Proofing:** GovOnline has integrated with the EPA's Shared CROMERR Services to electronic verify user's identity. If verification is successful, there will be no need to submit signed paper ESA to DNR.
3. **Account Administration:** to ensure that ROs comply with the e-Signature requirements

(2) Signature Process

- ROs are required to sign ESAs and submit their requests to DNR in order to establish a RO account with certification privilege
- Account Management process is used to demonstrate GovOnline's audit trail capability and ensure that RO stays in compliance with electronic signature requirements.
- GovOnline has integrated with the EPA's Shared CROMERR Services to electronic verify user's identity. If verification is successful, there will be no need to submit signed paper ESA to DNR.

(3) Submission Process

- RO e-signature is bonded with each submittal
- RO could view human readable COR prior to submission
- All submittals are locked, no change, no-repudiation
- Acknowledgement is shown on screen and also sent to the submitter's email account

(4) Signature Validation

- e-Signature is validated for each submittal
- Validation includes
 - User ID, Password, PIN, and correctly answered Challenge Question
 - Signature is included as part of the Copy-of-Record
 - A receipt confirmation (via email) is issued to the signature holder.
 - ❖ To notify the RO's e-signature has been used to submit a report to DNR.
 - ❖ If the RO finds it not the case, the RO is required to notify DNR immediately.
- Binding e-Signature with each "Submittal"

(5) Creation and Maintenance of the Copy of Record (COR)

- **Create Copy-of-Record:** Once the submission is received by CROMERR SERVICES, the system will apply a secure hashing encryption algorithm known as "SHA-2". The SHA-2 hashing algorithm is applied to the document content, password and PIN.

- **Storage of Copy-of-Record:** CROMERR SERVICES stores a copy of the submission exactly as it was received. Every time the file is opened, a CRC check is performed to compare the current copy of record with which was originally submitted. This ensures document integrity.
- **Retrieve and View Copy-of-Record:** multiple searching filters are available for the User to find a submission of interest. User can view COR in a human readable format.
 - Revision History Is Kept: If the user submits a revision to the original submission, CROMERR SERVICES will save both submissions in the system. In CROMERR SERVICES, all historical submissions are retrievable in the systems.
- **RO to make Revision to the Copy-of-Record:** all revisions are kept in GovOnline.

(B) CROMERR Account Service and Management

GovOnline offers CROMERR Account Service for the regulated entity and contacts to establish a Responsible Officer, RO, account and maintain security credentials.

(A) Procedure to Establish a RO Account

A RO representing a facility could self-register a user account with the CROMERR Service from GovOnline. During the registration, the RO could:

- **Online Registration & Request** (Integrating with DNR's Facility Explorer)
 - Select a "facility" from GovOnline with data provided by the DNR Facility Profiler
 - After the facility designation, the RO could select "submittal type(s)" he/she wish to serve as the certifier
 - Combination of multiple facilities and multiple submittal types will be allowed in one registration request
 - GovOnline will generate an Electronic Signature Agreement (ESA) that provides terms/conditions and offers a signature space for each unique combination of "facility and submittal type". This step will be skipped if the RO already passes the electronic Identity Proofing from the Shared CROMERR Services interface.
 - The RO must sign and return the ESA to DNR for review and approval
- **DNR review & approval**
 - DNR will verify the request and approve or deny the request. This step will be skipped if the RO already passes the electronic Identity Proofing from the Shared CROMERR Services interface.
 - If approved, DNR will turn on the RO role for those "facility and submittal type"
 - The RO will be automatically notified by GovOnline on DNR's decision and must follow email instructions to complete the RO account registration

(B) RO to Manage Associated Users

- A RO will have the privilege to manage Consultant/Preparer users for the submittal types he/she is approved for. A RO could search the registered user database, select/add users to the RO account, and designate which "role" the associated user could have for each "facility and submittal type"
- If RO delegates his/her certification authority to an agent, both RO and the Agent must sign an ESA and submit it to DNR for approval. For other account types, no DNR approval will be required.
- Data Access for associated users



The screenshot shows the 'My Account' page with a 'Consultant List' table. The table has columns for 'Delete', 'Edit', 'First Name', 'Last Name', 'Facility', 'Permission', 'Application', 'Effective Date', and 'Expiration Date'. There are 7 rows of data listed.

Delete	Edit	First Name	Last Name	Facility	Permission	Application	Effective Date	Expiration Date
X		Chloe	Hackman	ALLIED READY-MIX, INC.	Prepare Only	NPDES Principal Application		
X		Chloe	Hackman	MPG CHEMICAL, INC. KIMBERLY PARK PLANT	Prepare Only	Title V Application		
X		Joan	Swift	BLUE RIDGE PAPER PROD.	Delegate Agent	NPDES Principal Application	06/01/2010	06/01/2018
X		John	Smith	Neovito AG	Delegate Agent	Title V Application	03/02/2012	04/01/2020
X		Linda	Shelton	US BIODIESEL, INC.	Prepare Only	Title V Application		
X		Mary	White	Ecosin Hield Corp.	Delegate agent	NPDES Principal Application	04/15/2014	04/01/2018
X		Mary	White	Ecosin Hield Corp.	Delegate Agent	Title V Application	04/15/2014	04/01/2018

- Each associated user can only access the data for the “facility and submittal type(s)” he/she is granted by the facility’s RO. Data privilege will be controlled by the “permission” assigned by the RO.
- The RO will be able to see all data prepared by all associated users.

GovOnline offers the following features to support online payment. The Solution will allow for integration of current DNR system for accepting online payment.

(a) Fee Calculation

- Fee calculation module to calculate proper application fee based on DNR fee schedule
- Track DNR time spent for application review for billing purpose

(b) PCI DSS Compliance

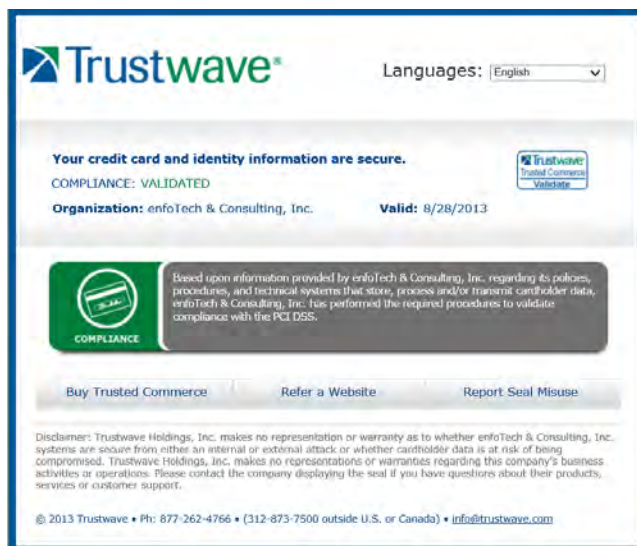
- Comply with the PCI DSS
- Certificate is shown on right

(c) Acceptable Payment Types

- Credit Cards
- ACH
- Check

(d) Payment Processor Integrations

- Web APIs to interface with payment processor
- Track payment processor result including success/fail, confirmation ID, date



GovOnline allows the user to save unfinished applications and come back later to resume their work.

Retrieve unfinished applications

Click this to continue previous work

Unfinished applications

My Dashboard | **Submittal** | My Account

Open Submittals

- Start a New Submittal (Apply new Submittal)
- My Favorite Submittals (My favorite submittals list)
- Edit Pending Submittals (Edit unfinished Submittals)**
- Submitted Submittals
- Track Submitted Submittals (Monitor submitted submittals)
- Manage Permits/Certs (Track permits or licenses)
- Correspondence Msg (Monitor correspondence Msg)
- Email History (Track emails for submitted submittals)
- Link Paper Submission (Link Paper Submission)
- Search Public Submittal (Search Public Submittal)

Submittal > Open Submittals > Edit Pending Submittals

Below are applications/reports that were previously drafted, but have not been submitted. To continue work on an unfinished application/report, locate it on the list below and click the 'Edit' button. To work on a new application/report, click the 'Start a New' menu on the left 'Navigation Panel'. To remove an unfinished application/report, click the 'Delete' button.

Submittal ID:

Category: Permit/License Department: (All) Program: (All) Submittal Type: (All)

Facility Name: Site Address: Organization Name: Search

Unfinished Submittals

1 - 15 of 130 item(s)

	Instructions	Facility	App Info.	Type	RO Info.
✖	N/A	SOUTHWIRE CO. - CARROLLTON One Southwire Drive, Carrollton, Carroll, GA 30119	43622 - Title V Application App Type: Status: Pending	CAA Updated on: 11/02/2016	John Smith One Southwire Drive, Carrollton, 30119
✖	N/A	MOHAWK IND-DURKAN PAT 405 Virgil Dr, Dalton, Whitfield, GA 30722	43633 - UST - Storage Tank Registration Form App Type: Status: Pending	UST Program Updated on: 11/02/2016	John Smith 405 Virgil Dr, Dalton, 30722
✖	N/A	Organization: Orion Development Miraview 4184 Keheley Drive, Cobb, GA	43631 - Stormwater Construction General Permit App Type: Status: Pending	Stormwater Updated on: 11/02/2016	John Smith 4184 Keheley Drive
✖	N/A	MOHAWK IND-DURKAN PAT 405 Virgil Dr, Dalton, Whitfield, GA 30722	40433 - Title V Application App Type: Status: Pending	CAA Updated on: 11/02/2016	John Smith 405 Virgil Dr, Dalton, 30722

GovOnline allows users to search and retrieve submittals, make change, and save. The System will also track data change history for every data element on the Dynamic data entry form.

An example screen is shown below.

Online Form Data

✓ Saved Successfully.

Hide History Save Close

Project Site Location

★ Address 1
86 MAPLETON ROAD, Unit 21

★ City ★ State ★ Zip Code
ALLENTOWN NJ 08501

Block Lot Qualification Code
101 4

View History Panel

Edit	Changed to Value	Changed Date	Changed By	Reason
Edit	86 MAPLETON ROAD, Unit 21	10/23/2012 9:09:32 PM	admin	
Edit	86 MAPLETON ROAD, Unit 2	10/23/2012 9:08:58 PM	admin	
Edit	86 MAPLETON ROAD	10/17/2012 2:12:43 PM	demoUser	

Close

3.17

GovOnline system supports the data import. Data import is mostly used to bring in large amount of data in order to reduce data entry effort. It is commonly used to import Equipment or Emission data in an Excel-like table format. GovOnline will provide an Excel template for the user to download and enter data locally in Excel. The user could copy-and-paste data from Excel to the online data entry form. Since the import function is tied to the table column layout, this function will be implemented as a customization item.

GovOnline offers comprehensive support for user roles and access privilege. Features are listed below:

Portal	Role	Privilege
Public	Facility User (Responsible Officer)	<ul style="list-style-type: none"> Enter and edit permit applications, submit permit applications, view permit applications, and view reports for permit applications by facility Add/change/manage consultants to prepare application data for facilities they are assigned to
	Consultant User	<ul style="list-style-type: none"> Enter, edit, and view permit applications for their hiring facility. Consultants cannot submit permit applications on behalf of a facility A consultant could work for multiple RO and multiple facilities A consultant could not see facility's data that they do not belong to
Agency	Agency User (staff)	<ul style="list-style-type: none"> Role-based security Agency User will enter, edit, and view permit applications. Agency User will view reports as requested Agency User will modify permit application fields.
	Agency User (Supervisor)	<ul style="list-style-type: none"> Turn on/off required data entry, add/edit/delete data validation rules, add new fields, delete existing fields, change placement of fields, and manage drop-down lists

Portal	Role	Privilege
	Agency User (System Admin)	▪ Add/edit/move/delete facility records and add/edit/delete user ids and permissions
	Agency User (DBA)	▪ Maintain application database for DNR

Application Form

For each applicant type, GovOnline will generate an Adobe file to mimic DNR application forms with data input by the Applicant. The Adobe document is accessible to the applicant at any time so that they could use it to verify their data during the preparation, confirm what are entered before submission, keep the final copy after submittal, and retrieve it in future for reference.

Documents Issued by DNR

Merge Feature: GovOnline also supports the Word merge and Adobe form merge functions. For each application type, it might result in multiple issuance document types ranging from Request for Information, Draft Permit, Public Notice, to Final Permit. For each issuance type, GovOnline will store a document template that consists of boiler plate language and “data fields” to be used to merge user input data from application forms or permit data entered by the DNR staff.

Check-out & Check-in Feature: GovOnline manages all documents within the database and maintain document versions to ensure good document integrity. The System allows the user to:

Check-out: check out a document to have the exclusive right to make changes. Other others could still view the document.

Check-in: check in a document to update the server version with changes. The new version will be available for other users to view. It also release the change lock indicator to allow another user to check out the document.

An example screen is listed below.

Project **Village Center at Woodmoor Project** Collapse with Pending Items Details

Phase 1: Planning Phase

- [2790] DWR01 - Eligibility Survey - 09/15/2016 ~ 12/14/2016
 - Eligibility Survey Review - 09/15/2016 ~ 12/14/2016
- [2787] DWR02 - Pre-Qualification - 09/15/2016 ~ 10/15/2016
 - Pre-Qualification Review - 09/15/2016 ~ 10/15/2016
 - Internal Review Meeting - 09/15/2016 ~ 10/15/2016
 - Pre-App Meeting - 09/15/2016 ~ 10/15/2016
 - 09/15/2016 - Pre-App Meeting [Due: 09/22/2016]
 - 09/15/2016 - Prepare Draft Pre-Qual Review Letter [Due: 09/22/2016]
 - 09/15/2016 - RDOLA - Review Draft Pre-Qual Review Letter [Due: 09/22/2016]
 - 09/15/2016 - PA - Review Draft Pre-Qual Review Letter [Due: 09/22/2016]
 - 09/15/2016 - Issue Final Pre-Qual Review Letter [Due: 09/22/2016]
- Planning Grant Execution - 09/15/2016 ~ 10/15/2016

Phase 2: Design Phase

- [2788] DWR06 - Plans and Specifications - 09/15/2016 ~ 10/15/2016
 - Plans and Specifications Review - 09/15/2016 ~ 10/15/2016
 - Pending - GLU Contract Document Review [Due: 10/15/2016]
 - Pending - ERU Self-Certification Review [Due: 10/15/2016]

Phase 3: Funding Phase

Phase 4: Construction Phase

- [2789] DWR09 - Pay Request - 09/15/2016 ~ 09/26/2016
 - Pay Requests - 09/15/2016 ~ 09/26/2016
 - Pending - GLU Pay Request Review [Due: 09/19/2016]
 - Pending - GLU Prepare and Issue Pay Request Approval [Due: 09/26/2016]
 - Pending - Issue Verification Letter [Due: 09/26/2016]

Basic Information

Activity: **Issue Final Pre-Qual Review Letter** Assigned To: **Erick Worker** Completed By: **Erick Worker**

Status: **Completed** Complete on: **09/15/2016** Due on: **09/16/2016**

Task Comment:

Upload and Issue Final Letter

Letter Type: Ref Number:

Description:

Add Letter

Issued	Source Control	Issuance Info.	Critical Dates	Version Info.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Issuance#: Status: Pending Stage: Draft Letter File: Pre-Qualification Review Letter	Issued on - by N/A Effective on - Expired on -	Checked out on - by N/A Uploaded by N/A Version#: -
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Issuance#: Status: Issued Stage: Final Letter File: Pre-Qualification Review Letter	Issued on 09/15/2016 by Erick Worker Effective on - Expired on -	Checked out on - by N/A Uploaded by N/A Version#: -

Save Work Task

Pre-Qualification Review Letter - Word

FILE HOME INSERT DESIGN PAGE LAYOUT REFERENCES MAILINGS REVIEW VIEW

Clipboard Font Paragraph Styles

9/15/2016 12:00:00 AM

Greg Levine, Public Works Director
Town of Lake City
P.O. Box 544
Lake City, CO 81235

Re: Town of Lake City
Drinking Water Revolving Fund (DWRP)
Pre-Qualification Review, Project Number 141472D-I

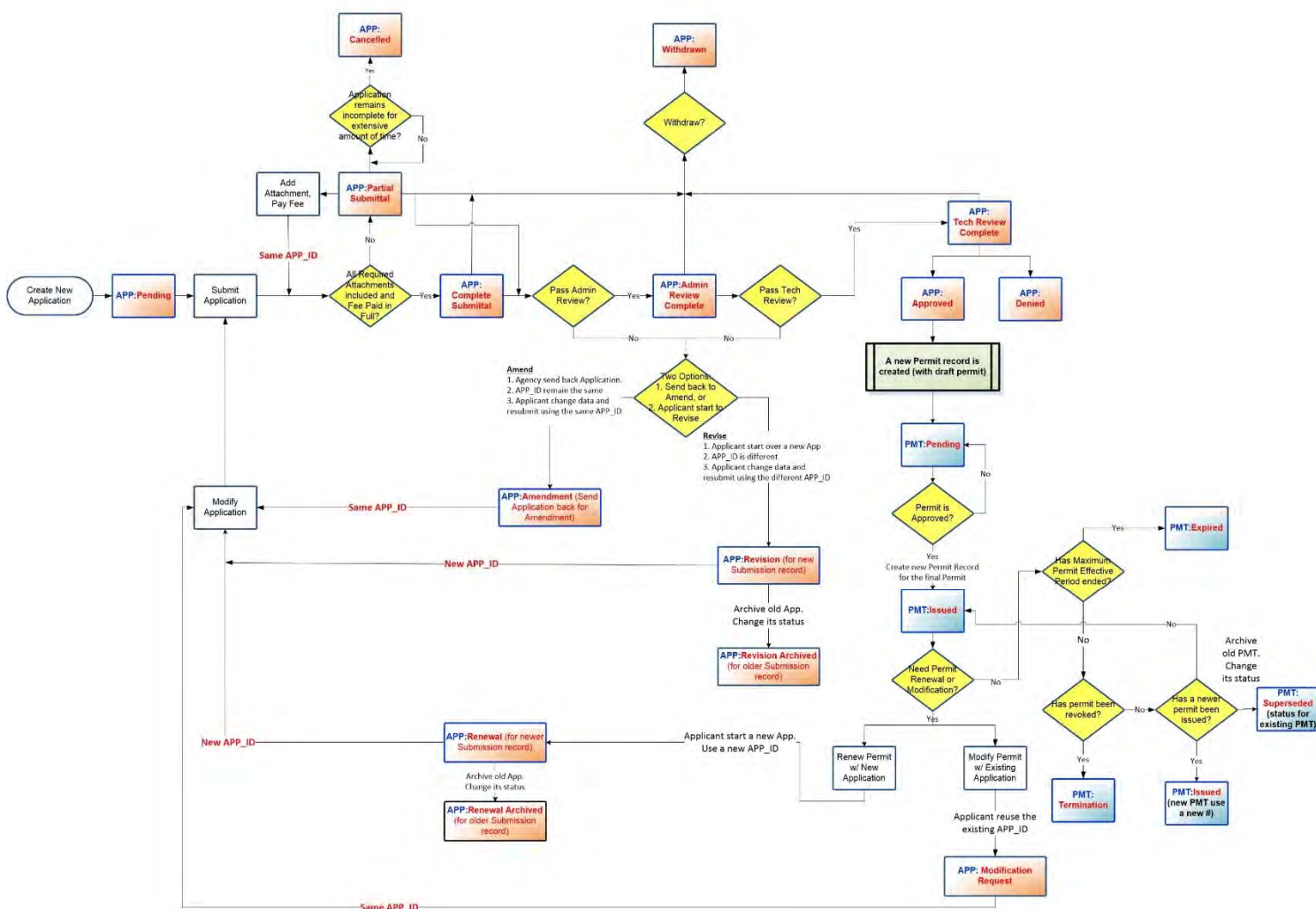
Dear Mr. Levine:

The Water Quality Control Division (division) received the Town of Lake City (town) Pre-Qualification Form on December 21, 2015. A pre-application meeting was held on January 28, 2016 with the following in attendance: Leslie Klusmitz, Greg Levine - Town of Lake City; Joanne Fagan, Consolidated Consulting Services; Barry Cress, Department of Local Affairs; John Williams; and Matthew Stearns, Amy Zimmerman and Erick Worker - Colorado Department of Public Health and Environment. The SRF partnering agencies recommend the town advance to the next stages of the DWRP loan application process. The following information summarizes the results of the eligibility assessment, preliminary environmental determination, and financial analysis based on the information included in the Pre-Qualification Form.

(A) Permit Life Cycle Management (Cradle-to-Grave Status):

- GovOnline tracks the entire permit life cycle from cradle to grave. It maintains over 20 statuses and supports “triggers” or “workflow” based on each status change. A high-level overview of the permit life cycle tracking is illustrated in a diagram below.

GovOnline Status Tracking Flow Chart



- GovOnline also tracks “time” spent for each step in the permitting process. It tracks the time DNR staff uses to make a “completeness determination” of a new permit application. After an application is deemed complete, GovOnline continues to track time spent for each review steps defined in the workflow.
- For example, GovOnline allows the DNR staff to “send back” the application package to the applicant and asking for additional information. In this case, the “clock” will stop. After the applicant submits a revision and DNR confirms that the revision is deemed complete, the clock will resume.

(B) Project Management (Workflow Tracking)

GovOnline offers tracking of permit review tasks, resource assignment, due date, and status. The System will automatically alert to the staff for upcoming due tasks, display them on their individual dashboard, and help the unit manager to monitoring work progress.

GovOnline supports work flow management and manages all business rules in either the database or XML. Rules are configurable by DNR and require no coding change. Functions include:

B.1 For the Regulated Entity

After making a submittal, the regulated entity user(s) could monitor the workflow through either of the following:

- New Alerts on the Dashboard
- “Work Activities” screen for each submittal (see an example screen below. The Regulated Entity can not see the DNR staff name assigned to each task or the target due date, unless DNR wishes to share such details with the Public. Instead, they can only see the Task name and Status.)

B.2 For the DNR staff

After receiving a submittal, the GovOnline will automatically create a set of workflow tasks and assign those tasks to “default” DNR staff with a “default” due date. Each DNR staff will:

- Automatically receive email alerts for Tasks assigned to him/her
- See New Alerts on the Dashboard
- Manage work in the “Work Activities” screen for each submittal (example screen below)

Task Name	Assigned To	Task Status	Due Date	Complete Date
Data Verification	Joe Smith, Daniel Jeng	Completed	10/29/2013	11/27/2013
Verify Responsible Official Signature	Joe Smith, Daniel Jeng	N/A	-	-
Assign Permit Writer	Joe Smith, Daniel Jeng	N/A	-	-
Administratively Review Application		N/A	-	-
Technically Review Application and Develop NOI Letter		N/A	-	-
Sign and Issue NOI Letter	Joe Smith, Daniel Jeng	N/A	-	-
Permit Data Verification	Joe Smith, Daniel Jeng	N/A	-	-

The Solution tracks all information generated from each submittal’s life-cycle, including review activities, documents, comments, etc. They are:

- To-do list, DNR resource assignment, due date. To-do tasks might include administrative completeness review, inspection, technical review, drafting permit, public notice, and final approval. (the To-do list will be configurable and be based on DNR’s business processes specific to each submission type)
- Correspondences between DNR and the regulated entity.
- Email communications between the DNR staff and the regulated entity user.
- Inspection reports associated with the Application/Compliance reports.
- Pictures, draft permits, support documents, drawings, Excel as part of the Application or can be generated during the application review process.

GovOnline automatically generate a notification (email or SMS message) to appropriate personnel (plan reviewer, permit writer, investigator, or contact person) when there is no activity for a predefined number of days or the deadline is approaching.

B.3 For DNR Supervisors

GovOnline allows the DNR supervisors to define standard workflows and task assignments and work collaboration among the staff members. The Workflow configuration options include:

- Define a business process: include Process name, description, Trigger, Execution (in sequence or in parallel)

- Define template tasks: include Task name, type, default work duration, default person to receive this task assignment, status, etc.

GovOnline also provides a work performance matrix report to show overall permit review to meet certain response timeline, status of each project, the task it is at and who are assigned to complete with a target due date.

(C) Track Billable Hours:

Time Tracking: GovOnline allows the DNR users to track time spent to process an air permit application. Tracking will be kept at each permit application level and will include

- Date
- Person
- Work hour
- Reference task
- Description
- Hourly rate (can be automatically default to a rate defined by the DNR Admin)
- Labor cost (calculated)
- Invoiced?

An example screen is shown below.

DENNISON, 4350 AVERY DRIVE, FLOWERY BRANCH, HALL, GA 30542

Details

General Information Phase Submittal Obligations Submittal Work Activity Info **Time Tracking** Funding Inspection Documents

Total Project Cost Incurred: \$10,762.50 Total Charge Submit to FIMS: \$3,363.00 New Project Cost Since Last Push to FIMS: \$2,512.50 Remaining balance(Total Project Cost Incurred - All Project Payments - Initial Payment Amount)

Project Time Tracking Transaction

Project Time Tracking

Search Filters
☐ Sent to FIMS ☐ Not Sent to FIMS
 Person: Reference Task: Description:
 Work Date Range: 10/3/2013 - 11/3/2016 Push to FIMS Date Range: -

☐ Check All Selected Time Tracking Cost:

1 - 15 of 21 item(s)

	Delete	Work Date	Person	Work Hour	Reference Task	Description	Hourly Rate	Labor Cost	Sent to FIMS?	Export Date
<input type="checkbox"/>	<input checked="" type="checkbox"/>	08/25/2016	David Brownlee	1.5	VRP Compliance Status Report (CSR) Review	Meeting prep and meeting with app	75	\$112.50	No	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/28/2016	David Brownlee	1	Progress Report Review	Review progress report and associ	75	\$75.00	No	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/27/2016	Kevin Collins	8	Progress Report Review	VRP Progress Report review and c	75	\$600.00	No	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	11/02/2015	Kevin Collins	1	Progress Report Review	Progress Report letter revised and	75	\$75.00	No	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	11/02/2015	David Brownlee	1.5	Progress Report Review	Review progress report and associ	75	\$112.50	No	

Invoice Generation: GovOnline also supports invoice generation. The invoice generation function will be a customization item with additional cost. An example screen is shown below.

General Information Phase Submittal Obligations Submittal Work Activity Info **Time Tracking** Funding Inspection Documents

Total Project Cost Incurred: \$10,762.50 Total Charge Submit to FIMS: \$3,363.00 New Project Cost Since Last Push to FIMS: \$2,512.50

Project Time Tracking Transaction

All fee records that have been sent to FIMS

1 - 2 of 2 item(s)

Fee Amount	Date Sent to FIMS	Sent By
\$2,200.50		EPDMIG VRP
\$1,162.50		EPDMIG VRP

All payment records that have been received from FIMS:

1 - 2 of 2 item(s)

Payment Amount (\$)	Payment Method	Check number	Deposit Date	Invoice No.
\$1,162.50	Check		08/19/2014	
\$2,200.50	Check		12/06/2013	

Reports specified in the RFP requirements will be provided.

GovOnline offers standard canned reports and user-defined data query. DNR Admin could develop new reports and add them to GovOnline without any coding changes. DNR Admin could also develop standard data query statements and publish them for other DNR users to use.

1. Standard Reports:

- SQL Server reporting services
- Reports can be created with SQL Server reporting services
- Supports data filters
- Export reports to other file formats (Word, Excel, CSV, PDF, TIFF, XML, HTML, etc.)

2. Data Query:

- Query tool lets users with appropriate rights to upload SQL Statements to be used by general users to query data
- View data only
- Query results will be displayed on screen in a table and can be exported to Excel
- Does not require other software or special installation.
- Example Data Query Screen – SQL style (on right)

EXECUTE QUERY

Please locate the desired query from the available Query Folders. Click on the desired query link to run the query

[Back to Query List](#)

* Query Name:
Query Sub Submission Table

Select Parent Folder:
[Dropdown]

* Query
SELECT * FROM PM_SUB_SUBMISSION WHERE SUBMISSION_RID = @SUBMISSION_RID

Cancel Save Query Run Query Select Parameter

Example Data Query Screen – Pre-defined filters style (below)

Advanced Search							
Application Status:		Permit Status:		Application:			
Accepted Admin Review Completed Amendment		Active Expired Inactive		(All) Standard Hydraulic Project Beach Prospecting US Forest Service MOU			
Application ID:	Business Name:		Permit Number:				
<input type="text"/>	<input type="text"/>		<input type="text"/>				
Project Name:		Applicant First/Last Name:					
<input type="text"/>		<input type="text"/>					
Site Address:							
<input type="text"/>							
Permit Issued Date:		Permit End Date:					
<input type="text"/> ~ <input type="text"/>		<input type="text"/> ~ <input type="text"/>					
Project Start Date:		Project End Date:					
<input type="text"/> ~ <input type="text"/>		<input type="text"/> ~ <input type="text"/>					
Waterbody Name:		Waterbody Number:					
<input type="text"/>		<input type="text"/>					
WRIA Number:		Region:		County:		Section:	
0 - Unknown 1 - Nooksack 2 - San Juan		1 - Eastern 2 - North Central 3 - South Central		Adams Asotin Benton		01 02 03	
Township:	Range:	Project Type:					
01 N 02 N 03 N	01 E 01 W 02 E	Aquatic Plant Control Bank Protection Barge Landing					
Latitude:		Longitude:					
<input type="text"/>		<input type="text"/>					
Biologist:							
Barber, Eva Chapman, Patrick Kamps, Jeffrey							
Close		Reset Parameters		Search		Notification Name: <input type="text"/>	
				Daily		Add To My Notification	

GovOnline supports on-demand reporting with two tools:

1. Report Viewer:

- DNR develops new reports in SQL Reporting Service
- Upload the report to GovOnline Viewer and setup user access security
- Users with proper security can access the reports

2. Data Query:

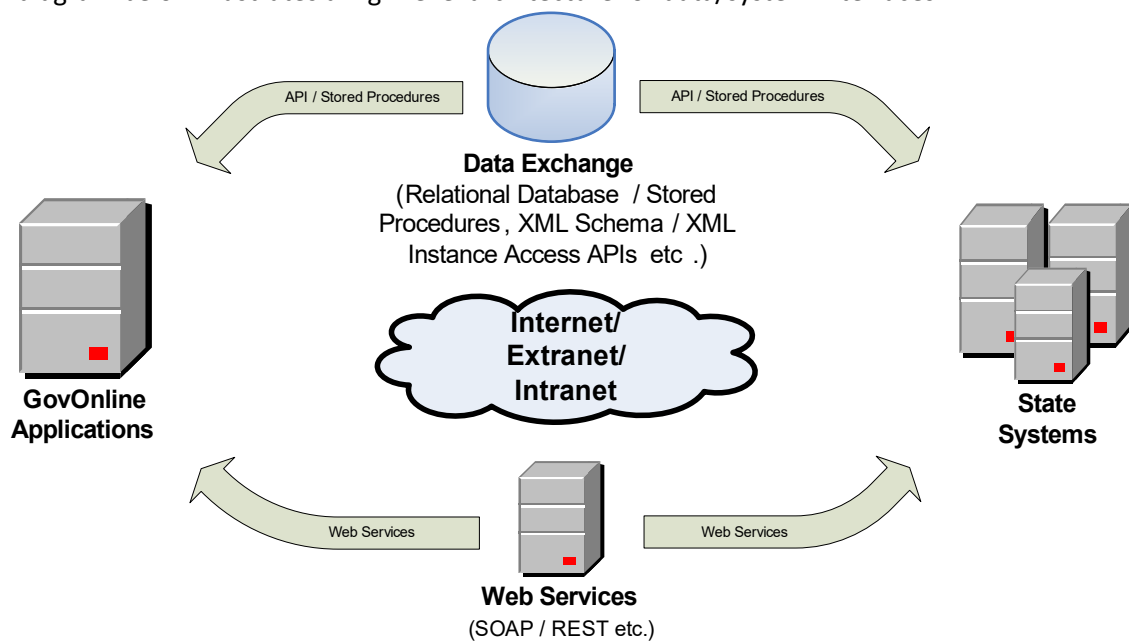
- DNR develops new reports in SQL Reporting Service
- Upload the report to GovOnline Viewer and setup user access security
- Users with proper security can access the reports

enfoTech will provide GovOnline data dictionary and Entity Relation diagrams to help DNR to develop ad-doc reports.

GovOnline offers three mechanisms to support data flow to downstream data systems.

1. **Web APIs** (Open Protocol, SOAP, RESTful)
2. **Table-to-Table Data Exchange** (with staging tables and APIs)
3. **EDI** (external data file transfer)

A diagram below illustrates a high-level architecture for data/system interfaces.



enfoTech will explore interface options and work with the DNR to select the best interface option for each external system during the “Requirement Verification and Gap Analysis” stage. If required, enfoTech will also create a testing environment at enfoTech server environment that mimics the DNR environment. Simulation of DNR operation for thorough testing is essential for system interface. enfoTech will perform testing to ensure no problems prior to releasing the interface package(s) to DNR.

The proposed Solution will replace the functions offered by the Construction Permit and Title V Operating Permit project tracking databases. Please see Section 3.20 for details.

(A) Training Plan

enfoTech will develop a Training Plan to recommend training classes, contents, and delivery methods. We will provide necessary trainings to the DNR for effective utilization of the new system. All trainings will be conducted onsite. enfoTech will submit a draft training plan to the DNR for comment prior to the training. A draft training plan might include the following contents:

5. Introduction
6. Strategy and Approach
 - Methodology
 - Audience
 - Types of Training
 - Trainer Role and Responsibilities
 - Preparation (Materials, Equipment, Administration, hand-on Practice, Setup, Training database)
7. Training Courses
8. Schedule

(B) User Training

Training courses will be business process oriented. enfoTech proposes four types of training course.

Training Course	Duration	Audience	# of Classes
4. DNR User Training <ul style="list-style-type: none"> ▪ e-Application System Overview (General functions) ▪ Online Permitting (public access) ▪ Permit Review Work Flow and Permit Generation (DNR access) 	2.5 Day	DNR Staff	1
5. Facility Users and Consultant Training <ul style="list-style-type: none"> ▪ Train-the-trainer training to train DNR support staff to provide support to the Facility users and consultants ▪ Online Tutorial ▪ Outreach Plan to provide announcements and Webinars 	0.5 Day	DNR Staff	1
6. Advanced User Training <ul style="list-style-type: none"> ▪ update forms and managing content of drop down lists ▪ ad-hoc reporting 	0.5 Day	DNR Supervisor	1
4. System Admin & IT Technical Training <ul style="list-style-type: none"> ▪ System installation and patch releases ▪ System monitoring ▪ Security management ▪ Database training 	0.5 Day	DNR IT	1

(C) Training Database and Online Tutorial

Training Database: enfoTech will deliver a training database that will pre-populate data with use cases and example data. The training database will be used for the user training and post-production refresher training. enfoTech will provide a database script to refresh the training database to allow the DNR to reset the database for each training session.

Online Tutorial: enfoTech will deliver an online tutorial video that will include basic training sessions for e-Application system. The Tutorial will be placed at the e-Application login page to allow new users to self-learn the system. An example of the Tutorial for Michigan State Air Emission Inventory System is available at:

http://www.enfotech.com/enfoWebApp/pages/Gallery/lib/swf/MAERS_Tutorial_Video_Final2.swf

(D) Documentation

The following documents will be delivered.

- User Guide

- **Online Help:** be included with the System.
- **Training Guide:** tailored to the DNR's workflows.
- **Admin Guide:** technical details and reference manual about the system for the System administrator
- **Installation Guide:** be tailored to the DNR's IT environment. Server requirements and step-by-step system installation instructions.
- **Technical Manuals:** Technical Reference Manuals (E-R diagrams and the Data Dictionary). This documentation will include external system interfaces.

All documentations will be delivered to the DNR in both the hard copy and electronic versions. System documentations will be updated if applicable when system upgrades are made. All system documentations pertinent to the e-Application operations will also be available online.

(A) Mechanism for DNR To Report Defects and Track Resolution Progress

enfoTech will expand the project team web site to manage issues reported after the Go-live. The project team web site will provide the following features:

- The Website will assign a unique Issue ID for each issue
- DNR could report issues and monitor issues till closure
 - Issue reporter could record issue description, input, output, and error messages, screen shots
 - Issue reporter will receive an email alert when the issue status is changed
 - Issue reporter will an email alert when the issue is resolved and ready for retest
 - Issue Reporter could change/monitor the issue until it is closed
- enfoTech Investigation of Reported Issues
 - enfoTech staff will automatically receive email alert when a new issue is reported at the website
 - If the issue is a bug, create a Work Item at the enfoTech MTFS server and assign resources to fix the bug. The MTFS work item will record the corresponding Issue ID from the Project Team Website to maintain one-to-one traceability. Each bug will be monitored by enfoTech PM until it is satisfactorily resolved and closed by DNR.
 - If the issue is data related, enfoTech will develop a database script to fix the data
 - If the issue is training related, provide proper operation instructions to the user
 - If the issue is an addition/change to the approved requirements, it will be handled through change request procedure
- enfoTech provides ad-hoc GoToMeeting with DNR (based on DNR PM request)
 - For technical support on emergency issue
 - For technical discussions on issues that cannot be properly conveyed at the PTWS
 - For other maintenance items deemed necessary by PMs from both parties
- If Manage interim system patches to DNR which will include:
 - What's new
 - Change the status of "Issues" to "Resolved & Return to DNR for Retest" at the Project Website
 - If the Issue successfully passes the Retest, the original Issue Reporter will change the status of Issue to "Resolved". If Retest fails, the status will be changed to "Return to enfoTech" for investigation for which enfoTech will repeat the Issue resolution process until the Issue is resolved.

(2) Support Hotline

enfoTech will maintain a support hotline staffed with technical persons to provide technical services to the DNR via phone, emails, ad-hoc GoToMeeting sessions, and documentations. In addition, the enfoTech PM

will host routine conference calls with the DNR's PM, when necessary, to review progress on completing service requests.

(3) Remedial Training

The e-Application system will be a paradigm shift from the paper submission to online application with system integrations to exchange data with 4 external systems. If remedial training is needed for certain user groups or business processes, enfoTech will provide ad-hoc GoToMeeting sessions to help end users to ensure smooth transition to the new system.

(B) enfoTech SOPs to Resolve Defects

enfoTech has implemented a comprehensive Capability Maturity Model Implementation (CMMI-Level 3) compatible mechanism for all projects. We have utilized all of the CMMI-Level 3 compatible procedures, project tracking forms, and collaboration processes for all our projects. We strive to achieve the following objectives:

- Standard processes for developing and maintaining software across enfoTech are documented, including both software engineering and management processes, and these processes are integrated and coherent
- Standard processes are referred to throughout enfoTech's standard software process
- Standard processes established at enfoTech are used (and changed, as appropriate) to help the managers and technical staff perform effective software engineering practices at enfoTech

enfoTech implemented the following QA procedures for all product development and project implementations:

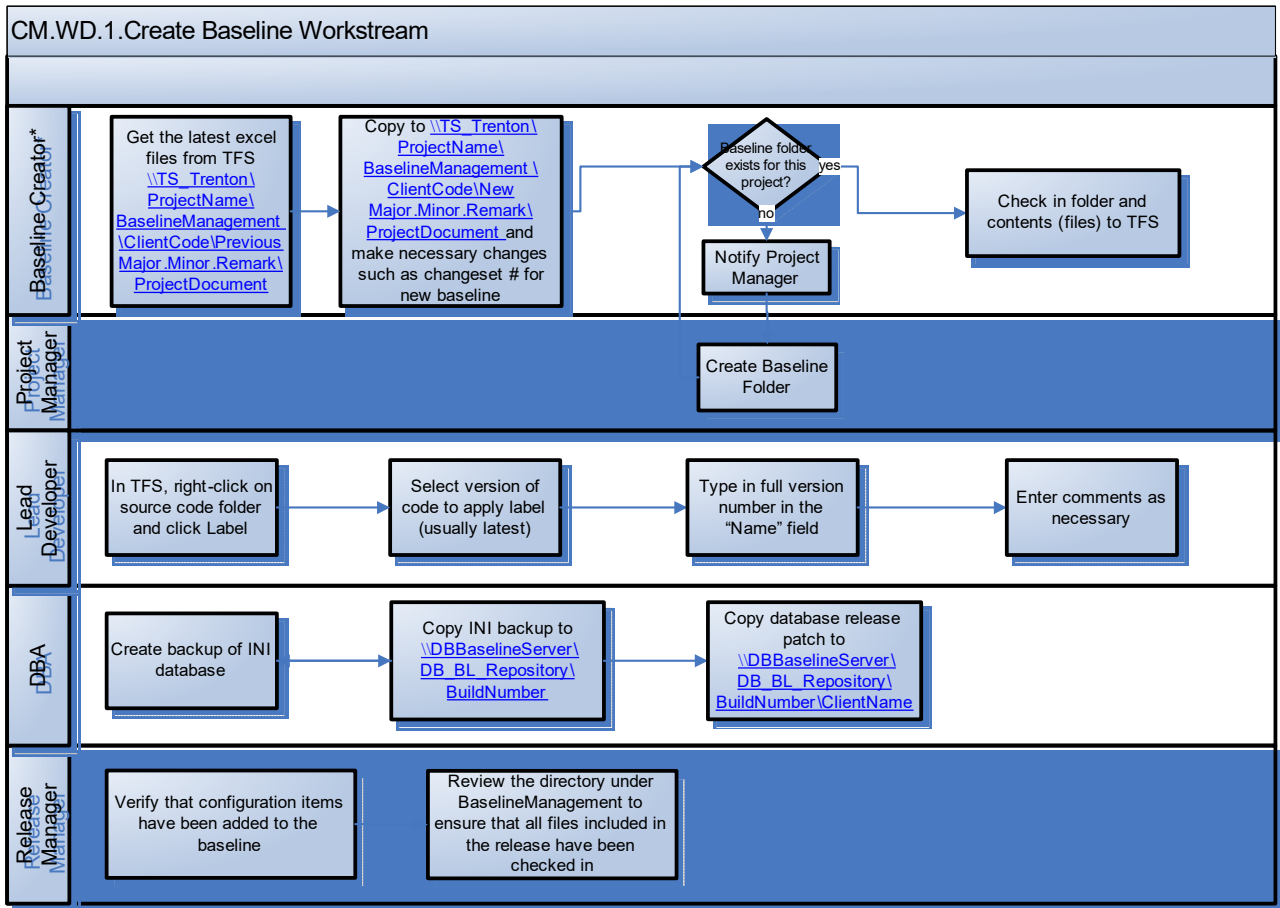
(A) Peer Review of Requirement Spec. & System Design

Quality assurance begins with accurate requirements and proper system design through clear communication. Each customer/product requirement and corresponding system design will be peer reviewed to verify accuracy of contents and to validate that proper implementation techniques are used. This is essential to avoid redo. High-level activities include:

- a. **Identify "Peer Review" team**
- b. **Peer Review the Customer Requirements & Scenarios:** The Peer Review team will peer review the draft Customer Requirements Specification by analyzing the requirements to ensure that they are necessary and sufficient.
- c. **Modify Customer Requirements Specification Based on Peer Review**
- d. **Internal Approval of Customer Requirements**
- e. **Protection of Customer's Data:** Data provided by our customers for the purpose of project implementation shall be treated confidentially
- f. **Obtain Customer Signoff**

(B) Create Product Baselines

A baseline represents a version of product release installed at the client location. enfoTech employs the best industry practices to maintain product baselines for bi-directional traceability between the requirements and final product features. Our baseline work stream is illustrated in a diagram below:



*Project Manager, Release Manager, Project Architect, Lead Developer, Developer, Business Analyst, Database Developer, etc – anyone who needs to baseline a work product

High-level activities include:

1. Document Baseline
2. Create a Work Item in Team Foundation Server to track a Baseline (version #)
3. Create Application Solution Baseline
4. Create Backup Database Baseline
5. Generate Baseline Report for audit trail and approval

(C) Change Request Management

For each product change, our product development Team will track the request in the Microsoft Team Foundation Server (MSTS) from the requirement, design, programming, test, to final release. A product release (version) might include multiple change requests. Our change request management involves the following activities:

- Create a Change Request (CR):
 - CR Submitter reviews the proposal of change request from either Project Website or internal needs to determine if change request should be made. Create a work item for the change request.
 - The CR reviewer should perform an impact analysis and identify all of the baselines that will be affected by this change, and then link the change request work item to the identified baseline(s)
- Review the change request:

- The CR Reviewer reviews by going through questionnaires on Approval Review tab in Team System Work Item form. The reviewer will input his/her review comment and recommend a cause of action to PM and Solution Architect.
- Each CR must be signed off by both the Project Manager and the Solution Architect together
- Each CR Reviewer will need to consult the Change Control Board (CCB) if there are concerns about infrastructure, technologies, architecture, or any questions that may require subject matter expert input
- Decision for Approval or Rejection
 - Once the CR has been approved, the CR Reviewer will turn the work item into “Active”, create TASK work item(s), and assign to people who are doing the changes.
 - For those baselines such as schedule, plan, requirements, designs, etc, that may take effect of this change should get updated if applicable. For database development tasks, follow the naming convention identified in the Database Change Management Standards.
 - If the CR has been rejected by any reasons, the work item will be assigned back to Submitter with the reason(s) (Exit the work stream)
- Completion for change request
 - Once all related work items have resolved, the change request work item should be resolved. Tester shall close the change request work item once it passes testing.

(D) Product Release Management

The release management is to ensure the delivery package includes all expected items and meet the expectation as addressed in the contract. There are 2 major steps, “Release Preparation” and “Release Deployment”.

High-level activities include:

1. Collect Release Package

Collect the following items:

- Application release candidate
- Database patch/dump file release guide
- Installation/Patch guide
- Administration guide (if required)
- What’s New document
- User Training materials (if user training is required)
- Online Help / User Guide (if required)

2. Test Release Package in UAT (lab) environment

Once the release package is ready, both the technology solution for the release and the supporting process documentation are tested in a lab environment (UAT staging server).

This is a test to ensure the mechanism delivers the designed release successfully and that the technical elements of the release all work.

3. Place a Copy of Release Package into Team System and Update Baseline

4. Provide Advance Communication of Release to the Client

Information communicated to users, support staff, and others during the release preparation process often includes release plans and dates, details of where to find and sign up for training courses (if appropriate).

5. Release Readiness Review

The Release Readiness Review is the final management checkpoint and approval step before the release team begins deployment. It should include the following topics:

- The operability of the release
- The supportability of the release
- The readiness of the target production environment

6. Deploy the Release

7. Review Deployed Release

The release manager confirms that the release is working correctly and the deployment process concludes with the completion of the change review process.

Because the software process is well defined, management has good insight into technical progress on all projects. enfoTech's software process can be summarized as standard and consistent because both software engineering and management activities are stable and repeatable. Within established product lines, cost, schedule, and functionality are under control, and software quality is tracked. This process capability is based on a common, corporate-wide understanding of the activities, roles, and responsibilities in a defined software process.

A Quality Assurance Plan is not a document *per se*, but a business process. In other words, the Quality Assurance plan is a process that is integrated into business practice throughout enfoTech to ensure that work output meets certain standard acceptance criteria.

enfoTech utilizes Microsoft Team Foundation Server as one of the tools to support our Quality Assurance Plan.

GovOnline is an enterprise-wide Portal with modular components and extensive configuration options to support different business processes required for each permitting type. The Portal consists of:

- **Core Components:** are reusable for all submittal types without system coding change
- **Configurable Tools/Engine:** are used to extend the Portal to support all submittal types with configuration options. All configuration settings are saved in XML files. Coding changes are very minimum.

A high level overview of major system components to offer system extension to support all submittal types and to meet their own business processes and workflows is listed below.

Reusable Core Components (without any coding change required)

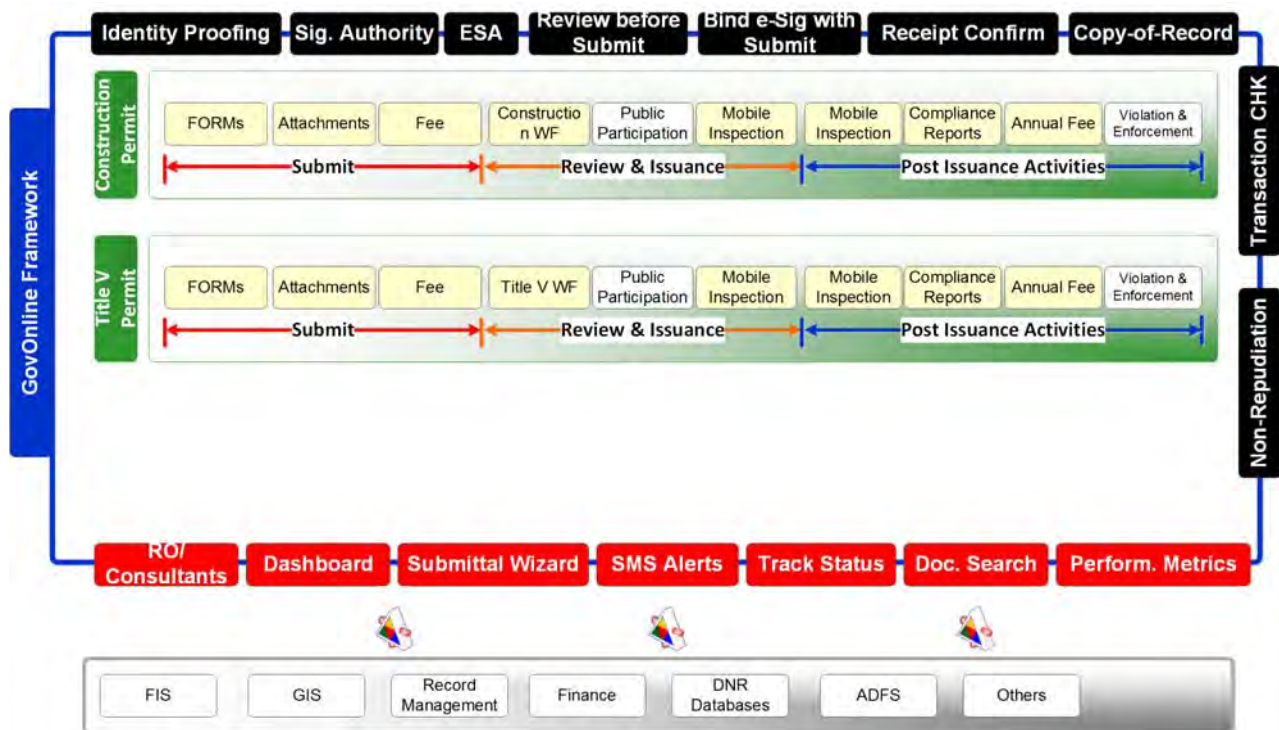
Component	Reusable?	Comments
CROMERR Services	Yes	Account management, Security, Identity proofing, Signature authority, ESA, Review before submit, Bind signature with Submittal, Receipt confirmation, Copy-of-record, Transition check, non repudiation, etc.
Submittal Service	Yes	RO and Consultant management, Dashboard, Submittal Wizard, SMS Alert, Track Status, Document Search
Notification Service	Yes	Manage tasks, assignment, due date, status, and send notifications to proper persons to alert upcoming tasks.
System Interfaces	Yes	Facility Profiler, GIS, Record Management, Active Directory, data exchange with external databases
Fee Payment	Yes	Credit card, ACH, pay by check, pay upfront, pay later, payment tracking
Mobile	Yes	Mobile inspection software to manage trips, tasks, and work results for

Component	Reusable?	Comments
Inspection		each individual who use the device.
Violation	Yes	A Central violation management console with record filters to support Unit specific violation records.
Enforcement	Yes	A Central enforcement management console with record filters to support Unit specific enforcement actions.

Configurable Portal Tools/Engine (Configuration options to support processes unique to each Permit)

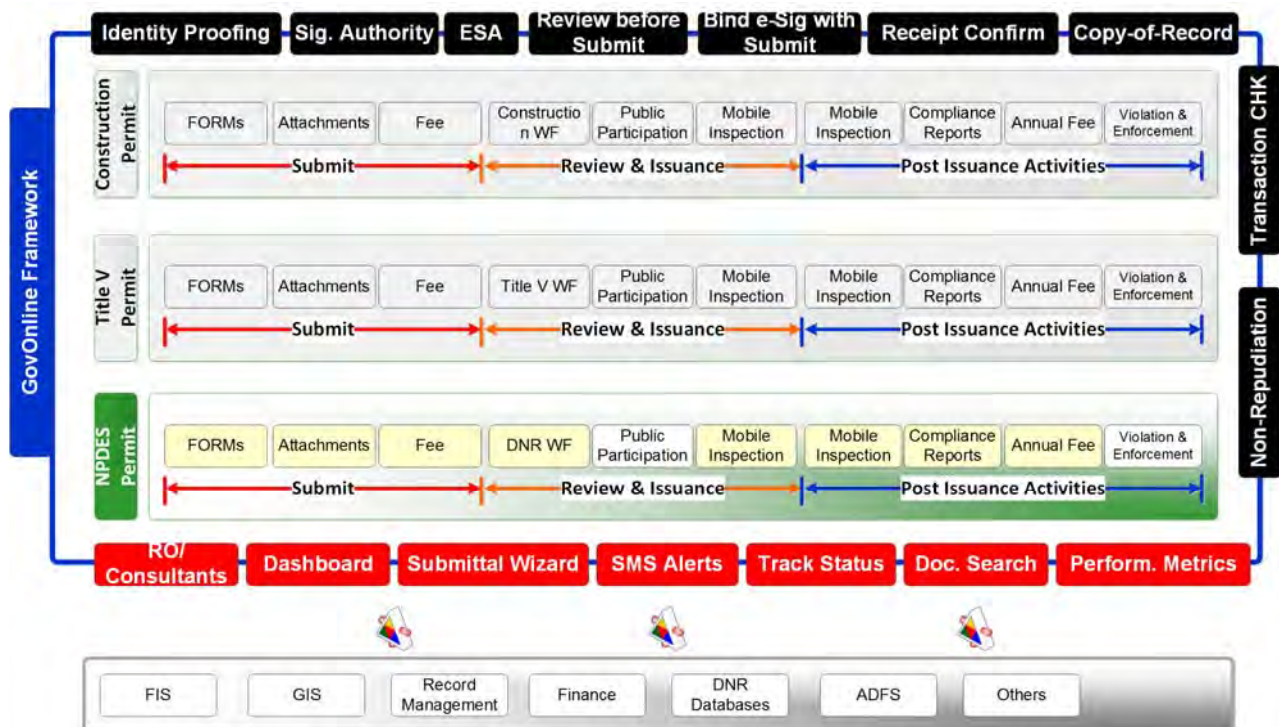
Component	Reusable?	Comments
Submittal Management	Yes	A Central Console to manage properties unique to each submittal type. For example, online form, attachment requirements, fee calculation, validation rules, workflow, issuance documents, etc.
Form Engine	Yes	For each submittal type, configuration options to add/change/delete data elements, validation rules, and online help messages. All data entry forms are saved in an XML file. GovOnline will present data entry form based on the XML file and capture user input together with the XML file. When making changes to the online form, we will need to redeploy the XML file without any system change.
Attachment Option	Yes	For each submittal type, configuration options to specify attachments required for the submittal. Setting for mandatory, optional, mailing addresses, etc. Configuration will be saved in a XML file. When making changes to attachment settings, we will need to redeploy the XML file without any system change.
Fee Calculation	Yes	For each submittal type, configuration options to specify calculation formula to determine the fee amount. Configuration will be saved in a XML file. When making changes to fee logics, we will need to redeploy the XML file without any system change.
Workflow Engine	Yes	For each submittal type, configuration options to specify workflow, tasks, assigned personnel, due date, and status. Configuration will be saved in a XML file. When making changes to workflow, we will need to redeploy the XML file without any system change.
Issuance	Yes	A Central Console to manage issuance document using Word Merge function. A submittal could have multiple issuance types such as RFI, draft permit, public notice, final permit, etc.

The following diagram illustrates GovOnline configurations after the air construction and Title V permits are completed.



The following diagram illustrates extending the GovOnline system to accommodate additional submittal types.

- Existing submittals will work independently with no affect from newly added submittal types
- New submittal types will reuse core components and operate independently with its own properties, online forms, workflow, and issuance documents.



enfoTech understands that DNR might choose to perform the data migration. enfoTech will work with DNR, in a DNR prefer manner, to successfully migrate the data to the new Solution. For past 22 years, enfoTech has provided data migration services or assistance to State IT resources for all environmental IT projects.

enfoTech proposes to start data migration at the system iteration #1 so that the DNR could evaluate the interim system releases with its own data, verify the data migration contents/accuracy, and use its own data to verify system configurations to ensure meeting project needs. Data migration will include SPARS, Microsoft Access, SLEIS, and Stack Test Databases. The data migration will include:

- **Data Migration Plan:** enfoTech will work with DAQ as a team on the data migration. Tasks shall include:
 - Develop a data migration Plan with Source database, tables, and contents
 - Map data elements from the source database to the new database
 - Document business rules to retain Facility ID used at the SPARS and logic to generate new Facility ID at the new database
 - Identity the key values to merge data from SPARS, Microsoft Access, SLEIS, and Stack Test Database
 - Identify potential data gaps that will require data collection to fill in the gaps
 - Identify potential data issues for data cleansing before data migration
 - Identify the freeze-current-database and cut-off-to-new-database procedure
- **Development of Data Migration Scripts:**
 - Iteration 1:
 - ❖ Facility data,
 - ❖ Facility contact information,
 - Iteration 2:
 - ❖ Revise iteration scripts #1
 - ❖ Application and Emission data
 - ❖ Reference data for pick-list
 - ❖ AP-42 emission factor data
 - Iteration 3:
 - ❖ Revise iteration scripts #1 and #2
 - ❖ Rerun all scripts & Verify and complete
 - Iteration 4:
 - ❖ Revise iteration scripts #1 and #2 and #3
 - ❖ Rerun all scripts & Verify and complete
- Run data migration multiple times and make adjustments
- Final Data Migration: rerun all scripts to perform final data migration before the PROD use

3.28.1 Government IT Project Experiences

enfoTech has provided IT solutions to government agencies for the past 22 years. We serve the following market sectors and focus on environmental solutions.

(A) Federal government (Date: 2/2000 to Present):

- Exchange Network (USEPA, ECOS, and Jointed Integrated Project Teams)
 - ❖ Develop or/and participate in technical teams to develop core technologies and open protocols
 - ❖ Environmental Data Standards

- ❖ Environmental Core Reference Model
- ❖ Data Flow XML schema development
- ❖ Data Flow Configuration Documents
- ❖ RESTful guidelines
- ❖ Node Specifications
- Multi-states EN Project Implementations
 - ❖ EN Node
 - ❖ Exchange Network Browser
 - ❖ Homeland Security Data Exchange
 - ❖ Drinking water lab test data exchange
 - ❖ Ambient water quality data exchange
 - ❖ Emergency Response Registry for Spills
 - ❖ Large Aquatic Ecosystem Data Exchange
 - ❖ Mercury content product data exchange
- Implement EN Data Flows (~ 70 data flow projects): (1) FRS (Facility Registry System); (2) AQS (Air Quality System); (3) AQDE (Air Quality Data Exchange); (4) EIS/NEI (Air Emission Inventory); (5) ICIS-NPDES; (6) ICIS-AFS; (7) WQX (Water Quality Data eXchange); (8) SDWIS; (9) RCRA Info; (10) UIC (Underground Injection Controls); (11) TRI (Toxic Release Inventory); (12) EPHTN (Env. Public Health Tracking Network); (13) eDWR (Lab-to-State Drinking Water Reporting); (14) DCM: Drive a Clean Machine; (15) ODPX: Ocean Data Partnership Exchange; (17) NCTCOG: North Central Texas Council of Govt. ; (18) Open Dump: Tribal Inventory of Open Dumps; (19) Mercury: Mercury content product data flow; (20) Radioactive Wastes; (21) Radon; (22) Environmental Incidents; (23) EMTS EPA Moderated Transaction Service
- Implement Online Permitting (USACE)

(B) State government (Date: 12/1994 to Present):

- Implement State-wide Environmental Databases
 - Facility Identification & Permit System
 - NPDES Electronic permitting and compliance reporting
 - Ambient Water Quality Monitoring & Assessment System
 - Ambient air quality monitoring and assessment system
 - Land Protection Waste Management System
 - Compliant Management System
- Implement State-wide Online Permitting Systems
 - Air Permits (Title V, PSD, NSR, SIP, Minor Mod., Administrative Amendment)
 - Water Permits (NPDES Major Municipal, Major Industrial, NOI, NEC, Drinking Water Facility Construction, etc.)
 - Waste Permits (waste handlers)
 - Lab certifications
- Implement State-wide Compliance Reporting Systems
 - NPDES compliance reporting (DMR, Nutrient Trading, Storm Water)
 - Annual Air Emission Reporting and Fee Calculation and Invoicing
 - Drinking water lab test reporting
 - Ambient water quality monitoring
 - Volunteer water quality testing
 - Private well testing

- Mobile for inspection, field sampling, survey, notice of violation, temporary permits, etc.
- GIS for site identification, property boundary line/coordinates, data search by area (point-radius or bonding box), geospatial data analyses, zoom-in/zoom-out data layers, etc.

(C)Local government (Date: 1994 to present)

- Industrial Pretreatment System
- Online permitting
- Online compliance reporting (SMR, compliance schedules, surcharge statements, etc.)
- e-Inspection
- Biosolid management, disposal and compliance assurance
- Fat, Oil, and Grease compliance management

3.28.2 Environmental IT Experiences

enfoTech has provided end-to-end enterprise-wide environmental IT solutions to states and the federal government since 1994. Our past experiences encompass air, water, waste environmental medias and include database, online permitting, compliance reporting, and mobile capability. A high-level summary is presented below:

Project Nature	Air Quality	Water Protection	Waste Management
Exchange Network Core Technologies & Multi-media applications	<ul style="list-style-type: none"> ▪ Node 1.1 \$ 2.0 specification: Consultant on the Node 1.1 & 2.0 specifications ▪ Node 1.1 & 2.0 software: Pioneered the Node 1.1 & 2.0 software ▪ EN Core Reference Model (CRM): Prime consultant to develop CRM ▪ EN Data Standards: Prime consultant to develop Environmental Sampling Analysis and Reporting (ESAR) standards ▪ EN XML schema & FCD: Prime consultant to develop XML schema and FCD for 7 data flows: DMR, DWR, EI, ST, AQDE, WQDE, OD. Contribute to FRS & RCRA Info. ▪ SOA security: XML gateway assessment, design, and implementation ▪ EN Browser: Prime consultant to develop EN Browser ▪ EN Financial: Prime consultant to develop Return-On-Investment (ROI) model ▪ FRS Data flow ▪ EPHTN (Env. Public Health Tracking Network) 		
Exchange Network Data Flows	<ul style="list-style-type: none"> ▪ AQS ▪ AQDE ▪ EIS/NEI ▪ ICIS-AFS ▪ DCM (Drive a Clean Machine) ▪ Radon ▪ EMTS 	<ul style="list-style-type: none"> ▪ ICIS-NPDES ▪ WQX ▪ SDWIS ▪ eDWR (Lab-to-State Drinking Water) ▪ ODPX (Ocean Data Partnership Exchange) 	<ul style="list-style-type: none"> ▪ RCRA Info ▪ RCRA C/E ▪ UIC ▪ Open Dump ▪ Mercury (Mercury content product) ▪ Radioactive Wastes ▪ Env. Incidents ▪ TRI
State-wide Multi-media Systems	<ul style="list-style-type: none"> ▪ Facility Identification System: Central repository for Facility Identification, Permit, and Contact data ▪ Compliant Management: complaint intake, assessment, assignment, inspection, follow-up, notification, workflow, satisfaction survey for all environmental medias. 		
State-wide Compliance Database	<ul style="list-style-type: none"> ▪ Air Emission Inventory & Fee Management ▪ Online air emission calculation & reporting 	<ul style="list-style-type: none"> ▪ NPDES compliance system ▪ Aquatic Hydraulic permit & compliance system ▪ Online compliance 	<ul style="list-style-type: none"> ▪ Land Protection compliance system ▪ Online waste disposal compliance reporting

Project Nature	Air Quality	Water Protection	Waste Management
	<ul style="list-style-type: none"> Online air permitting Air quality data management AQS real time public interface GIS interface Real time AQS monitoring equipment interface 	<ul style="list-style-type: none"> reporting (DMR, sludge, nutrient trading, etc.) Online permitting for wastewater, groundwater, drinking water permits Ambient water quality data management & assessment Industrial pretreatment Mobile inspection & sampling GIS interface LIMS interface 	<ul style="list-style-type: none"> Online permitting for waste haulers Mobile inspection & sampling GIS interface

3.28.3 State-wide Environmental IT Project Experiences

Since 1994, enfoTech has completed over 200 database management projects for Federal agencies, State Agencies, County and Local municipalities. Below is a list of example projects from the past 5 years:

No	Organization (Year)	Project	Platform
1	New Jersey DEP (2005 – 2014)	<u>Online Compliance Reporting System:</u> A state-wide online compliance reporting system (E2) to collect monitoring data for drinking water, water quality, private well testing, lab certifications. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> Web Java Oracle
2	Alabama DEM (2007-2014)	<u>NPDES Compliance System:</u> A state-wide NPDES Database system to manage wastewater facility's permits, inspections, monitoring, compliance, and enforcement data. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> Web .NET SQL Server
3	Ohio EPA (2007 – 2014)	<u>Online Compliance Reporting System:</u> A state-wide online compliance reporting system (E2) to collect monitoring data for wastewater DMR, drinking water testing, water quality credible monitoring data. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> Java Oracle
4	Indiana DEM (2008 – 2014)	<u>Water Quality Data Management System:</u> A state-wide ambient water quality database to manage projects, sample locations, sampling schedules, samples, lab results, field data, etc. Complete a WQX data flow to EPA's CDX. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> .NET Oracle
5	Alabama DEM (2008-2014)	<u>e-Permit System:</u> A state-wide e-Permit system to process online applications for waste handlers, wastewater discharger Notice of Intent, construction storm water permits, sanitary sewer overflow. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> Web .NET SQL Server
6	Michigan DEQ (2008 – 2014)	<u>Air Emission Reporting & Fee Management System:</u> A state-wide air emission calculation and reporting system to manage point source air emissions, conduct report audits, calculate emission fees, and generate invoices. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> Web .NET SQL Server

No	Organization (Year)	Project	Platform
7	Massachusetts DEP (2009)	<u>Air Quality Data Management System:</u> A state-wide data system to manage air quality monitoring data, QA air quality data, calculate AQI index, flow AQS data to EPA, develop a website to share real-time air quality data with the public.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ Oracle
8	Rhode Island DOH (2009 – 2014)	<u>Online Compliance Reporting System:</u> A state-wide online compliance reporting system (E2) to collect monitoring data for drinking water testing data. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ Java ▪ SQL Server
9	US Army Corp. of Engineers (2009-2010)	<u>e-Permit System:</u> A nation-wide e-Permit system to process online applications for 404 nationwide construction permits.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
10	Oklahoma DEQ (2009-2014)	<u>NPDES Data Management System:</u> A state-wide NPDES Database system to manage wastewater facility's permits, inspections, monitoring, compliance, and enforcement data. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
11	Oklahoma DEQ (2009-2014)	<u>Complaint Management System:</u> A state-wide Complaint management database to manage complaint intake, resource assignment, inspections, responses, and notifications. A public data inquiry portal is also provided. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
12	Oklahoma DEQ (2009-2014)	<u>Facility Identification System:</u> A state-wide Facility Identification System to reconcile all facility IDs, Permit #s, and Contacts generated from subsystems.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
13	Oklahoma DEQ (2010-2014)	<u>Land Protection Division Information System:</u> A state-wide Land Protection Division compliance database to manage waste handlers, permits, inspections, compliance reports, and enforcement. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
14	Massachusetts DEP (2011-2012)	<u>NPDES Compliance System:</u> A state-wide NPDES Database system to manage wastewater facility's permits, inspections, monitoring, compliance, and enforcement data.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
15	Rhode Island DEM (2011-2014)	<u>NPDES Compliance System:</u> A state-wide NPDES Database system to manage wastewater facility's permits, inspections, monitoring, compliance, and enforcement data. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ C/S ▪ .NET ▪ SQL Server
16	Oklahoma DEQ (2011-2014)	<u>Facility Profiler System:</u> A state-wide Facility Profile system to reconcile and manage Facility IDs from all state databases. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
17	Texas CEQ (2012-2014)	<u>e-Permit System:</u> A state-wide e-Permit system to process online applications for natural gas vehicle grant application.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server

No	Organization (Year)	Project	Platform
18	Texas CEQ (2012-2014)	<u>Online Compliance Reporting System:</u> A state-wide online compliance reporting system (E2) to collect monitoring data for drinking water testing data.	<ul style="list-style-type: none"> ▪ Java ▪ Oracle
19	South Africa Department of Environmental Affairs (2013 – 2014)	<u>Air Emission Reporting & Management System:</u> A Nation-wide air emission calculation and reporting system to manage air emissions from 7 key key source sectors: industrial point sources, transport (vehicle, railway, aviation, ports, and pipelines), residential burning, waste (wastewater treatment and landfill), agriculture & fishing, land use & forestry, and natural resources. System also automatic calculate greenhouse gas emissions. System will support EI report audits, calculate emission fees, and generate invoices. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
20	Washington DFW (2013-2014)	<u>Permit Management System:</u> A state-wide Permit system to process online applications, issue permits, and manage post permit activities for Division of Fish and Wildlife. System enhancements and maintenance continue to present.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
21	Oklahoma DEQ (2014)	<u>Online Air Permitting System:</u> A state-wide online e-Permit system to support air permit applications and integrates with the backend air database called TEAM. DEQ adopts GovOnline as the e-Permit portal. The Air Division is the 1 st group to offer online permitting.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
22	Georgia EPD (2014)	<u>Facility Identification System:</u> A state-wide Facility Identification System to reconcile all facility IDs, Permit #s, and Contacts generated from subsystems.	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
23	Georgia EPD (2014)	<u>Online Submittal System:</u> A state-wide online e-Permit system to support all environmental submittals (permit applications and compliance reporting).	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server
24	Colorado DPHE (2016)	<u>Online Submittal System:</u> A state-wide online e-Permit system to support all environmental submittals (permit applications and compliance reporting).	<ul style="list-style-type: none"> ▪ Web ▪ .NET ▪ SQL Server

3.28.4 Environmental Data Exchange Experiences

enfoTech actively participates in the Exchange Network (National Environmental Information Exchange Network) projects since 2001. We contribute our expertise to support many important “cornerstone” projects that establish standards, policies, and guidelines to benefit Exchange Network partners.

3.28.4.1 Exchange Network Core Technologies Development

We contribute to the following key EN technologies that are relevant to the DAQ project:

(A) General NEIEN Contributions and Experiences:

- Contributor to the Exchange Network Node specifications
- Consultant to develop the EN Node adopted by Exchange Network

- Prime consultant to develop Core Reference Model and Shared Schema Components for use to develop all Exchange Network XML schema
- Prime Consultant to develop EN Browser tool
- Key consultant to pilot EPA's Exchange Network Discover Service (ENDS) registration and to enhance the registration and discover processes for the EN partners
- Technical consultant to the Exchange Network "Network Technical Board (NTB)" to provide technical research, document review, standard development, and support to the EN Governance body
- Contributing reviewer to the Exchange Network REST specifications.

(B) Exchange Network Core Technologies Experiences

enfoTech is one of the leading solution providers for EN related projects. Examples of our experience include:

- Node 1.1 specification: Consultant on developing the Node 1.1 specifications
- Node 1.1 software: Pioneered the Node 1.1 software for New Hampshire and Delaware
- EN Core Reference Model (CRM): Prime consultant on developing the EN Core Reference Model and Shared Schema Components (SSCs) that EN partners use as the basis for all the XML schema development for all data flows
- EN Data Standards: Prime consultant to the EPA to develop various data standards including the Environmental Sampling Analysis and Reporting (ESAR) standards
- EN XML schema development: Prime consultant for developing the XML schema for major data flows including those for Discharge Monitoring Report (DMR), Drinking Water Report (DWR), Environmental Incident (EI), Tier II Reporting, Storage Tank reporting, Air Quality Data Exchange (AQDE), Water Quality Data Exchange (WQDE), Water Quality (WQX), Open Dump, Underground Injection Control (UIC), etc. and participants to Facility Registry System (FRS), Resource Conservation and Recovery Act (RCRA), etc.
- SOA security: XML gateway assessment, design, and implementation
- Exchange Network Discovery Service (ENDS): the ENDS consists of two major parts: (1) Data Registry and (2) Data Browser
 - Data Registry: Participating consultant for the ENDS Data Registry development
 - Data Browser: Prime consultant for the ENDS Data Browser development
- EN Financial Support
 - ROI Model: Prime consultant for developing an EN Return-On-Investment (ROI) model for quantifying the benefits of EN projects. The ROI model has been used by the states to justify EN project requests, estimate data flow implementation costs, and request funding
 - EN Financial Baseline: Prime consultant for developing a Costing Model for data flow implementations
- Future EN Technology Development
 - Node 2.0 specification: Participant in the Node 2.0 specification development
 - Node 2.0 software: To offer the Node 2.0 software in accordance with the Node 2.0 specification
 - E-Enterprise: RESTful specifications, services registry, etc.

3.28.4.2 Exchange Network Challenge Grant Experiences

enfoTech has served as the prime consultant for multiple EN Challenge Grant projects. We are familiar with the challenges from the challenge grants and have experiences to facilitate a team with a diverse background (program, IT, EPA) to document existing processes, perform best business practice analyses, develop new processes, implement new IT solutions to support new business processes, training, and project outreach. Our project experiences are listed below:

EN Challenge Grant Project	Objectives	Lead Agency
1. Node 1.0 Challenge Grant	Develop Node 1.0 software to support states to flow environmental data from states' internal databases to EPA's CDX.	Delaware NREC
2. E-DMR Challenge Grant	Develop an electronic reporting mechanism to collect wastewater Discharge Monitoring Report (DMR) from facility to states and from states to EPA.	Michigan DEQ
3. E-DWR Challenge Grant	Develop best business practices, templates, schema, and tools to collect drinking water test reports (DWR) from laboratories, water systems, to states and from states to EPA.	New Hampshire DES
4. Homeland Security Challenge Grant	Develop best business practices, templates, schema, and tools to integrate environmental data to assist states to support emergency responses.	New Hampshire DES
5. WQDE Data Sharing Challenge Grant	Develop best business practices, templates, schema, and tools to allow DEP, Fishery, Marine, Volunteer to electronic report, validate, and share ambient water quality monitoring data.	New Jersey DEP
6. Regional AQS Data Sharing Challenge Grant	Develop best business practices, templates, schema, and tools to allow states to share ambient air quality monitoring data, submit to EPA, and to support law enforcement personnel to respond to emergency responses.	New Jersey DEP
7. Node 2.0 Challenge Grant	Develop Node 2.0 software to support states to publish and share environmental data with EN partners. EN Node 2.0 was adopted by EN as a standard Node tool.	ECOS
8. EN Browser	Develop EN Browser software to support EN partners to discover and consume environmental data published in the Exchange Network	New Jersey DEP
9. Great Lake Spill Response Challenge Grant	Develop best business practices, templates, schema, and tools to support Great Lakes states to obtain critical resources to respond to oil spills	Michigan DEQ
10. Large Aquatic Ecosystem System Challenge Grant	Develop best business practices, templates, schema, and tools to support Great Lakes states to share water quality, fish tissues, sediment, climate changes, environmental assessments data	Michigan DEQ

3.28.4.3 Exchange Network Data Flow Experiences

enfoTech has successfully completed 62 Exchange Network data flows. They are listed in a Table below:

Legend	
FRS: Facility Registry System	Others:
AQS: Air Quality System	▪ eDWR: Lab-to-State Drinking Water Reporting
AQDE: Air Quality Data Exchange	▪ DCM: Drive a Clean Machine
ICIS-NPDES: ICIS for NPDES	▪ ODPX: Ocean Data Partnership Exchange
ICIS-AFS: ICIS for AFS	▪ NCTCOG: North Central Texas Council of Govt.
WQX: Water Quality Data eXchange	▪ Open Dump: Tribal Inventory of Open Dumps
SDWIS: State-to-EPA Drinking Water Reporting	▪ Mercury: Mercury content product data flow
RCRA: Resource Conservation & Recovery Act	▪ R. Waste: Radioactive Wastes

Legend	
UIC: Underground Injection Controls EIS/NEI: Air Emission Inventory Reporting TRI: Toxic Release Inventory EPHTN: Env. Public Health Tracking Network	<ul style="list-style-type: none"> ▪ Radon: Radon Tests ▪ Incident: Environmental Incidents ▪ EMTS: EPA Moderated Transaction Service

3.28.5 Recognition / Awards

enfoTech's dedication to environmental software solutions, coupled with past project successes, has translated into a number of prestigious awards being bestowed upon our customers by federal, state, and non-profit organizations. Below are some noteworthy examples:

- **"Director's Award":** by Washington Department of Fish and Wildlife for delivering a new and improved Aquatic Protection Permitting System.
- **"Outstanding Performance Award":** by Michigan Department of Environmental Quality for delivering a new and improved Michigan Air Emission Reporting System.
- **"Innovation Award":** by ECOS for the NJDEP AQS Project. Leveraging the technology of the Exchange Network, and with strong collaboration between the states and the EPA Air Program, partners developed one common way to report to EPA data systems and share more data state to state.
- **"Denali Peak Performance" Award:** by Alaska Governor. Award to the Alaska Department of Environmental Conservation's Water Information Management for excellence in service to the State. Alaska's DEC uses the NPDES Management System (NMS) and E2 software programs.
- **"Commitment to Excellence" Award:** by AWWA for NJDEP implementing the E2 Electronic Drinking Water Reporting System, which accepts electronic submissions of drinking water data from laboratories and water systems, demonstrating a strong effort to improve the timeliness of data submittals and enhance data quality.
- **Michigan Excellence in Technology Award – Best Application Serving a Public Organization's Business Needs:** by Government Technology Magazine. Awarded for *"Michigan's Electronic Discharge Monitoring Report Data Exchange."* Presented by Government Technology Magazine at the Michigan Digital Government Summit,
- **Certificate of Tribute:** by Michigan Governor Honor to the Michigan DEQ for their *"Exceptional contributions to the field of Information Technology."* Presented at Michigan Digital Government Summit,
- **Chief Information Officer – Partners Award:** by USEPA, The Office of Environmental Information Annual Award for *"Toxic Release Inventory State Data Exchange Network Pilot Implementation."*
- **Certificate of Achievement – Promoting Efficiencies:** by USEPA. The National Environmental Information Exchange Network Award for *"Michigan's Electronic Discharge Monitoring Report Data Exchange."*
- **Recognition for Outstanding Work:** by USEPA. The National Environmental Information Exchange Network Award for *"Advancing the National Environmental Information Exchange Network."*



3.28.6 References

Reference #1: Michigan Department of Environmental Quality (Installed Model)

Reference Client #1: Michigan Department of Environmental Quality (Installed Model)		
Company Name: Michigan DEQ Company Address: Constitution Hall, 525 W. Allegan Lansing, MI 48913	Contact Name: Michael Beaulac Contact Title: Assistant State Administrator Contact Phone Number: 517-284-6701 Contact Email Address: beaulacm@michigan.gov	
Project Name: <ul style="list-style-type: none">Michigan Air Emission Reporting SystemNPDES Information SystemOnline e-DMR Reporting (E2)e-Permitting & Inquiry for Permit Search	Project Start: 8/2001	System In Production: 7/2003
Total Contract Cost: \$ 6,210,000 for implementation & Services	enfoTech work engagement: 100% completed by enfoTech, no Subcontractor	
Meet the project schedule (Circle one) : <input checked="" type="checkbox"/> Yes No	enfoTech completed the Project on schedule and within budget.	
Business Needs: DEQ Air Programs regulates sources of air pollutants to minimize adverse impact on human health and the environment. DEQ partners with enfoTech to implement a state-wide online air emission reporting system. DEQ Water Quality Programs provide regulatory oversight for all public water supplies, issue permits to regulate the discharge of industrial and municipal wastewaters. DEQ partners with enfoTech to develop a state-wide online permitting, inspection, compliance and enforcement system.		
Services Delivered: enfoTech successfully completed the following projects for DEQ: <ul style="list-style-type: none"><u>Online environmental e-Permitting System:</u> State-wide Online permit system for Air, Water, Waste<u>Online compliance reporting systems:</u> Online Air Emission Reporting System; DMR reporting system; Online Drinking Water Test Results reporting system;<u>State-wide Environmental Compliance Database:</u> NPDES permit and compliance system; Groundwater compliance management system; Aquatic Nuisance Control management; Drinking water data query system; NPDES Public Inquiry system; Dry Cleaning Compliance & Inspection		
System Use Environment Number of Concurrent Users: 539; Active Permits: 27,730;		
Project Results: <ul style="list-style-type: none">Online e-Permit and Compliance Reporting<ul style="list-style-type: none">Saves DEQ resources and money to manually track and enter data80% of 1,200 facilities submit compliance reports onlineReduces the Facility’s compliance costs by offering a streamlined report submission method, readily available computer tools, reduced wait times, and eliminates paper & associated costs.Improves accuracy of compliance data by eliminating potential errors that otherwise would be introduced through manual and/or redundant data entry.Improve accuracy of reporting compliance to EPA and save time and costOnline Air Emission Reporting<ul style="list-style-type: none">MAERS was rolled into production in 10/2009 to collect emission data for 2009 reporting year. For		

Reference Client #1: Michigan Department of Environmental Quality (Installed Model)

the 2009 reporting year, 70 % of the 1740 facilities used MAERS to submit their emission reports before the deadline. For the 2010 reporting year, the percentage increased to 92%. For 2012 reporting year, 96% reporting were completed via MAERS. DEQ uses MAERS to calculate, invoice, and track payments for ~ \$ 10 MM each year of air emission fees.

Relevance to the System Project

- Use GovOnline as the base to support online permitting
- Online licensing for new, renewal, amend, and terminate licenses
- Manage permit application review workflow based on application type
- Inspection scheduling, results and mobile inspection
- Track inspection violations and associated enforcement actions
- Document management and search
- Public Inquiry module to allow general public to search
- End-to-end project implementation services to include: Planning, Management, Requirement Verification, Design, Configurations, Testing, UAT support, training, and maintenance and support

Reference #2: Georgia DNR, Environmental Protection Division (SaaS Model)**Reference Client #3: Georgia Environmental Protection Division (SaaS Model)**

Company Name: Georgia DNR, Environmental Protection Division	Contact Name: Angela Ivester Contact Title: IT Director	
Company Address: 2 Martin Luther King, Jr., Dr., Atlanta, GA 30334	Contact Phone Number: 404-463-0077 Contact Email Address: Angela.Ivester@dnr.state.ga.us	
Project Name: Online Title V Air Permitting Online Air SIP Permitting; NPDES Permitting; Land Environmental Management Information Repository (LEMIR)	Project Start: 3/2014	System In Production: 9/2014
Total Contract Cost: \$ 2,000,000 for implementation	enfoTech work engagement: 100% completed by enfoTech, no Subcontractor	
Meet the project schedule (Circle one) : <input checked="" type="checkbox"/> Yes No	enfoTech completed the Project on schedule and within budget.	

Business Needs:

Georgia EPD envisions an integrated system in which State staff and the public will be able to use a variety of common mechanisms to access the State Entity's information resources. The data will originate from many different sources, as it does today, but it will be presented in a standardized, easy-to-access, and easy-to-understand manner. EPD partners with enfoTech to implement a state-wide Facility Information System and an Online Permitting System to automate permitting process.

Project Scope

- State-wide Facility Information Management System
- State-wide online permitting for air, water and land protection permits
- Manage Workflow for all submittals
- Manage permit obligations: including compliance reports, extension, termination, on-hold, complete
- Mobile inspection using iPad (iOS7)
- Integrate with state databases through secured web-service APIs
- Support all 1,000 EPD users, Support ~ 50,000 state-wide permitted facility users
- enfoTech provides SaaS hosting services

Systems Delivered: GovOnline, Mobile, Web Inquiry, Facility Information System (FIS), LEMIR

Reference Client #3: Georgia Environmental Protection Division (SaaS Model)Services Delivered:

- Developed requirements, designed, build, test, and delivered a System to support the end-to-end permitting, post-permit compliance business processes
- Mobile inspection module using iPad
- Provided training to all EPD staff and completed user/system documentation
- Provided end-to-end project management services to manage project deliverables, schedule, testing, quality assurance, UAT, deployment, support
- Comply with Service Organization Control II security and Payment Card Industry Data Security Standard (PCIDDS)
- Provide hosting services (SaaS)
- Continue to provide system support and maintenance services

SaaS Summary:

Number of Concurrent Users: 600; Permits : ~ 50,000; Issuance: ~ 20,000/year (estimated)

Relevance to the System Project

- SaaS service model & Use GovOnline as the base to support online permitting
- Online licensing for new, renewal, amend, and terminate licenses
- Manage permit application review workflow based on application type
- Inspection scheduling, results and mobile inspection; violations and associated enforcement actions
- Document management and search
- Public Inquiry module to allow general public to search
- End-to-end project implementation services to include: Planning, Management, Requirement Verification, Design, Configurations, Testing, UAT support, training, and maintenance and support

Reference #3: Republic of South Africa, Department of Environmental Affairs (SaaS Model)**Reference Client #2: Republic of South Africa, Department of Environmental Affairs****Company Name:**

South Africa Department of Environmental Affairs (Cnr. Steve Biko and Soutpansberg Road, Environment House, 473 Steve Biko, Arcadia, Pretoria, 0083, South Africa)

Contact Name: Dr. Patience Gwaze

Contact Title: Directorate: Atmospheric Quality Information

Contact Phone Number: +27 12 399 9192

Email Address: pgwaze@environment.gov.za

Project Name:

South African Atmospheric Emission Licensing & Inventory Portal (SAAELIP)

Project Start:

8/2012

System In Production:

10/2013

Total Contract Cost:

\$ 1,182,580 for implementation

enfoTech work engagement: 100% completed by enfoTech, no Subcontractor

Meet the project schedule (Circle one) :

☒ Yes

No

enfoTech completed the Project on schedule and within budget.

Business Needs:

South Africa requires a complete and accurate air emission inventory for air pollutant emissions and greenhouse gases. The effort to establish a complete emission inventory on a nationwide basis is substantial and the potential issues are challenging and complex. Such an inventory will eventually encompass over 4,000 users (from the regulators, to source representatives, consultants, public users, etc.), roughly 2,000 sources with an estimate of 20,000 emission units, and more than 500,000 emission records. Emission estimates will include seven key source sectors: industrial point sources, transport (vehicle, railway, aviation, ports, and pipelines), residential burning, waste (wastewater treatment and landfill), agriculture & fishing, land use & forestry, and natural resources.

Project Scope

Reference Client #2: Republic of South Africa, Department of Environmental Affairs

- Nation-wide air emission licensing and emission management
- Air Licensing: Online air license application, DEA workflow to review/approve licenses
- Emission Reporting: Online emission reporting, AP-42 emission calculations, EI report audit, emission sources, contacts, equipment, process, pollutant management
- Report Cycle management, including Master Reporter List Tracking, Reminders, Auto Emission Calculation, Auto Data Quality Checks, Technical Audits, Revision, Approval, Statistical Data Trending, GIS Spatial data analysis, Data Mining, Reports.
- Support all 4,000 facility and regulatory users; Support ~ 500,000 emission records/year
- enfoTech provides SaaS hosting services

Systems Delivered: GovOnline, Web Inquiry for Data Search

Services Delivered:

- Developed requirements, designed, build, test, and delivered a System to support the end-to-end air emission calculation, reporting, audit, and approval to meet regulatory requirements
- Support training to over 280 users and completed user/system documentation
- Provided end-to-end project management services to manage project deliverables, schedule, testing, quality assurance, UAT, deployment, support. Provide hosting services (SaaS).
- Continue to provide system support and maintenance services

SaaS Summary:

Number of Concurrent Users : 1,500; Number of Report Records/Year : ~ 500,000

Relevance to the System Project

- SaaS service model & Use GovOnline as the base to support online reporting
- Data migration to initiate initial user list,
- Use a Master List Tracking screen to monitor reminder sent, user confirmation, submission due date, receive date. Online reporting for new and amend reports
- Manage review workflow based on report type
- Document management and search
- Public Inquiry module to allow general public to search
- End-to-end project implementation services to include: Planning, Management, Requirement Verification, Design, Configurations, Testing, UAT support, training, and maintenance and support

The proposed project team members are highly qualified for the Project. Their environmental domain knowledge, technical skills, and project experiences are highly relevant to the Project. The table below provides a high-level cross-reference of the proposed project Key personnel skills/experience with the Project requirements. Detailed resumes for each key project personnel are provided in Appendix.

Qualifications Required by the Project	Sony Su	Charlie Tsai	John Fisher	Helen Pan	Nicki Chang
Years of Experience	15	18	2	16	15
Degree	MS	MS	PhD	MS	MS
Major	ChE	CIS	PHY	CIS	CIS
Project Role	PM, BA	SA	BA	DEV	DBA
Percent Time Commitment (%)	50%	40%	50%	60%	25%
1. Air Permitting and Emission Inventory Project Experiences	√	√	√	√	√
2. Environmental Regulatory Domain & Business Process Knowledge	√	√	√	√	√
3. Experience in environmental data models, data structure, data dictionary, and data migration tools	√	√	√	√	√

Qualifications Required by the Project	Sony Su	Charlie Tsai	John Fisher	Helen Pan	Nicki Chang
4. Specialize in requirement verification, training, end-users support, documentation	√	√	√		√
5. Specialized in large-scale IT design, development, implementation	√	√	√	√	√
6. Experience in system life cycle QA procedures projects	√	√	√	√	√
7. Experience in web-services APIs, XML for system/data integrations	√	√	√	√	√

The proposed team consists of professionals who specialize in delivering enterprise-wide environmental database systems. They all have air quality IT project experiences and are well versed in environmental domain knowledge and leading edge computer technologies, which are essential qualifications for the project. The **5 team members** (1 PhD, 4 Masters) will bring with them ~ 60 man-years of enterprise-wide environmental IT project experiences. The team is also well balanced with:

- **2 Business Professionals:** to primarily work with end users for requirement verification, logical design, system documentation, quality assurance, training, and support
- **2 System Professionals:** to provide system architecture design, physical design, system development, and unit testing tasks. In addition, they will provide hardware infrastructure, security, and web standard compliance services.
- **1 Database Professionals:** to provide database related tasks including data migration, stored procedures, and business object development. They will optimize system performance.

The team has the know-how and technical skills to accomplish the tasks being assigned to them for this project. Based on project needs, additional resources will be made available to effectively complete the project requirements.

A. enfoTech Key Project Staff

enfoTech presents the following personnel to support the project. The following Table provides abbreviated resumes for project staff.

Name / Role	Qualifications and Skills
Sony Su <u>Role:</u> <ul style="list-style-type: none"> ▪ Project Manager & Lead BA ▪ Requirement, Design, Testing, Training, Document 	<ul style="list-style-type: none"> ▪ 15 years large scale state-wide web-based environmental IT project experiences for Michigan, Massachusetts, Maine, New Hampshire, Florida, Ohio, Alabama, Rhode Island, Indiana ▪ 12 years project management experiences ▪ 12 years of environmental data systems with system integration experiences ▪ Project Manager for Michigan DEQ Air Emission Inventory, Online Reporting Projects ▪ Education: BS and MS in Chemical Engineering
John Fisher <u>Role:</u> <ul style="list-style-type: none"> ▪ Business Analyst ▪ Requirement, Design, Testing, Training & Documentation 	<ul style="list-style-type: none"> ▪ 2 years large scale state-wide environmental IT project experiences for South Africa DEA, Virginia, Georgia EPD, Arizona DEQ, City of Phoenix, San Jose, etc. ▪ Business Analyst for South Africa DEA Air Emission Inventory System ▪ Business Analyst for Online Permitting and Mobile system ▪ Familiar with environmental programs for Air Emission Reporting, Air Permitting, NPDES Permit and Compliance, Ambient air quality, Ambient Water Quality, Site Remediation, RCRA Waste management, Lead Paint Reduction, Superfund, etc. ▪ Education: PhD in Physics
Charlie Tsai <u>Role:</u>	<ul style="list-style-type: none"> ▪ 18 years large scale state-wide environmental IT project experiences for Michigan, Texas, New Jersey, Oklahoma, Ohio, Missouri, Florida, Indiana, Idaho,

Name / Role	Qualifications and Skills
<ul style="list-style-type: none"> ▪ Solution Architect 	<ul style="list-style-type: none"> ▪ Georgia, Maine, Rhode Island, South Carolina, Alabama, Alaska, and USEPA ▪ 18 years of system integration experiences using web services, ETL, data files. ▪ System Architect for Michigan Air Emission Inventory System and South Africa DEA Air Emission Inventory Reporting System ▪ A certified Project Management Professional (PMP) ▪ Education: MS in Computer Information Science
Helen Pan <u>Role:</u> <ul style="list-style-type: none"> ▪ Lead Developer ▪ GIS development 	<ul style="list-style-type: none"> ▪ 16 years large scale state-wide environmental IT project experiences involving air emission inventory reporting, air quality monitoring, online reporting, Title V Online air permitting, NPDES Online major permitting, for Michigan, Hydraulic Permit for Watershed protection, Land Protection System, Compliant Management System. ▪ Lead Developer for Michigan Air Emission Inventory Reporting System and South Africa air permitting and emission inventory systems ▪ Resident expert on ESRI ArcGIS, Arc IMS, Google Map API, Bing Map APIs, shape files, GML, and EDMS ▪ Education: MS in Computer Information Science
Nicki Chang <u>Role:</u> <ul style="list-style-type: none"> ▪ Data Migration ▪ Database related work ▪ Database performance tuning 	<ul style="list-style-type: none"> ▪ 15 years large scale state-wide environmental IT project experiences involving air emission inventory reporting, air quality monitoring, online reporting, Title V Online air permitting, NPDES Online major permitting, for Michigan, Hydraulic Permit for Watershed protection, Land Protection System, Compliant Management System ▪ Lead database developer for Michigan Air Emission Inventory System, South Africa Air Emission Inventory System, Georgia State Title V online air permitting, Georgia State Air SIP online permitting, Georgia State NPDES online major permitting. ▪ Specialized in system integration experiences using web services, ETL, data files. ▪ Specialized in DB script development, data migration, database performance tuning

All project personnel are enfoTech's permanent employees. Key project personnel are senior managers at enfoTech with professional resources at their disposal. The DNR shall not experience any resource constraint throughout the contract.

(B) Resource Contingency Plan

enfoTech is a process-driven corporation. Our SOPs requires that all project work be recorded at our MS Team Foundation Servers (TFS) for tracking and quality assurance. Life-cycle materials for each system function will be recorded in the TFS, including the requirements, design, rationale, coding, testing, and documentation. The TFS maintain bi-directional traceability between the requirement and the final system function. In a team work environment, the TFS tracks all work revisions, comments, and supervisor approval. Our CMMi level 3 process oriented SOPs will minimize any negative impact that might potentially be caused by personnel's changes.

In addition, enfoTech also prepares a contingency plan to maintain project continuity in the unforeseeable event when an employee leaves the Company or take a long leave of absence.

Backup Resource	Project Role(s)	Education	Experiences
Chloe Wu	Project Manager	MS, Biomedical Engineer	<ul style="list-style-type: none"> • 3 years in state-wide e-permitting and environmental database projects
Sylvia Zhao	Business Analyst	MS, Business	<ul style="list-style-type: none"> • 2 years in state-wide e-permitting and

Backup Resource	Project Role(s)	Education	Experiences
		Analytics	environmental database projects
Julia Xiao	Business Analyst	MS, System Engineering	<ul style="list-style-type: none"> 2 years in state-wide e-permitting and environmental database projects
Danwen Sun	Solution Architect	MS, Electric Engineering	<ul style="list-style-type: none"> 17 years in state-wide e-permitting and environmental database projects

enfoTech developers have an average of 8 years of development experiences. Ample senior developer resources are available and will be added to the Team based on project needs.

Sony Su (Project Manager)

Project Responsibility: Sony will serve as the enfoTech team project manager, reporting to the DNR's Project Manager. Sony will be responsible for developing the project plan, outlining major milestones, breaking down work tasks, and work with DNR's PM to develop a master Plan with schedule to complete all project work. He will also be tracking the project progress and will provide status reports to the DNR project manager. Sony will be responsible for ensuring that project deliverables are completed with good quality, on time and within budget.

Experience: Sony has been a Director with enfoTech since 2001 and is the resident expert on air permitting and emission inventory systems. He has demonstrated his technical skills to deliver an integrated enterprise-wide IT system to address complex business issues. He pays great attention to details and is very easy to work with a large group of people with diverse background. Sony will bring the following valuable assets to the project:

- Working knowledge and familiarity with air permitting, emission inventory, inspection, complaint management, and compliance and enforcement business processes
- Comprehensive environmental domain knowledge for requirement gathering, business process analysis, data mining, and user documentation and training
- Expert knowledge of system and data integrations
- Expert knowledge on emission calculations, AP-42 emission factors, and emission audit which will be valuable in delivering an emission calculation and inventory module for the DNR
- Excellent project facilitation skills, easy to work with, and results oriented

Sony has excellent "soft" skills to facilitate large scale projects with members from diverse backgrounds and with different levels of IT knowledge. He is skilled in leading members with different levels of technical backgrounds to effectively deliver complex information systems that are easy to use. Sony has the talent to communicate well with senior managers for project updates, resource/cost management, scoping and risk management; and also offers environmental domain knowledge to work with SMEs to facilitate business requirements gathering; plus technical skills to engage system/database design with web hosting and database teams. His project management and team facilitation skills have been highly endorsed by members of all projects in which he has been involved. Sony has 10 years of project management experience and has supervised up to 20 staff members with projects worth up to 5 million dollars. Sony's extensive environmental regulatory background and IT knowledge with a track record of proven experience to facilitate large-scale projects, especially for the state environmental IT and Exchange Network projects, involving diverse project members with different backgrounds. His project management and team facilitation skills have been highly endorsed by members of all projects he has been involved in.

Charlie Tsai (Senior Software Engineer)**Project Role: System Development Manager**

Education: BS in Business Management, MS in Computer Information Science

Project Responsibility: Charlie is an enfoTech Director responsible for environmental system implementations. He will serve as the technical lead to coordinate development resources to complete system deliverables. He will also be monitoring development deliverables, tracking progress and will provide status reports. He will be responsible for ensuring that software deliverables are completed with good quality and on time.

Experience: Charlie has his Project Management Professional (PMP) certification and has 18 years of experience in managing large-scale implementations and complex IT systems development. He has extensive experience working with environmental permitting, monitoring, inspection, C/E and is a resident expert in the project life cycle development. He has managed large scale projects of over \$ 100 million in size.

He offers expert working knowledge of SOA oriented implementation, XML implementation protocols, and data security. Charlie is an expert in the latest Web service development toolkits for both .NET and J2EE and is experienced in the development and implementation of XML technologies (XML schema and XML style sheets).

Charlie will bring the following valuable assets to the project:

- Over 18 years of environmental IT projects at state agencies focus on online reporting and e-Permitting
- Over 14 years of project experiences on Exchange Network standards/guidelines, protocols, Node, data flow implementations, EN Browser, ENDS, SOA services, RESTful services, and e-Enterprise
- Expert knowledge of environmental permitting, monitoring, inspection, C/E which will be instrumental to design and delivery of the System
- Familiar with environmental e-Permitting and mobile inspection processes and related IT projects
- System architecture and implementation of SOA systems and XML technologies
- Technical expertise on work flow foundation, windows presentation foundation, .NET framework, XAML, XML gateway
- Resident expert on system development quality assurance based on software engineering institute's CMMI-3 model
- Extensive working experience in SQL Server database, C#, C++, C, VC++(MFC, ATL), VB, VBA, Java, VBScript, JavaScript, XML, HTML, ASP
- Excellent project facilitation skills, easy to work with, and results oriented

4. enfoTech Background Information

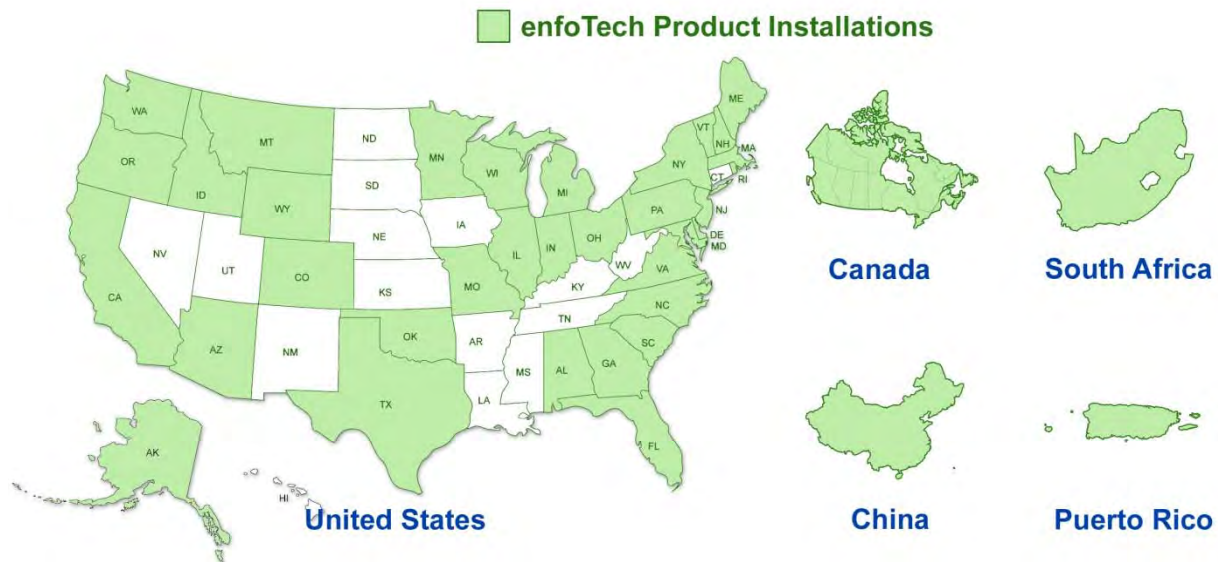
enfoTech is a privately owned C-corporation. The company was incorporated in the state of New Jersey on December 21, 1994. The Company has a very strong financial standing and a prosperous business/financial outlook. enfoTech is a small, woman and minority-owned business.

Year Established	1994
State Registered	New Jersey
Type of Registration	Privately Owned C-Corporation
Address	1368 How Lane, North Brunswick, NJ 08902
Phone & Fax	Phone: 732-839-1688; Fax: 732-214-8619
Federal Tax ID	223364641
Dun and Bradstreet Number	015926413
Web Site	http://www.enfotech.com
Offices to Complete this RFP Project	1368 How Lane, North Brunswick, NJ 08902
Average Number of Full-time Staff	40 to 50 in past 3 years
RFP Contact, Contract Negotiation, Scheduling, Arrangements	Tony Jeng, Executive Vice President Phone: 732-839-1688 ext. 107 Email: Tony_Jeng@enfotech.com
Subcontractor	None
Company's Account Firm	Nicholas Boxter, CPA Whitehouse Station, NJ 08888

enfoTech is a technology-oriented company that develops enterprise-wide environmental compliance software and provides related consulting services. Our development strategy is business-process focused, workflow driven, and compliance assurance demonstration. We offer a well-defined core data model and a suite of flexible and extensible software modules to deliver a final Solution that will meet the unique requirements of each client. With this strategy in mind, we diligently produce software that offers a framework for easy configuration to address program-specific data collection and compliance management while at the same time offering cross-functional solutions for data integration using XML and Web Services technologies. Our business focus includes workflow automation, electronic data collection, and compliance management. To achieve this goal, enfoTech works closely with our customers to develop compliance management solutions that revolutionize the workplace.

enfoTech's corporate focus has been on environmental permitting, compliance reporting, and code enforcement since 1994. We have successfully implemented over 200 large-scale IT projects for regulatory agencies domestically and internationally.

Our products and project implementations cover the following regions:



In 2002, enfoTech participated in EPA's National Environmental Information Exchange and has been one of key contributors to develop core technologies for the EN community to facilitate electronic data exchange among agencies, data publishing, data discover, and data analysis.

We specialize in business process analysis, requirement definition, data modeling, system development, deployment, and outreach programs. enfoTech is a Capability Maturity Model Integration (CMMI) Level 3 candidate corporation.

We have expertise in facilitating discussions with a large group of users with diverse background to reach consensus on requirements, business process improvements, system configurations, and implementations. We are also experienced in providing training and support to our clients for a smooth roll-out of new IT systems.

If selected for this project, enfoTech will register to do business in Iowa.

We are not aware that New Jersey has a preference program for instate vendor.

5. Termination, Litigation, Debarment

enfoTech responses to each of RFP questions are listed below.

Has the Vendor had a contract for goods and/or services terminated for any reason? If so, provide full details regarding the termination.

[enfoTech response]: No.

Describe any damages or penalties assessed against or dispute resolution settlements entered into by Vendor under any existing or past contracts for goods and/or services. Provide full details regarding the circumstances, including dollar amount of damages, penalties and settlement payments.

[enfoTech response]: We have never been in any damage claims or dispute brought against the Company in the past.

Describe any order, judgment or decree of any Federal or State authority barring, suspending or otherwise limiting the right of the Vendor to engage in any business, practice or activity.

[enfoTech response]: We have never been in any order, judgement or decree brought against the Company in the past.

A list and summary of all litigation or threatened litigation, administrative or regulatory proceedings, or similar matters to which the Vendor or its officers have been a party.

[enfoTech response]: We have never been in any litigation brought against the Company in the past.

Any irregularities discovered in any of the accounts maintained by the Vendor on behalf of others. Describe the circumstances and disposition of the irregularities.

[enfoTech response]: We have never experienced of any irregularities reported to the Company in the past.

Failure to disclose these matters may result in rejection of the Proposal or termination of any subsequent Contract. The above disclosures are a continuing requirement of the Vendor. Vendor shall provide written notification to Lead Agency of any such matter commencing or occurring after submission of a Proposal, and with respect to the successful Vendor, following execution of the Contract.

[enfoTech response]: enfoTech acknowledges and will comply.

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6. Acceptance of Terms and Conditions

enfoTech acknowledges its acceptance of the terms and conditions of the RFP and the General and Special Terms and Conditions without change except as otherwise expressly stated in its Proposal, Section 9.

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7. Certification Letter

A signed copy of the RFP Attachment #1 (Certification Letter) is attached after this page.

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8. Authorization to Release Information

A signed copy of the RFP Attachment #2 (Authorization to Release Information Letter) is attached after this page.

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9. enfoTech Proposal Terms

enfoTech confirms that the goods and/or services offered in the Proposal are currently available and that all Proposal terms, including price, will remain firm 240 days following the deadline for submitting Proposals.

enfoTech can accept payments from EFT/ACH, or State Warrant.

enfoTech proposes the GovOnline, a commercial-off-the-shelf (COTS) product to meet the e-Application project needs. Therefore, enfoTech proposes some industrial standard terms for DNR to consider:

Data Ownership: DNR shall have the full ownership and right for all the data stored in the GovOnline system.

Product Ownership:

- enfoTech will continue to own the entire Title, design, source codes, intellectual properties, documentation, database schema, copyrights of the GovOnline system, and its derived products.
- enfoTech will grant to Iowa Department of Nature Resources a perpetual, irrevocable, nonexclusive, and nontransferable license under applicable copyrights and/or trade secrets to use enfoTech Software provided under the Contract issued by DNR.

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10. Appendix

Summary of enfoTech Response to Attachment 6.

- The proposed COTS software, GovOnline, offers a high degree of fit (88% match right of the box)
- There are total **697** requirements from **9** functional categories, here are our preliminary assessment of the GovOnline COTS product against the requirements.

Response Code	Count	Percentage
S : Standard functionality delivered out-of-the-box	616	88%
M : Modification/Customization/Work-around required	81	12%
T : Offered by way of a third party/ partner product	0	0%
N : Unable to provide this functionality	0	0%
Total:	697	100%

enfoTech has also provided point-by-point response to each functional requirement in Section 10.1.1 to 10.1.9. For those requirements that will require programming services, we will flag them and provide line item cost in the Cost proposal under a separate cover. DNR will have the option to pick-and-choose from the line item costs to determine the final total configuration cost.

10.1.1 Overview

Inclusions

Goals

- Increase On Time Delivery by 25%
- Reduce support hours by 33%
- Increase the volume of applications submitted electronically to 75%
- Reduce the number of screens required to submit a permit application by 33%
- Increase the number of application forms complete on submission to 90%
- Increase Customer Satisfaction Score for electronic application system by 25%
- *Remove expense of Middleware and Support Software (Appeon, PowerBuilder, Toad)*
- *Reduce expense of Oracle licensing in DNR*
- *Eliminate redundant data entry*
- *Employees are able to change application forms without the use of IT staff*
- Employees are able to produce reports from available data without the use of IT staff

Exclusions

- e-Application will not replace SLEIS for submitting emissions inventories
- e-Application will not change the functionality of One Stop Data Warehouse
- e-Application will not change the functionality of Field Office Compliance Database (FOCD)
- e-Application will not change the functionality of Stack Test Database
- e-Application will not diminish the role of Environmental staff in performing technical review of permit applications or in writing permits

enfoTech acknowledges the requirements. The proposed Solution will meet RFP requirements. Please see detailed explanation in Proposal Section 3 and 10.2.

10.1.2 Scope

This project will build an easy-to-use system for electronically submitting Construction and Title V Permit applications with all necessary forms and attachments. The system will provide a single point of access for collecting permit application information, tracking, and storing the application, including information updates as deemed necessary by agency staff. The system will provide the option to export certain information (such as emission unit/point descriptions and IDs, facility location, and facility contacts) into Word templates used by Air Quality staff to write permits so as to eliminate redundant data entry.

[enfoTech acknowledges the requirements. The proposed Solution will meet RFP requirements. Please see detailed explanation in Proposal Section 3 and 10.2.](#)

10.1.3 Global Requirements

This project will deliver a permitting application system with components of reusable code whenever possible to facilitate inter agency usability.

Creation of the following items will provide the DNR with a workable set of tools to enable e-Application solutions across multiple environmental media (e.g. air, water, solid waste, etc.). These tools will increase online reporting by industry, decrease manual data entry by agency staff, improve data quality, and incorporate easy online payment processing and tracking.

At a high-level, the following items benefit the DNR Bureaus and regulated business required to have air quality permits:

1. A sharable air e-Application system and associated documentation that can create, store, and maintain permit application forms submitted by regulated entities. Environmental agencies across the country are interested in e-Application as a means to streamline processes and reduce turnaround time. Since many of the permitting components across different environmental media are similar, other agencies that have an interest in implementing similar e-Application systems will be able to utilize the framework, modules, system architecture, programming code, documentation, and lessons learned from this project.
2. An administrative interface that will allow bureau staff to define custom data validation rules, processing rules, and form instructions.
3. A sharable module for permit workflow tracking.
4. A system that is scalable to include a permit fee payment module.
5. Adherence to EPA's Cross Media Electronic Reporting Rule (CROMERR) requirements (40 CFR Part 3).
6. Architecture designed to incorporate custom modules to allow for unique permit or state requirements.

[enfoTech acknowledges the requirements. The proposed Solution will meet RFP requirements. Please see detailed explanation in Proposal Section 3 and 10.2.](#)

10.1.4 Technical (Non-functional) Requirements



Number	Description	Requirement	Response Code (S/M/T/N)	Comment
NF1.0	Compatibility	System will work with MS Windows OS	S	Details in Section 3.7
NF1.1	Compatibility	System will work with iOS	S	Details in Section 3.7
NF1.2	Compatibility	System will work on Google Chrome	S	Details in Section 3.7
NF1.3	Compatibility	System will work on Internet Explorer and Edge	S	Details in Section 3.7

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
NF1.4	Compatibility	System will work on Mozilla Firefox	S	Details in Section 3.7
NF1.5	Compatibility	System will work on Safari	S	Details in Section 3.7
NF1.6	Compatibility	System will work on Android OS	S	Details in Section 3.7
NF2.0	Standard Design	If built as software on DNR server, system will be built to conform to DNR IT application development guidelines in SQL/C#/.NET for relational database management systems. Does not apply if solution is cloud-based.	S	Will comply
NF2.1	Standard Design	Application code must meet the usability standard of Universal Design and Section 508 of the U.S. Rehabilitation Act of 1973 (Group B Requirement). https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards#subpart_b	S	Will comply
NF2.2	Standard Design	Field attributes will conform to EPA Data Standards https://www.epa.gov/data-standards/list-epa-data-standards#file-150391	S	Will comply
NF3.0	Capacity	System must be able to accommodate up to 999,999 unique equipment numbers per facility number	S	Database has no limit to store facility and equipment data.
NF3.1	Capacity	System must be able to accommodate 999,999 unique facilities.	S	Database has no limit to store facility data.
NF3.2	Capacity	System must be able to accommodate 500-1,000 concurrent external connections.	S	Will comply
NF4.0	Dependencies	System will be built to push data to Stack Test Database	M	Details in Section 3.23
NF4.1	Dependencies	System will be built to push data to Construction Permit Search Database	M	Details in Section 3.23
NF4.2	Dependencies	System will be built to push data to One Stop Data Warehouse	M	Details in Section 3.23
NF4.3	Dependencies	System will be built to push data to AQWebApps		
NF4.4	Dependencies	System will be built to push data to records center database	M	Details in Section 3.23
NF5.0	Sustainability	System will allow Agency Admin User to add/edit/delete records in data flows to dependent systems as requirements change.	M	Details in Section 3.23
NF5.1	Sustainability	System will allow enhancements to changes in operating systems and browser compatibility as requirements change	S	Will comply
NF6.0	Application Security Refer to http://www.epa.gov/cromerr	Provide online interface to certify truth and accuracy of original submission	S	Details in Section 3.13, 3.15, and 3.16
NF6.1	Application Security	Provide mechanism to perform identity proofing of the submitter	S	Details in Section 3.13

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
NF6.2	Application Security	Create the office copy of record	S	Please refer to Section 3.13, 3.19, 10.2.1.3
NF6.3	Application Security	Bind electronic signature to online document	S	Please refer to Section 3.13
NF6.4	Application Security	Provide means to prove that the copy of record was not altered	S	Please refer to Section 3.13
NF6.5	Application Security	Provide means to repudiate a submission	S	Please refer to Section 3.13
NF7.0	Change Control	Change control process will allow changes in user interface to be in production within 30 days of start	S	Details in Section 3.25, 10.2.2.8 – Form Engine
NF7.1	Change Control	Change control process will allow changes in application forms to be in production within 15 days of start	S	Details in Section 3.25, 10.2.2.8 – Form Engine

10.1.5 User Experience (Functional) Requirements

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
F1.0	Cursor Focus	All screens will open with cursor active in first data entry field	S	
F2.0	Navigation	<Enter> advances cursor to next field	M	Additional configuration needed
F2.1	Navigation	Cursor advances left to right and then down to next row	S	
F2.2	Navigation	All links open in the same window enabling user to use the 'Back' button that corresponds with the browser's 'Back' button	S	Will comply
F2.3	Navigation	<Enter> key will function as Find/Search when a search value is entered into a field	S	Will comply
F2.4	Navigation	System will have one user interface for attaching files	S	Details in Section 3.11
F2.5	Navigation	User Interface will mimic paper forms – See Section 3.2.2	M	Please refer to Section 3.2.2.3.1 and 10.2.1.2
F3.0	Drop Down lists	All drop down lists will be sorted alphabetically ascending	S	Please refer to Section 3.3, and 10.2.1.2
F3.1	Drop Down lists	Cursor will jump to item in list matching input	S	Please refer to Section 3.3, and 10.2.1.2
F4.0	Save and Continue	All screens will allow user to save application and resume data entry later	S	Please refer to Section 3.15
F4.1	Save and Continue	Auto save will run every 15 minutes if keyboard is active	M	Additional configuration needed
F4.2	Save and Continue	If browser crashes, application will resume at last manual save/auto save when user logs into system	S	

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
F5.0	Eliminate Redundant Data Entry	Fields will populate with stored values based on facility number. Example Facility #01-23-456 location information, contact information and equipment lists populate all application forms with the option to add or remove data on new application (cannot edit must add and select)	S	Details in Section 3.9
F6.0	Field Masks	All fields with specialized format will use an input mask. Example ZIP Code, Phone Number, Professional Engineer License Number	S	Online form data entry will be equipped with data validation rules to ensure data quality. Please refer to Section 3.3, and 10.2.1.2
F7.0	Required Information	Fields marked required cannot be left blank or contain a null value	S	Online form data entry will be equipped with data validation rules to ensure data quality. Please refer to Section 3.3, and 10.2.1.2
F8.0	Field Help	All context help pop-up boxes will explain how to enter data in plain language.	S	System offers online help features. Please refer to Section 3.3, and 10.2.1.2
F9.0	Error Messages	All error message pop-up boxes will give user error message detail in plain language and provide guidance to correct data entry	S	Systems conducts validation checks on the data entry to ensure data quality. If the entered data fails validation checks, error / warning messages will be displayed to user with clear instructions on how to correct. Please refer to Section 3.3, and 10.2.1.2
F10.0	Time Indicators	System will show 'progress bar' if a command takes more than 10 seconds	M	
F10.1	Time Indicators	System will show 'busy' cursor if a command takes more than one second	S	A sample  'busy' icon as below will be displayed to user when a command takes more than one second.
F11.0	Search	Search results from any module can be sorted in tabular format	S	User can click on column header to sort search results in tabular format. 

10.1.6 Implementation Requirements

This section is dependent on vendor proposal.

10.1.7 Decommissioning Requirements

Number	System
Decom1	State Permitting and Reporting System will be archived and removed from eAirServices
Decom2	AQWebApps will be archived and removed from Air Quality Employee Manual website
Decom3	Construction Permitting Project Tracker Access database will be evaluated for elements that may be discontinued
Decom4	Title V Operating Permit Project Tracker Access database will be evaluated for elements that may be discontinued

enfoTech acknowledges the requirements and will comply.

10.1.8 Agency Neutral Processes and Requirements

This section provides detail for the development team concerning components which perform tasks determined not specific to Air Quality permitting.

10.1.8.1 Administrative Module

10.1.8.1.1 Administrative Module Process

Provide easy to use interface allowing agency staff to modify application fields such as turn on/off required data entry, add/edit/delete data validation rules, add new field, change placement of field, and add/edit/delete users and user permissions. Includes management of drop-down lists and a security level for agency staff different from Information Technology staff.

10.1.8.1.2 Administrative Module Requirements

Number	Category	Description	Requirement	Response Code (S/M/T/N)	Comment
A1.0	Permissions	Define Roles	Drop Down List: Facility User, Consultant, Agency User, Agency Senior, Agency Admin, Agency IT	S	Please refer to Section 3.18
A2.0	Permissions	Facility User	User will be able to start new permit application	S	Please refer to Section 3.15, 10.2.1.2
A2.1	Permissions	Facility User	User will be able to resume partial application	S	Please refer to Section 3.15, and 10.2.1.2
A2.2	Permissions	Facility User	User will be able to edit application prior to submit	S	Please refer to Section 3.15, and 10.2.1.2
A2.3	Permissions	Facility User	User will be able to edit application after submission and send 'update' notification	S	Please refer to Section 3.16, and 10.2.1.2
A2.4	Permissions	Facility User	User will be able to submit application	S	Please refer to Section 3.13, 3.15, 3.16, and 10.2.1.2
A2.5	Permissions	Facility User	User will be able to view application during data entry and after submission.	S	Please refer to Section 3.13, 10.2.1.2, 10.2.1.3

Number	Category	Description	Requirement	Response Code (S/M/T/N)	Comment
A3.0	Permissions	Consultant	User will inherit Facility User Permissions	S	Please refer to Section 3.13, 3.18
A3.1	Permissions	Consultant	User will be able to complete & submit applications for more than one facility	S	Please refer to Section 3.13, 3.18
A4.0	Permissions	Agency User	User will inherit Facility User Permissions	S	Please refer to Section 3.18, 10.2.2
A4.1	Permissions	Agency User	User will be able to review submitted application	S	Please refer to Section 3.18, 10.2.2
A4.2	Permissions	Agency User	User will be able to review history of changes to an application	S	Please refer to Section 3.16, 3.18, 10.2.2
A4.3	Permissions	Agency User	User will be able to update application for agency view	S	
A4.4	Permissions	Agency User	User can add/edit/remove content in drop down Lists	S	Please refer to Section 3.18, 10.2.2.8
A4.5	Permissions	Agency User	User can modify data validation rules	S	Please refer to Section 3.18, 3.26, 10.2.2.8
A4.6	Permissions	Agency User	User can add/edit/remove application questions	S	Please refer to Section 3.18, 3.26, 10.2.2.8
A4.7	Permissions	Agency User	User can add/edit/remove fields from application user interface	S	Please refer to Section 3.18, 3.26, 10.2.2.8
A6.0	Permissions	Agency Admin	User will inherit Agency User Permissions	S	Please refer to Section 3.18, 10.2.2
A6.1	Permissions	Agency Admin	User will be able to create new facility records	S	Please refer to Section 3.3, 3.18, 10.2.2
A6.2	Permissions	Agency Admin	User will be able to create new user id accounts	S	Please refer to Section 3.13, 3.18
A6.3	Permissions	Agency Admin	User will be able to deactivate user id accounts	S	Please refer to Section 3.13, 3.18
A6.4	Permissions	Agency Admin	User will be able to change user id permissions	S	Please refer to Section 3.13, 3.18
A6.5	Permissions	Agency Admin	User will be able to move/edit/delete 'undo' permits from one facility to another	M	Require additional programming
A6.6	Permissions	Agency Admin	User will be able to edit/remove incorrect data from application	S	
A6.7	Permissions	Agency Admin	User will be able to move equipment from one facility to another facility	M	Require additional programming
A6.8	Permissions	Agency Admin	User will be able to merge equipment from two or more facilities	M	Require additional programming

Number	Category	Description	Requirement	Response Code (S/M/T/N)	Comment
A6.9	Permissions	Agency Admin	User will be able to add/edit/delete fields from all module user interfaces	S	Form fields are stored in XML file. Admin will need to have XML and programming skills to make changes. Details in Section 3.18, 3.26, 10.2.2.8; Form Engine.
A6.10	Permissions	Agency Admin	User can adjust fee schedule	S	Please refer to Section 3.26, 10.2.2.8
A7.0	Permissions	DBA	User will NOT inherit permissions from any other defined role	S	Please refer to Section 3.18
A7.1	Permissions	DBA	User will be able to replicate database tables	S	Please refer to Section 3.18
A7.2	Permissions	DBA	User will be able to install software upgrades	S	Please refer to Section 3.18
A7.3	Permissions	DBA	User will be able to add rows in database tables	S	Please refer to Section 3.18
A7.4	Permissions	DBA	User will be able to add columns in database tables	S	Please refer to Section 3.18
A7.5	Permissions	DBA	User will be able to backup database	S	Please refer to Section 3.18
A7.6	Permissions	DBA	User will be able to restore database	S	Please refer to Section 3.18
A8.0	Authentication	User Authentication	All users can ask for password reset from sign in page.	S	Please refer to Section 3.13
A8.1	Authentication	User Authentication	User ID authentication will conform to established DNR protocols	S	By default the user ID authentication is compliant with CROMERR requirements. If DNR protocols have additional requirements, the system will also conform. Please refer to Section 3.13

10.1.8.2 Review Module

10.1.8.2.1 Review Module Process

Provide easy to use interface for agency staff to review submitted permit application online with option to generate a printed copy of the permit application.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.8, 3.19.

10.1.8.2.2 Review Module Requirements

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
B1.0	Facility User Review	Facility User will be able to review permit application online at any point of data entry before submitting to agency	S	Please refer to Section 3.13, 10.2.1
B1.1	Facility User Review	Facility User will be able to submit completed application or close review and edit application	S	Please refer to Section 3.13, 3.15, 10.2.1.2
B1.2	Facility User Review	Facility User will be able to review application following submission	S	Please refer to Section 3.13, 3.15, 10.2.1.2
B2.0	Agency User Review	Agency User will be able to review submitted permit application or close review and edit application	S	Please refer to Section 3.9, 3.13, 3.16, 3.18
B2.1	Agency User Review	Agency User will be able to view application as 'read only' before facility user submission	M	Programming changes required
B2.2	Agency User Review	Agency User will be able to indicate that application review is in progress and notify other users who view application with an easily recognizable signal "flashing red"	M	System can provide "flag" function for agency user to identify a submittal case is currently under review. Please refer to Section 3.20, 10.2.1.9
B2.3	Agency User Review	Agency User will be able to turn 'application in review' flag off when appropriate	S	Agency user can "unflag" a submittal case when he/she exits out of the review.
B3.0	Print Preview	Any user will be able to populate current 'paper' forms with a button that runs in the background to push application field values to pdf or Word or similar tools.	S	Please refer to Section 3.19

10.1.8.3 Attachment Module

10.1.8.3.1 Attachment Module Process

Provide easy to use interface allowing attachment of common file types for supplemental information including, but not limited to, word processing documents, spreadsheets, photos, flowcharts, process diagrams, and maps.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.8, 3.11.

10.1.8.3.2 Attachment Module Requirements

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
C1.0	Attach files	Facility User will be able to attach common file types for supplemental information including, but not limited to, word processing documents, spreadsheets, photos, flowcharts, process diagrams, and maps.	S	Please refer to Section 3.11

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
C1.1	Attach files	User will receive message box "File successfully uploaded" when file upload is complete	S	Please refer to Section 3.11
C1.2	Attach files	On error, user will receive error message box "File did not upload because" with a clear explanation i.e., - file upload timed out	S	Please refer to Section 3.11
C1.2.1	Attach files	If the error is size of attachment, provide messaging that file size is too large and allow applicant to upload smaller files.	S	Please refer to Section 3.11
C2.0	File Size	System will allow large attachments up to 40 MB in size	S	Please refer to Section 3.11

10.1.8.4 Confidential Business Information Module

10.1.8.4.1 Confidential Business Information Module Process

Provide secure mechanism for facility to request portions of permit application as 'Confidential' as allowed by Rule 567 Iowa Administrative Code section 22.107(2). Agency needs option to deny request in which case the system will not store a public copy of the application with redacted information.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.12.

10.1.8.4.2 Confidential Business Information Requirements

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
D1.0	Confidential Data	Facility User will be able to request indicated Confidential Business Information (CBI) in application	S	Please refer to Section 3.12
D1.0.1	Confidential Data	Facility User will agree to provide a letter of substantiation to support their claim.	S	Please refer to Section 3.12
D1.1	Confidential Data	Confidential Process can be redacted	S	Please refer to Section 3.12
D1.2	Confidential Data	Confidential Equipment Specifications can be redacted	S	Please refer to Section 3.12
D1.3	Confidential Data	<i>Message box to advise emissions cannot be confidential</i>	S	For certain sections, such as emissions, that will not allow redaction, system will provide instruction on user interface. If user still try to mark it as confidential, system will pop up message box to user. Please refer to Section 3.12
D2.0	Public	System will store a public copy of the permit application with redacted information completely blacked out	S	Please refer to Section 3.12

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
D3.0	Private	System will store a confidential copy of the permit application with all information for Agency User to perform technical review and issue permit	S	Please refer to Section 3.12

10.1.8.5 Payment Module

10.1.8.5.1 Payment Module Process

Provide method for a regulated entity applying for air quality permit to pay fees. The fee mechanism must conform to Payment Card Industry Data Security Standard (PCI DSS) rules and must allow for online payment with credit, debit or e-check. U.S. Bank is the current state vendor for online banking.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.14.

10.1.8.5.2 Payment Module Requirements

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
E1.0	Pay online	Facility User chooses to pay application fee online	S	Please refer to Section 3.14
E2.0	Type of application	Check box select one	S	Please refer to Section 3.14, 10.2.1.2
E2.1	Type of application	Minor Source Construction Permit Application	M	The online form for this application type will be configured to mimic 'paper' form. The payment feature will be available for this application type. Please refer to Section 3.14
E2.2	Type of application	Minor Source Registration Permit Application	M	The online form for this application type will be configured to mimic 'paper' form. The payment feature will be available for this application type. Please refer to Section 3.14
E2.3	Type of application	Minor Source Permit by Rule Application	M	The online form for this application type will be configured to mimic 'paper' form. The payment feature will be available for this application type. Please refer to Section 3.14

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
E2.4	Type of application	Minor Source Permit Template Application	M	The online form for this application type will be configured to mimic 'paper' form. The payment feature will be available for this application type. Please refer to Section 3.14
E3.0	Invoice	If the type of permit application is not listed, display message box advising of billable hours and provide link to Air Quality Fees page	M	Help instructions and reference URL link can be easily added into the system.
E3.1	Invoice	User can pay invoice for billed hours online using invoice number	S	Based on the invoice number input by user, system will display the invoiced amount and invoice due date for user to verify. Please refer to Section 3.14
E4.0	Type of payment	Secure website payment process authorized by OCIO	M	Please refer to Section 3.14

10.1.8.6 Project Tracking Module

10.1.8.6.1 Project Tracking Module Process

Provide easy to use project tracking tool to facility (read only) and agency staff (update) with status/workflow stage for each active permit application (see G2.11).

Permit application status includes, but is not limited to, the following: submitted, received, complete and accurate, assigned, technical review, requesting information, public notice, issued, and expiration date. Please include a component to track billable hours. The status of current Construction Permit applications, as well as Draft and Final Permits, are shown in the [Construction Permit Search](#) database. Current Title V Draft and Final Permits are published on DNR's website: [Title V Draft and Final Permits](#). Both Construction Permit and Title V Operating Permit program areas use an Access database for project tracking. We are seeking recommendations for an alternate solution.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.20.

10.1.8.6.2 Project Tracking Module Field Requirements

Facility data is agency neutral. Project/Application data and Permit data are specific to Air Quality program but would easily be modified to fit another program.

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G1.0	Facility Data	Facility Name	Text Box	S	Please refer to Section 3.3

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G1.1	Facility Data	Facility Number	Text Box 10 characters	S	Please refer to Section 3.3
G1.2	Facility Data	EQ Number	Text Box 7 characters	S	Please refer to Section 3.3
G1.3	Facility Data	Type of Facility	Drop Down List: Minor EI, Title V, Title V/Minor EI, Aggregate Processing Plant, Hot Mix Asphalt Plant, Concrete Batch Plant, Compression Ignition Engines, Spark Ignition Engines, Large Bulk Gas Plant, Small Bulk Gas Plant, Group 1 Grain Elevators, Group 2 Grain Elevators, Prepared Feeds, Permit by Rule Spray Booth.	S	Please refer to Section 3.3. The drop-down list can be updated by system admin on the front end.
G1.5	Facility Data	Contact Last Name	Text Box	S	Please refer to Section 3.3
G1.6	Facility Data	Contact Title	Text Box	S	Please refer to Section 3.3
G1.7	Facility Data	Contact Phone Number	All phone numbers will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be (nnn) nnn-nnnn. This field will be varchar 15 to match One Stop Standard. The input mask will be displayed while the user is entering the information.	S	Please refer to Section 3.3
G1.8	Facility Data	Contact Email Address	Email address must have a valid domain name format	S	Please refer to Section 3.3. System conducts validation check to ensure the email address format is valid.
G1.9	Facility Data	Parent Company Name	Text Box	S	Please refer to Section 3.3
G1.10	Facility Data	Mailing Address 1	Text Box	S	Please refer to Section 3.3
G1.11	Facility Data	Mailing Address 2	Text Box	S	Please refer to Section 3.3
G1.12	Facility Data	Mailing City	Text Box	S	Please refer to Section 3.3
G1.13	Facility Data	Mailing State	Drop Down List defaults to IA	S	Please refer to Section 3.3
G1.14	Facility Data	Mailing Zip	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn-nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3
G1.10	Facility Data	Billing Address 1	Text Box (if different from Mailing Address)	S	Please refer to Section 3.3

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G1.11	Facility Data	Billing Address 2	Text Box	S	Please refer to Section 3.3
G1.12	Facility Data	Billing City	Text Box	S	Please refer to Section 3.3
G1.13	Facility Data	Billing State	Drop Down List defaults to IA	S	Please refer to Section 3.3
G1.14	Facility Data	Billing Zip	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn-nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3
G1.15	Facility Data	Site Address 1	Text Box	S	Please refer to Section 3.3
G1.16	Facility Data	Site Address 2	Text Box	S	Please refer to Section 3.3
G1.17	Facility Data	Site City	Text Box	S	Please refer to Section 3.3
G1.18	Facility Data	Site State	Drop Down List defaults to IA	S	Please refer to Section 3.3
G1.19	Facility Data	Site Zip	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn-nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3
G1.20	Facility Data	Site County	Drop Down List of Iowa county names	S	Please refer to Section 3.3
G1.21	Facility Data	Responsible Official First Name	Text Box	S	Please refer to Section 3.3, 3.13
G1.22	Facility Data	RO Last Name	Text Box	S	Please refer to Section 3.3, 3.13
G1.23	Facility Data	RO Title	Text Box	S	Please refer to Section 3.3, 3.13
G1.24	Facility Data	RO Company	Text Box	S	Please refer to Section 3.3, 3.13
G1.25	Facility Data	RO Address 1	Text Box	S	Please refer to Section 3.3, 3.13
G1.26	Facility Data	RO Address 2	Text Box	S	Please refer to Section 3.3, 3.13
G1.27	Facility Data	RO City	Text Box	S	Please refer to Section 3.3, 3.13
G1.28	Facility Data	RO State	Drop Down List defaults to IA	S	Please refer to Section 3.3, 3.13

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G1.29	Facility Data	RO Zip	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn- nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3, 3.13
G1.30	Facility Data	SIC Code	Text Box 4 characters	S	Please refer to Section 3.3
G1.31	Facility Data	NAICS Code	Text Box 6 characters	S	Please refer to Section 3.3
G1.32	Facility Data	Field Office	Drop Down List of DNR field office locations	S	Please refer to Section 3.3
G2.0	Project Data	Project Number	Text Box 12 characters	S	Please refer to Section 3.20
G2.1	Project Data	Type of Application	Drop Down List: Title V Initial, Title V Renewal, Construction Permit Initial, Title V Supplemental Information, Title V Administrative Amendment, Title V Minor Permit Modification, Title V Significant Permit Modification, Rescission, Variance; CP Other Complex; CP Standard, CP PSD/NA-NSR Complex; Other Complex Type (dependent drop down list): SIP, PSD Synthetic, Title V Synthetic, Greenfield biofuel, Netting, Legal, Compliance, Consent Decree; Type of Application table includes billable rate by type of application for management reports	S	Please refer to Section 3.20
G2.2	Project Data	Submitted by Consultant	Yes/No Radio Button, if Yes text box displays to enter Consultant Name	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G2.3	Project Data	If Yes, Consultant Name	Drop down List based on table of frequently used Consultants	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.4	Project Data	Facility Requested Draft Permit	Yes/No Radio Button	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.5	Project Data	Facility Requested Confidentiality	Yes/No Radio Button	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.6	Project Data	Date Received	Pop up Calendar selection tool	S	Please refer to Section 3.20
G2.7	Project Data	Application Late	Yes/No Radio Button	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G2.8	Project Data	Application Incomplete	Yes/No Radio Button	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.9	Project Data	Date Assigned to Staff	Pop up Calendar selection tool	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.10	Project Data	Assigned Staff	Drop Down List: Name of Environmental Specialist or Engineer assigned to permit application; table of employees includes job classification and billable rate for management reports.	M	The Solution currently categorizes the assigned staff as: (1) Project Director (who will be responsible to reassign project manager), (2) Project Manager, and (3) Project Team member. The list of assigned staff currently includes staff name, job title, and classification. The billable rate will be added to the list.
G2.11	Project Data	Project Status	Drop Down List: Waiting to be assigned, Permit writer assigned, Technical review in progress, Request additional information from applicant, Referred to compliance, Referred to legal, Referred to other, Draft permit issued, Public notice, Final permit issued (list can be edited by Agency User Role see A4.4)	S	Please refer to Section 3.20. System admin can update reference data in drop-down list.
G2.12	Project Data	Project Status Date	Pop up Calendar selection tool	S	Please refer to Section 3.20.

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G2.13	Project Data	Project Event	Drop Down List: Construction Welcome Call, Administratively Complete, Construction Request Information, Construction Awaiting Engineer Assignment, Construction Review Engineer Assigned, Construction Engineer Review, Modeling Assessment, Construction Draft Permit Issued, , Title V Received, Title V Assigned, Title V Information Request, Title V Technical Review, Title V Facility Review, Title V Expiration Date, Public Notice, Final Permit Issued, (list can be edited by Agency User Role see A4.4)	M	The “Project” module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into ‘Project Detail’ page. Please refer to Section 3.20
G2.14	Project Data	Project Event Date	Pop up Calendar selection tool	M	The “Project” module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into ‘Project Detail’ page. Please refer to Section 3.20
G2.23	Project Data	Copy Application sent to EPA	Yes/No Radio Button	M	The “Project” module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into ‘Project Detail’ page. Please refer to Section 3.20
G2.24	Project Data	CP Projects to Title V Sources	List of each project attached to Facility Number	S	User is able to view a list of associated project(s) under a facility
G2.25	Project Data	CP Permits per Project	Numeric 3 characters	M	The “Project” module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into ‘Project Detail’ page. Please refer to Section 3.20

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G2.26	Project Data	Time Tracking Activity Code	Drop Down List joined to Type of Application table and includes billable rate for management reports	S	Please refer to Section 3.20
G2.27	Project Data	Time Tracking Duration	Numeric 6 characters	S	Please refer to Section 3.20
G2.28	Project Data	Time Tracking Activity Date	Pop up Calendar selection tool	S	Please refer to Section 3.20
G2.29	Project Data	Time Tracking Activity Approval Date	Pop up Calendar selection tool	S	Please refer to Section 3.20
G2.30	Project Data	NSPS Flag	Yes/No Radio Button, if Yes text box displays to enter NSPS Subpart	M	The “Project” module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into ‘Project Detail’ page. Please refer to Section 3.20
G2.31	Project Data	if Yes, NSPS Subpart	Memo Box	M	The “Project” module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into ‘Project Detail’ page. Please refer to Section 3.20
G2.31.1	Project Data	+ for additional NSPS Subpart	Memo Box	M	The “Project” module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into ‘Project Detail’ page. Please refer to Section 3.20

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G2.32	Project Data	NESHAP Flag	Yes/No Radio Button, if Yes text box displays to enter NESHAP Subpart	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.33	Project Data	if Yes, NESHAP Subpart	Memo Box	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.33.1	Project Data	+ for additional NESHAP Subpart	Memo Box	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.34	Project Data	Acid Rain	Yes/No Radio Button	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G2.35	Project Data	CSAPR	Yes/No Radio Button	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.36	Project Data	CP Exempt Determination	Numeric 3 characters	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.37	Project Data	Denials	Numeric 3 characters	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.38	Project Data	Withdrawals	Numeric 3 characters	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G2.39	Project Data	Rescissions	Numeric 3 characters	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.40	Project Data	CP Comments	Memo Box	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G2.41	Project Data	TV Comments	Memo Box	M	The "Project" module in the proposed Solution captures project detailed information. The detailed information data elements could be different by project type / application type. This data element will be added into 'Project Detail' page. Please refer to Section 3.20
G3.0	Permit Data	Permit Number	Text Box 16 characters	S	Please refer to Section 3.20, 10.2.2.3
G3.1	Permit Data	Date Permit Issued	Pop up Calendar selection tool	S	Please refer to Section 3.20, 10.2.2.3
G3.2	Permit Data	Permit Type	Drop Down List: Concrete Batch, Aggregate Processing, Asphalt, Grain Elevators Group 1, Grain Elevators Group 2, Group of Identical Permits, Collection of Air Permits, Plant-wide Applicability Limits, Standard Permit, Bulk Gasoline Plant Small, Bulk Gasoline Plant Large, Title V Initial Operating Permit, Title V Renewal Operating Permit, Title V Supplemental, Title V Minor Modification, Title V Significant Modification, Title V EZ Mod. (list can be edited by Agency User Role see A4.4)	S	Please refer to Section 3.20, 10.2.2.3.

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G3.3	Permit Data	Date Permit Expires	Pop up Calendar selection tool	S	Please refer to Section 3.20, 10.2.2.3
G3.4	Permit Data	Emission Point ID	Drop Down List populated by EP IDs associated with Facility Number	S	Please refer to Section 3.3, 3.4, 10.2.2.2, 10.2.2.3
G3.5	Permit Data	Emission Point Description	Populated from EP ID read only	S	Please refer to Section 3.3, 3.4, 10.2.2.2, 10.2.2.3
G3.6	Permit Data	Stack Shape	Populated from EP ID read only	S	Please refer to Section 3.3, 3.4, 10.2.2.2, 10.2.2.3
G3.7	Permit Data	Stack Size	Populated from EP ID read only	S	Please refer to Section 3.3, 3.4, 10.2.2.2, 10.2.2.3
G3.8	Permit Data	Discharge Style	Populated from EP ID read only	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.9	Permit Data	Exhaust Stream Flow Rate	Populated from EP ID read only	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.10	Permit Data	Exhaust Stream Exit Temperature	Populated from EP ID read only	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.11	Permit Data	Emission Point Start Operations Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.12	Permit Data	Emission Point Cease Operations Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.13	Permit Data	Emission Unit ID	Drop Down List populated by EU IDs associated with Facility Number	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.14	Permit Data	Emission Unit Description	Populated from EU ID read only	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.15	Permit Data	Emission Unit Start Operations Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.16	Permit Data	Emission Unit Cease Operations Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.17	Permit Data	Control Equipment ID	Can select from drop down list populated based facility number	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3
G3.18	Permit Data	Control Equipment Description	Populated from CE ID read only	S	Please refer to Section 3.3, 3.4, 3.5, 10.2.2.2, 10.2.2.3

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G4.0	User Interface	Issued permit can be uploaded when data entry is complete without waiting for an overnight cycle	Upload takes no more than 5 minutes from start; Eliminate duplicate storing of documents for time & money.	S	Please refer to Section 3.19, 3.20
G4.0.1	User Interface	Draft construction permit can be uploaded to Construction Permit Search, draft Title V permit posted to the website.	Upload takes no more than 5 minutes from start	S	Please refer to Section 3.19, 3.20
G4.0.2	User Interface	All permits that require a public comment can be uploaded. This can include minor projects, SIP projects, etc	Upload takes no more than 5 minutes from start	S	Please refer to Section 3.19, 3.20
G4.1	User Interface	User can upload multiple permits in single session	Browse and select multiple documents	S	One permit for each upload. One Session can support multiple permit uploads.
G4.2	User Interface	View issued permit as soon as agency uploads document		S	Please refer to Section 10.2.1
G4.3	User Interface	Final signed permit will show date stamp and user id		S	Please refer to Section 3.20
G4.4	User Interface	System will compare final projects to posted permits and produce a report of missing permits for section supervisor		M	
G4.5	User Interface	System will notify section supervisor when construction project is marked final so invoice can be generated and sent to facility		S	"Send invoice" will be part of the construction project work flow. Once the project is final, the "Send invoice" task will be triggered and send email to alert section supervisor. Please refer to Section 3.20, 10.2.2.8

Number	Category	Description	Validation rules	Response Code (S/M/T/N)	Comment
G4.6	User Interface	System will notify section supervisor, permit writer, and facility contact when issued permit is posted		S	Email notification can be triggered when a permit is issued. System admin is able to update the email notification template, and recipient(s).
G4.7	User Interface	Search for project status by facility name, facility number, project number, city, county		S	Please refer to Section 3.20
G4.8	User Interface	Search for all current applications by facility name, facility number, city, county, date range		S	Please refer to Section 3.20. The "Submittal Review" module provided by the Solution allows user to search applications by these filters.
G4.9	User Interface	Search for all permits by facility name, facility number, city, county, date range		S	Please refer to Section 3.3, 3.4, 3.20. The "Submittal Review" module and "Permit Management" module provided by the Solution allows user to search applications by these filters.
G4.10	User Interface	Search by Emission Point Description		S	Please refer to Section 3.3, 3.4
G4.11	User Interface	Search by Engineer/Environmental Specialist name		S	Please refer to Section 10.2.2.1

10.1.8.7 **Report Module**

The reporting module will be built agency neutral. The program area using the system will define the standard reports.

10.1.8.7.1 **Report Module Process**

Provide easy to use interface for requesting 'stock' reports such as how many open applications, how many issued permits, number of construction projects by facility. Provide ability to build on demand 'ad hoc' reports. Examples of current standard reports are available at [Select DNR-Air Quality Databases](#).

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.21, 3.22.

10.1.8.7.2 **Report Module Requirements**

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
H1.0	Standard reports	All Open Applications	S	Please refer to Section 3.9, 3.21, 10.2.2.6,
H1.1	Standard reports	All Applications in date range	S	Please refer to Section 3.9, 3.21, 10.2.2.6
H1.2	Standard reports	All Applications by Facility in date range	S	Please refer to Section 3.9, 3.21, 10.2.2.6
H1.3	Standard reports	All Applications by Type of Permit in date range	S	Please refer to Section 3.9, 3.21, 10.2.2.6

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
H1.4	Standard reports	All Applications within x distance of GIS point	S	Please refer to Section 3.21, 10.2.2.6,
H1.5	Standard reports	Source parameters for neighboring facilities to the applicant	S	Please refer to Section 3.21, 10.2.2.6,
H1.6	Standard reports	Source parameters for emission points at the facility that are not part of current application	M	
H1.7	Standard reports	Turn-around time by type of permit by date range	S	The Solution provides performance metrics analysis report to track turn-around time by permit type, or program area, or section, or permit event, or application type. Please refer to Section 3.21, 10.2.2.6
H1.8	Standard reports	On Time Delivery by type of permit, permit event and by date range	S	The Solution provides performance metrics analysis report by permit type, or program area, or section, or permit event, or application type. Please refer to Section 3.21, 10.2.2.6
H1.9	Standard reports	Issued permits by date range	S	Please refer to Section 3.21, 10.2.2.6
H1.10	Standard reports	Issued permits by facility	S	Please refer to Section 3.21, 10.2.2.6
H1.11	Standard reports	Current equipment list for facility	S	Please refer to Section 3.21, 10.2.2.6
H1.12	Standard reports	Summary of actual emissions data by pollutant at the emission point level	S	Please refer to Section 3.21, 10.2.2.6,
H1.13	Standard reports	Summary of potential emissions data by pollutant at the emission point level	S	Please refer to Section 3.21, 10.2.2.6,
H1.14	Standard reports	Issued permits by project type and facility type	S	Please refer to Section 3.21, 10.2.2.6
H2.0	Ad hoc reports	Allow fields to be added to standard report	S	Please refer to Section 3.22, 10.2.2.6
H2.1	Ad hoc reports	Create new queries/reports	S	Please refer to Section 3.22, 10.2.2.6
H3.0	Export	Allows user to export data in tabular format	S	Please refer to Section 3.21, 3.22
H3.1	Export	Allows user to configure tabular output to allow easier import into various software formats	S	To be addressed by ad-hoc data query module.

10.1.8.8 Facility Module

Facility module will be built agency neutral. The link to view specific forms is for context purposes.

10.1.8.8.1 Facility Module Process

Provide easy to use interface to collect basic facility information (including, but not limited to, location with GIS and associated metadata, contact, type of permit, responsible official.). Current forms are part of

this RFP as RFP-DNR eApp-Attachment 7a-Construction Permit Application Forms, RFP-DNR eApp-Attach 7b-Construction Permit Application Instructions, RFP-DNR eApp-Attach 7c-Construction Permit Templates & Registrations, RFP-DNR eApp-Attach 8a-Title V Operating Permit Application Forms, and RFP-DNR eApp-Attach 8b-Title V Operating Permit Application Instructions.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.3.

10.1.8.8.2 Facility Module Requirements

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
K1.0	Facility Location	Street Address	Text Box	S	Please refer to Section 3.3
K1.1	Facility Location	City	Text Box	S	Please refer to Section 3.3
K1.2	Facility Location	State	Drop Down List defaults to IA	S	Please refer to Section 3.3
K1.3	Facility Location	ZIP Code	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn-nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3
K1.4	Facility Location	County	Drop Down List of Iowa county names	S	Please refer to Section 3.3
K1.5	Facility Location	UTM Easting	Numeric	S	Please refer to Section 3.3
K1.6	Facility Location	UTM Northing	Numeric	S	Please refer to Section 3.3
K1.7	Facility Location	UTM Zone	Radio Buttons: 14 or 15	S	Please refer to Section 3.3
K1.8	Facility Location	Latitude Measure	Numeric	S	Please refer to Section 3.3
K1.9	Facility Location	Longitude Measure	Numeric	S	Please refer to Section 3.3
K1.10	Facility Location	Reference Point	Text Box	S	Please refer to Section 3.3
K2.0	Facility Contact	First Name	Text Box	S	Please refer to Section 3.3
K2.1	Facility Contact	Last Name	Text Box	S	Please refer to Section 3.3
K2.2	Facility Contact	Title	Text Box	S	Please refer to Section 3.3
K2.3	Facility Contact	Street Address	Text Box	S	Please refer to Section 3.3
K2.4	Facility Contact	City	Text Box	S	Please refer to Section 3.3
K2.5	Facility Contact	State	Drop Down List defaults to IA	S	Please refer to Section 3.3

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
K2.6	Facility Contact	ZIP Code	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn-nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3
K2.7	Facility Contact	Phone	All phone numbers will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be (nnn) nnn-nnnn. This field will be varchar 15 to match One Stop Standard. The input mask will be displayed while the user is entering the information.	S	Please refer to Section 3.3
K2.8	Facility Contact	email	Email address must have a valid domain name format	S	Please refer to Section 3.3
K3.0	Responsible Official	First Name	Text Box	S	Please refer to Section 3.3, 3.13
K3.1	Responsible Official	Last Name	Text Box	S	Please refer to Section 3.3, 3.13
K3.2	Responsible Official	Title	Text Box	S	Please refer to Section 3.3, 3.13
K3.3	Responsible Official	Street Address	Text Box	S	Please refer to Section 3.3, 3.13
K3.4	Responsible Official	City	Text Box	S	Please refer to Section 3.3, 3.13
K3.5	Responsible Official	State	Drop Down List defaults to IA	S	Please refer to Section 3.3, 3.13
K3.6	Responsible Official	ZIP Code	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn-nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3, 3.13
K3.7	Responsible Official	Phone	All phone numbers will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be (nnn) nnn-nnnn. This field will be varchar 15 to match One Stop Standard. The input mask will be displayed while the user is entering the information.	S	Please refer to Section 3.3, 3.13
K3.8	Responsible Official	email	Email address must have a valid domain name format	S	Please refer to Section 3.3, 3.13

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
K4.0	Facility General	Company Name	Text Box	S	Please refer to Section 3.3
K4.1	Facility General	Facility Number	Text Box 10 characters	S	Please refer to Section 3.3
K4.2	Facility General	EIQ Number	Text Box 7 characters	S	Please refer to Section 3.3
K4.3	Facility General	Grain Elevator Usage Code	Text Box 4 character; must be complete; if not a grain elevator, defaults to Not Applicable	S	Please refer to Section 3.3
K4.4	Facility General	Employee Count	Numeric	S	Please refer to Section 3.3
K4.5	Facility General	Portable Site	Yes/No Radio Button	S	Please refer to Section 3.3
K4.6	Facility General	SIC Code	Required: Text Box 4 characters; Enter if known or use search http://www.osha.gov/pls/imis/sicsearch.html	S	Please refer to Section 3.3
K4.6.1	Facility General	Secondary SIC Code	Text Box 4 characters; Optional	S	Please refer to Section 3.3
K4.6.2	Facility General	Tertiary SIC Code	Text Box 4 characters; Optional	S	Please refer to Section 3.3
K4.7	Facility General	NAICS Code	Required: Text Box 6 characters; Enter if known or use search http://www.census.gov/eos/www/naics/index.html	S	Please refer to Section 3.3
K4.7.1	Facility General	Secondary NAICS Code	Text Box 6 characters; Optional	S	Please refer to Section 3.3
K4.7.2	Facility General	Tertiary NAICS Code	Text Box 6 characters; Optional	S	Please refer to Section 3.3
K4.8	Facility General	Type of Permit	Drop Down List: Construction Permit, Title V Initial, Title V Renewal, Title V Supplemental Information, Title V Administrative Amendment, Title V Minor Permit Modification, Title V Significant Permit Modification, Rescission, Variance	S	Please refer to Section 3.3
K4.9	Facility General	Close Date	Pop up Calendar selection tool	S	Please refer to Section 3.3
K4.10	Facility General	Close Date Comments	Text Box	S	Please refer to Section 3.3
K4.11	Facility General	Former Name	Text Box; Optional	S	Please refer to Section 3.3
K4.12	Facility General	Draft Permits	Yes/No Radio Button; Defaults to No	S	Please refer to Section 3.3
K4.13	Facility General	Business Description	Text Box	S	Please refer to Section 3.3
K4.14	Facility General	Adjacent Facilities	Text Box; Optional	S	Please refer to Section 3.3

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
K4.15	Facility General	Emission Units subject to Part 60 NSPS?	Yes/No Radio Button, if Yes is selected user must enter list of emission units in K4.15.1 else receive error message	S	Please refer to Section 3.3
K4.15.1	Facility General	If Yes, please list the emission units and the applicable NSPS subparts	Text Box	S	Please refer to Section 3.3
K4.16	Facility General	Emission Units subject to Part 61 or Part 63 NESHAP standard?	Yes/No Radio Button, if Yes is selected user must enter list of emission units in K4.16.1 else receive error message. See Appendix B	S	Please refer to Section 3.3
K4.16.1	Facility General	If Yes, please list the emission units and the applicable NESHAP subparts	Text Box	S	Please refer to Section 3.3
K5.0	Permit Preparer	Is Permit Application Prepared by Consultant?	Yes/No Radio Button, if Yes, expand accordion to display K5.1-K5.10	S	Please refer to Section 3.3, 3.13
K5.1	Permit Preparer	Permit Preparer First Name	Text Box	S	Please refer to Section 3.3, 3.13
K5.2	Permit Preparer	Permit Preparer Last Name	Text Box	S	Please refer to Section 3.3, 3.13
K5.3	Permit Preparer	Permit Preparer Address	Text Box	S	Please refer to Section 3.3, 3.13
K5.4	Permit Preparer	Permit Preparer City	Text Box	S	Please refer to Section 3.3, 3.13
K5.5	Permit Preparer	Permit Preparer State	Drop Down List defaults to IA	S	Please refer to Section 3.3, 3.13
K5.6	Permit Preparer	Permit Preparer ZIP Code	All ZIP Codes will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be nnnnn-nnnn. This field will match One Stop Standard. The input mask will be displayed while the user is entering information	S	Please refer to Section 3.3, 3.13
K5.7	Permit Preparer	Permit Preparer Email Address	Email address must have a valid domain name format	S	Please refer to Section 3.3, 3.13

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
K5.8	Permit Preparer	Permit Preparer Phone Number	All phone numbers will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be (nnn) nnn-nnnn. This field will be varchar 15 to match One Stop Standard. The input mask will be displayed while the user is entering the information.	S	Please refer to Section 3.3, 3.13
K5.9	Permit Preparer	Permit Preparer Iowa P.E. Number	Text Box; max length for Iowa PE Number is 8 characters	S	Please refer to Section 3.3, 3.13
K5.10	Permit Preparer	Permit Preparer Signature	Mechanism to acknowledge authority to prepare application on behalf of Responsible Official	S	Please refer to Section 3.3, 3.13

10.1.9 Agency Specific Processes and Requirements.

This section provides detail for the development team concerning components which perform tasks determined specific to Air Quality permitting.

10.1.9.1 Import Module

Decision to make - will system allow import? Facility could import new data with each application, concerns raised about data integrity

10.1.9.1.1 Import Module Process

System will be built to allow import of certain data fields (i.e., facility information, equipment lists, and emission information) from a common file format such as *.csv. Knowledge of Environmental Management Systems would be beneficial when building this module. Import will be designed to balance ease of use with data integrity.

Response Code (S/M/T/N): M

Comment: Please refer to Section 3.17.

10.1.9.1.2 Import Module Requirements

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
I1.0	Emission Unit Information	Emission Unit Number	M	Details in Section 3.3, 3.4, 3.17
I1.1	Emission Unit Information	Emission Unit Description	M	Details in Section 3.3, 3.4, 3.17
I1.2	Emission Unit Information	SCC Number	M	Details in Section 3.3, 3.4, 3.17
I1.3	Emission Unit Information	Manufacturer	M	Details in Section 3.3, 3.4, 3.17
I1.4	Emission Unit Information	Model Name	M	Details in Section 3.3, 3.4, 3.17
I1.5	Emission Unit Information	Model Number	M	Details in Section 3.3, 3.4, 3.17
I1.6	Emission Unit Information	Serial Number	M	Details in Section 3.3, 3.4, 3.17

Number	Description	Requirement	Response Code (S/M/T/N)	Comment
I1.7	Emission Unit Information	Construction Date	M	Details in Section 3.3, 3.4, 3.17
I1.8	Emission Unit Information	Installation Date	M	Details in Section 3.3, 3.4, 3.17
I1.9	Emission Unit Information	Modification Date	M	Details in Section 3.3, 3.4, 3.17
I1.10	Emission Unit Information	Maximum Hourly Design Rate	M	Details in Section 3.3, 3.4, 3.17
I2.0	Emission Point Information	Emission Point Number	M	Details in Section 3.3, 3.4, 3.17
I2.1	Emission Point Information	Emission Point Description	M	Details in Section 3.3, 3.4, 3.17
I2.2	Emission Point Information	Emission Point Type	M	Details in Section 3.3, 3.4, 3.17
I2.3	Emission Point Information	Stack Shape	M	Details in Section 3.3, 3.4, 3.17
I2.4	Emission Point Information	Stack Dimensions	M	Details in Section 3.3, 3.4, 3.17
I2.5	Emission Point Information	Stack Height above ground	M	Details in Section 3.3, 3.4, 3.17
I2.6	Emission Point Information	Stack Location UTM Easting	M	Details in Section 3.3, 3.4, 3.17
I2.7	Emission Point Information	Stack Location UTM Northing	M	Details in Section 3.3, 3.4, 3.17
I2.8	Emission Point Information	Stack UTM Zone	M	Details in Section 3.3, 3.4, 3.17
I2.9	Emission Point Information	Stack UTM Datum	M	Details in Section 3.3, 3.4, 3.17
I2.10	Emission Point Information	Exhaust Stream Flow Rate Units of Measure	M	Details in Section 3.3, 3.4, 3.17
I2.11	Emission Point Information	Exhaust Stream Flow Rate Value	M	Details in Section 3.3, 3.4, 3.17
I2.12	Emission Point Information	Exhaust Stream Exit Temperature	M	Details in Section 3.3, 3.4, 3.17
I3.0	Control Equipment by Emission Unit	Control Equipment Number	M	Details in Section 3.3, 3.4, 3.17
I3.1	Control Equipment by Emission Unit	Control Equipment Type	M	Details in Section 3.3, 3.4, 3.17
I3.2	Control Equipment by Emission Unit	Manufacturer	M	Details in Section 3.3, 3.4, 3.17
I3.3	Control Equipment by Emission Unit	Model Number	M	Details in Section 3.3, 3.4, 3.17
I3.4	Control Equipment by Emission Unit	Serial Number	M	Details in Section 3.3, 3.4, 3.17
I3.5	Control Equipment by Emission Unit	Installation Date	M	Details in Section 3.3, 3.4, 3.17

10.1.9.2 [Data Flow Module](#)

10.1.9.2.1 Data Flow Module Process

System will be built to provide data to dependent downstream systems including, but not limited to, Stack Test Database, Construction Permit Search, One Stop Data Warehouse, SLEIS, and AQWebApps. It is acceptable if this is achieved with an overnight batch process.

Response Code (S/M/T/N): M

Comment: Please refer to Section 3.23.

10.1.9.2.2 Data Flow Module Requirements

Data Flow requirements are found in Attachment 9-Data Flow Modules.

Response Code (S/M/T/N): M

Comment: Please refer to Section 3.23.

10.1.9.3 Equipment Module

10.1.9.3.1 Equipment Module Process

Provide easy to use interface to collect equipment for each unit/process, each stack/vent/release point location with GIS and associated metadata, each piece of control equipment, and, if applicable, each piece of continuous monitoring equipment. Current forms are part of this RFP as RFP-DNR eApp-Attachment 7a-Construction Permit Application Forms, RFP-DNR eApp-Attach 7b-Construction Permit Application Instructions, RFP-DNR eApp-Attach 7c-Construction Permit Templates & Registrations, RFP-DNR eApp-Attach 8a-Title V Operating Permit Application Forms, and RFP-DNR eApp-Attach 8b-Title V Operating Permit Application Instructions.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.4.

10.1.9.3.2 Equipment Module Requirements

L1.0-L1.15 Do not apply to Cooling Towers, see L9.7-L9.14

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L1.0	Emission Point Information	Facility Name	Applies to all types of permit. Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.4
L1.1	Emission Point Information	Emission Point Number	Duplicate section for each new Emission Point	S	Please refer to Section 3.3, 3.4
L1.2	Emission Point Information	Emission Point Description	Text box	S	Please refer to Section 3.3, 3.4
L1.3	TV only-Emission Point Information	Is this stack used as an Emergency Bypass Stack?	Yes/No Radio Button, if Yes is selected user must specify Emission Point else receive error message	S	Please refer to Section 3.3, 3.4
L1.3.1	TV only-Emission Point Information	If Yes, for which stack?	Text box to list Emission Point Numbers	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L1.4	Emission Point Information	Emission Point Type	Drop Down List: Vertical (without rain cap or obstruction), Vertical with rain cap or obstruction, Downward discharge (gooseneck), Horizontal discharge, Vent inside building, Fugitive, Other if Other text box displays to specify	S	Please refer to Section 3.3, 3.4
L4.4.1	Emission Point Information	Other Emission Point Type, please specify	Text box	S	Please refer to Section 3.3, 3.4
L1.5	Emission Point Information	Stack Shape	Drop Down List: Circular, Rectangular, Other if Other text box displays to specify	S	Please refer to Section 3.3, 3.4
L1.5.1	Emission Point Information	Other Stack Shape, please specify	Text box	S	Please refer to Section 3.3, 3.4
L1.6	Emission Point Information	Dimensions	If circular, radius in inches, if rectangular width and length in inches, if Other, text box displays to specify	S	Please refer to Section 3.3, 3.4
L1.6.1	Emission Point Information	Other Dimensions (specify)	Text box	S	Please refer to Section 3.3, 3.4
L1.7	Emission Point Information	Height above ground	Numeric in feet	S	Please refer to Section 3.3, 3.4
L1.8	TV only-Emission Point Information	Stack Location UTM Easting	Numeric	S	Please refer to Section 3.3, 3.4
L1.9	TV only-Emission Point Information	Stack Location UTM Northing	Numeric	S	Please refer to Section 3.3, 3.4
L1.10	TV only-Emission Point Information	Stack UTM Zone	Radio Buttons: 14 or 15	S	Please refer to Section 3.3, 3.4
L1.11	TV only-Emission Point Information	Stack UTM Datum	Radio Buttons: NAD 27 or NAD 83	S	Please refer to Section 3.3, 3.4
L1.13	Emission Point Information	Exhaust Stream Flow Rate Units of Measure	Radio Buttons: ACFM or SCFM	S	Please refer to Section 3.3, 3.4
L1.14	Emission Point Information	Exhaust Stream Flow Rate Value	Numeric	S	Please refer to Section 3.3, 3.4
L1.15	Emission Point Information	Exhaust Stream Exit Temperature	Numeric in degrees Fahrenheit	S	Please refer to Section 3.3, 3.4
L1.15.1	TV only-Emission Point Information	Exhaust Stream Exits at Ambient Temperature?	Yes/No Radio Button	S	Please refer to Section 3.3, 3.4
L1.16	TV only-Emission Point Information	Bypass Stack (Associated with this Emission Point) Emission Point Number	Text box; Optional but if complete user must provide description i.e., does this bypass a process? Is this an emergency bypass stack?	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L1.17	TV only-Emission Point Information	Bypass Stack Description	Text box	S	Please refer to Section 3.3, 3.4
L1.18	TV only-Emission Point Information	Secondary Bypass Stack Emission Point Number	Text box; Optional but if complete user must provide description i.e., does this bypass a process? Is this an emergency bypass stack?	S	Please refer to Section 3.3, 3.4
L1.19	TV only-Emission Point Information	Secondary Bypass Description	Text box	S	Please refer to Section 3.3, 3.4
L1.20	TV only-Emission Point Information	Tertiary Bypass Stack Emission Point Number	Text box; Optional but if complete user must provide description i.e., does this bypass a process? Is this an emergency bypass stack?	S	Please refer to Section 3.3, 3.4
L1.21	TV only-Emission Point Information	Tertiary Bypass Description	Text box	S	Please refer to Section 3.3, 3.4
L1.22	Emission Units Venting through this Emission Point	EU Number	Displays in tabular format with new row for each new EU; following fields are column headers;	S	Please refer to Section 3.3, 3.4
L1.23	TV only-Emission Units Venting through this Emission Point	SCC Number	Required; Enter if known or use search for SCC by keyword or partial code https://cfpub.epa.gov/webfire/	S	Please refer to Section 3.3, 3.4
L1.24	TV only-Emission Units Venting through this Emission Point	Secondary SCC Number	Optional; Search for SCC by keyword or partial code https://cfpub.epa.gov/webfire/	S	Please refer to Section 3.3, 3.4
L1.25	TV only- Emission Units Venting through this Emission Point	Tertiary SCC Number	Optional; Search for SCC by keyword or partial code https://cfpub.epa.gov/webfire/	S	Please refer to Section 3.3, 3.4
L1.26	Control Equipment Associated with this Emission Point	CE Number	New row for each new CE	S	Please refer to Section 3.3, 3.4
L1.27	TV only-Monitoring Equipment Associated with this Emission Point	ME Number	New row for each new ME	S	Please refer to Section 3.3, 3.4
L1.28	TV only-Monitoring Equipment Associated with this Emission Point	Installation Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L1.29	TV only-Monitoring Equipment Associated with this Emission Point	Modification Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4
L1.30	TV only-Monitoring Equipment Associated with this Emission Point	Construction Permit Number	Text box 16 characters	S	Please refer to Section 3.3, 3.4
L1.31	TV only-Monitoring Equipment Associated with this Emission Point	Exhaust Stream Moisture Content % (if known)	Numeric	S	Please refer to Section 3.3, 3.4
L2.0	Emission Unit Information	Facility Name	Applies to all types of permit. Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.4
L2.1	Emission Unit Information	Emission Unit Number	Duplicate section for each new Emission Unit; Every EP-EU join in L1.22 requires an EU in L2.1; System will not allow an orphan EU	S	Please refer to Section 3.3, 3.4
L2.2	Emission Unit Information	Emission Unit Description or Description of Process	Text box	S	Please refer to Section 3.3, 3.4
L2.3	Emission Unit Information	Emission Point Associated with EU	Text box	S	Please refer to Section 3.3, 3.4
L2.4	Emission Unit Information	Emission Point Description Associated with EU	Text box	S	Please refer to Section 3.3, 3.4
L2.5	Emission Unit Information	Control Equipment Associated with EU	Text box	S	Please refer to Section 3.3, 3.4
L2.6	TV only-Emission Unit Information	Monitoring Equipment Associated with EU	Text box	S	Please refer to Section 3.3, 3.4
L2.7	TV only-Emission Unit Information	SCC Number	Required; Search for SCC by keyword or partial code https://cfpub.epa.gov/webfire/	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L2.8	TV only-Emission Unit Information	Secondary SCC Number	Optional; Search for SCC by keyword or partial code https://cfpub.epa.gov/webfire/	S	Please refer to Section 3.3, 3.4
L2.9	TV only-Emission Unit Information	Tertiary SCC Number	Optional; Search for SCC by keyword or partial code https://cfpub.epa.gov/webfire/	S	Please refer to Section 3.3, 3.4
L2.10	Emission Unit Information	Name of Manufacturer	Text box	S	Please refer to Section 3.3, 3.4
L2.11	Emission Unit Information	Model Name	Text box	S	Please refer to Section 3.3, 3.4
L2.12	Emission Unit Information	Model Number	Text box	S	Please refer to Section 3.3, 3.4
L2.13	TV only-Emission Unit Information	Serial Number	Text box	S	Please refer to Section 3.3, 3.4
L2.14	Emission Unit Information	Construction Date	Text box to enter anticipated date	S	Please refer to Section 3.3, 3.4
L2.15	Emission Unit Information	Installation Date	Text box to enter anticipated date	S	Please refer to Section 3.3, 3.4
L2.16	Emission Unit Information	Modification Date	Text box to enter anticipated date	S	Please refer to Section 3.3, 3.4
L2.17	Emission Unit Information	Maximum Hourly Design Rate (Nameplate Capacity)	Text Box with Drop Down List: Pounds/Hour; Tons/Year; mmBTU/Hour; Units/Day and Other; if Other, text box displays to specify	S	Please refer to Section 3.3, 3.4
L2.17.1	Emission Unit Information	Other Unit of Measure, please specify	Text Box	S	Please refer to Section 3.3, 3.4
L2.17.2	Emission Unit Information	Maximum Process Design Capacity if different from L2.17	Text Box with Drop Down List: Pounds/Hour; Tons/Year; mmBTU/Hour; Units/Day and Other; if Other, text box displays to specify	S	Please refer to Section 3.3, 3.4
L2.17.3	Emission Unit Information	Other Unit of Measure, please specify	Text Box	S	Please refer to Section 3.3, 3.4
L2.18	Construction Permit Only	Type of Emission Unit	Drop Down List: New Unit, Unpermitted Existing Unit, Modification to the Permitted Unit, if Modification text box displays to enter Construction Permit Number	S	Please refer to Section 3.3, 3.4
L2.18.1	Construction Permit Only	Modification to Construction Permit Number	Text box 16 characters	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L2.19	Construction Permit Only	Specialized Equipment	Drop Down List: Internal Combustion Engine, Nonmetallic Mineral Processing Plant, Spray Paint Booth, Cooling Tower, Boiler. If selected accordion section for specific equipment questions displays	S	Please refer to Section 3.3, 3.4
L6.0	Construction Permit Only Internal Combustion Engine	Use of Engine	Drop Down List: Non-emergency, Emergency, Black Start, Emergency with Demand Response, Fire Pump	S	Please refer to Section 3.3, 3.4
L6.1	Construction Permit Only Internal Combustion Engine	Engine's Rated Power Unit of Measure	Radio Buttons: Brake Horsepower or Kilowatts	S	Please refer to Section 3.3, 3.4
L6.2	Construction Permit Only Internal Combustion Engine	Engine's Rated Power Value	Text box	S	Please refer to Section 3.3, 3.4
L6.3	Construction Permit Only Internal Combustion Engine	Engine Ignition Type	Radio Buttons: Compression Ignition or Spark Ignition	S	Please refer to Section 3.3, 3.4
L6.4	Construction Permit Only Internal Combustion Engine	For CI engines only: Displacement per cylinder	Numeric in liters	S	Please refer to Section 3.3, 3.4
L6.5	Construction Permit Only Internal Combustion Engine	For SI engines only: Type of engine	Radio Buttons: 2 stroke or 4 stroke	S	Please refer to Section 3.3, 3.4
L6.6	Construction Permit Only Internal Combustion Engine	For SI engines only: Fuel ratio	Radio Buttons: Rich burn or Lean burn	S	Please refer to Section 3.3, 3.4
L6.7	Construction Permit Only Internal Combustion Engine	Engine certified to EPA Tier Standard	Yes/No Radio Buttons if Yes, text box displays to provide Tier No.	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L6.7.1	Construction Permit Only Internal Combustion Engine	If Yes, provide Tier No.	Text box	S	Please refer to Section 3.3, 3.4
L6.8	Construction Permit Only Internal Combustion Engine	If engine is certified, provide copy of the Certificate of Conformity and manufacturer's technical information.	Message box	S	Please refer to Section 3.3, 3.4
L6.9	Construction Permit Only Internal Combustion Engine	If engine is not certified, include a copy of manufacturer's technical information if available	Message box	S	Please refer to Section 3.3, 3.4
L6.9.1	Construction Permit Only Internal Combustion Engine	Attachments	Radio Buttons: Certificate of Conformity or Manufacturer's technical information	S	Please refer to Section 3.3, 3.4
L6.10	Construction Permit Only Internal Combustion Engine	Fuel Type	Drop Down List: Diesel Fuel, Gasoline Fuel, Natural Gas, Other Fuels if Other Fuels text box displays to identify fuel	S	Please refer to Section 3.3, 3.4
L6.10.1	Construction Permit Only Internal Combustion Engine	Other Fuel, please identify	Text box	S	Please refer to Section 3.3, 3.4
L6.11	Construction Permit Only Internal Combustion Engine	Fuel Load Consumption Rate	Numeric in gallons/hour or cubic feet/hour	S	Please refer to Section 3.3, 3.4
L6.12	Construction Permit Only Internal Combustion Engine	Sulfur Content if Diesel or Other fuel	Numeric in % wt. or ppm	S	Please refer to Section 3.3, 3.4
L7.0	Construction Permit Only Nonmetallic Mineral Processing Plant Fugitive Only	Text box advises to complete L2.1, L2.2, L2.14, L2.17, and L2.5	Message box	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L8.0	Construction Permit Only Spray Paint Booth	Spray gun type	Text box	S	Please refer to Section 3.3, 3.4
L8.0.1	Construction Permit Only Spray Paint Booth	Spray gun capacity	Numeric in gallons/min or ounces/min	S	Please refer to Section 3.3, 3.4
L8.1	Construction Permit Only Spray Paint Booth	Transfer Efficiency %	Numeric	S	Please refer to Section 3.3, 3.4
L8.2	Construction Permit Only Spray Paint Booth	Number of guns to be used simultaneously	Numeric	S	Please refer to Section 3.3, 3.4
L8.3	Construction Permit Only Spray Paint Booth	Type of Material Used	Text box	S	Please refer to Section 3.3, 3.4
L8.4	Construction Permit Only Spray Paint Booth	Type of Material Coated	Text box	S	Please refer to Section 3.3, 3.4
L8.5	Construction Permit Only Spray Paint Booth	Solid Content	Numeric in pounds/gallon	S	Please refer to Section 3.3, 3.4
L8.6	Construction Permit Only Spray Paint Booth	VOC Content	Numeric in pounds/gallon	S	Please refer to Section 3.3, 3.4
L8.7	Construction Permit Only Spray Paint Booth	SDS Attached	Yes/No Radio Button	S	Please refer to Section 3.3, 3.4
L8.8	Construction Permit Only Spray Paint Booth	Do any of the spray materials contain compounds of chromium, lead, manganese, nickel, or cadmium?	Yes/No Radio Button	S	Please refer to Section 3.3, 3.4
L8.9	Construction Permit Only Spray Paint Booth	Dry Filter Manufacturer	Text box	S	Please refer to Section 3.3, 3.4
L8.10	Construction Permit Only Spray Paint Booth	Dry Filter Model	Text box	S	Please refer to Section 3.3, 3.4
L8.11	Construction Permit Only Spray Paint Booth	Dry Filter Rated Control Efficiency %	Numeric	S	Please refer to Section 3.3, 3.4
L8.12	Construction Permit Only Spray Paint Booth	Dry Filter Dimension	Numeric in inches	S	Please refer to Section 3.3, 3.4
L9.0	Construction Permit Only Cooling Tower	Number of Cells in Tower	Duplicate section for each tower. Numeric	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L9.1	Construction Permit Only Cooling Tower	Tower Maximum Water Flow Rate	Numeric in gallons/min	S	Please refer to Section 3.3, 3.4
L9.2	Construction Permit Only Cooling Tower	Measured Total Dissolved Solids (TDS) Content	Text box	S	Please refer to Section 3.3, 3.4
L9.3	Construction Permit Only Cooling Tower	Do You Use Additives in the Water?	Yes/No Radio Button	S	Please refer to Section 3.3, 3.4
L9.3.1	Construction Permit Only Cooling Tower	If Yes, provide SDS sheets for each additive	Message box	S	Please refer to Section 3.3, 3.4
L9.4	Construction Permit Only Cooling Tower	Mist Eliminator	Yes/No Radio Button	S	Please refer to Section 3.3, 3.4
L9.5	Construction Permit Only Cooling Tower	Mist Eliminator Control Equipment ID	Text box	S	Please refer to Section 3.3, 3.4
L9.6	Construction Permit Only Cooling Tower	Mist Eliminator Efficiency (% transmitted)	Numeric	S	Please refer to Section 3.3, 3.4
L9.7	Construction Permit Only Cooling Tower	Emission Point ID	Text box	S	Please refer to Section 3.3, 3.4
L9.8	Construction Permit Only Cooling Tower	Cell Height from the ground	Numeric in feet	S	Please refer to Section 3.3, 3.4
L9.9	Construction Permit Only Cooling Tower	Cell Stack Size	Numeric in radius inches diameter or rectangle inches wide by inches long	S	Please refer to Section 3.3, 3.4
L9.10	Construction Permit Only Cooling Tower	Cell Rated Air Flow Rate Units of Measure	Radio Buttons: ACFM or SCFM	S	Please refer to Section 3.3, 3.4
L9.11	Construction Permit Only Cooling Tower	Cell Rated Air Flow Rate Value	Numeric	S	Please refer to Section 3.3, 3.4
L9.12	Construction Permit Only Cooling Tower	Total Rated Air Flow Rate Units of Measure	Radio Buttons: ACFM or SCFM	S	Please refer to Section 3.3, 3.4
L9.13	Construction Permit Only Cooling Tower	Total Rated Air Flow Rate Value	Numeric	S	Please refer to Section 3.3, 3.4
L9.14	Construction Permit Only Cooling Tower	Exhaust Exit Temperature	Numeric in degrees Fahrenheit	S	Please refer to Section 3.3, 3.4
L10.0	Construction Permit Only Boiler	Fuel Type	Drop Down List: Natural Gas, Fuel Oil, Wood, Coal, Other Fuel if Other Fuel text box displays to specify	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L10.1	Construction Permit Only Boiler	Other Fuel, please identify	Text box	S	Please refer to Section 3.3, 3.4
L10.2	Construction Permit Only Boiler	Full Load Consumption Rate	Numeric in cubic feet/hour or gallons/hour or pounds/hour	S	Please refer to Section 3.3, 3.4
L10.3	Construction Permit Only Boiler	Sulfur Content if Fuel Oil, Coal, or Other Fuel	Text box	S	Please refer to Section 3.3, 3.4
L10.4	Construction Permit Only Boiler	For Coal boilers only: What type of coal will be burned?	Drop Down List: Bituminous, Sub-bituminous, Lignite	S	Please refer to Section 3.3, 3.4
L10.5	Construction Permit Only Boiler	For Solid boilers only: Include copy of both the ultimate and proximate fuel analyses	Message box	S	Please refer to Section 3.3, 3.4
L3.0	Control Equipment by Emission Unit	Facility Name	Applies to all types of permit. Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.4
L3.1	Control Equipment by Emission Unit	Control Equipment Number	Duplicate section for each new piece of Control Equipment; Every EP-CE join in L1.26 requires a CE in L3.1; System will not allow an orphan CE	S	Please refer to Section 3.3, 3.4
L3.2	Control Equipment by Emission Unit	Control Equipment Type	Drop Down List: Baghouse Filter, Cartridge Filter, Bin Vent Filter, Packed Bed Scrubber, Spray Chamber Scrubber, Venturi Scrubber, Dry Scrubber, Regenerative Thermal Oxidation, Flare Thermal Oxidation, Afterburner Thermal Oxidation, Recuperative Thermal Oxidation, Enclosed Flame Thermal Oxidation, Diesel Oxidation Catalyst, Electrostatic Precipitator, Flue Gas Recirculation, Gravity Settling Chamber, Internal Floating Roof Tank, Low NOx Burner, Vapor Condenser, Cyclone, Multiclone	S	Please refer to Section 3.3, 3.4
L3.3	Control Equipment by Emission Unit	Manufacturer	Text box	S	Please refer to Section 3.3, 3.4
L3.4	Control Equipment by Emission Unit	Model Number	Text box	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L3.5	TV only-Control Equipment by Emission Unit	Serial Number	Text box	S	Please refer to Section 3.3, 3.4
L3.6	Control Equipment by Emission Unit	Installation Date	Text box to enter anticipated date	S	Please refer to Section 3.3, 3.4
L3.7	TV only-Control Equipment by Emission Unit	Does this equipment vent to the atmosphere?	Yes/No Radio Button	S	Please refer to Section 3.3, 3.4
L3.8	Control Equipment by Emission Unit	Emission Unit Number Associate with this CE	Text box	S	Please refer to Section 3.3, 3.4
L3.9	TV only-Control Equipment by Emission Unit	Control Efficiency Based on	Radio Buttons: Manufacturer Specifications, if Manufacture Specifications, skip L3.18+, or Stack Test, if Stack Test then must provide date and method, Other, if other text box displays to specify	S	Please refer to Section 3.3, 3.4
L3.9.1	TV only-Control Equipment by Emission Unit	Stack Test Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4
L3.9.2	TV only-Control Equipment by Emission Unit	Reference Test Method	Text box	S	Please refer to Section 3.3, 3.4
L3.9.3	TV only-Control Equipment by Emission Unit	Other Control Efficiency, please specify	Text box	S	Please refer to Section 3.3, 3.4
L3.10	Control Equipment by Emission Unit	Pollutant Controlled	Displays tabular format with new row for each air pollutant selected from list (PM-2.5, PM-10, Total PM, SO ₂ , NO _x , VOC, CO, Lead, Ozone, NH ₃); following fields as column headers; possibly list air pollutants by CAS number	S	Please refer to Section 3.3, 3.4
L3.11	TV only-Control Equipment by Emission Unit	% Capture Efficiency of this Control Device	Numeric	S	Please refer to Section 3.3, 3.4
L3.12	Control Equipment by Emission Unit	% Control Equipment Efficiency of this Control Device	Numeric	S	Please refer to Section 3.3, 3.4
L3.13	Control Equipment by Emission Unit	% Combined Control Efficiency	Numeric	S	Please refer to Section 3.3, 3.4
L3.14	Control Equipment by Emission Unit	Is a capture hood involved?	Yes/No Radio Button if Yes, text box displays to specify efficiency	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L3.14.1	Control Equipment by Emission Unit	If Yes, capture hood efficiency percentage	Numeric	S	Please refer to Section 3.3, 3.4
L3.15	Control Equipment by Emission Unit	Emission Point Number Associated with this CEM	Text box	S	Please refer to Section 3.3, 3.4
L3.16	Control Equipment by Emission Unit	How will your facility monitor the performance of this control equipment?	Drop Down List: Pressure Drop, Bag Leak Detection System, Visible Emissions Observation, Parametric Pollution Concentration, Outlet Pollutant Concentration, Control Equipment Inspections and Maintenance, Cleaning Operation Frequency, Total Liquor Flow Rate, Recycled Liquor Flow Rate, Combustion Chamber Temperature Range, Minimum Operating Temperature, Flare Pilot Flame, Residence Time, Predictive Emissions Monitoring System, Continuous Emissions Monitoring System, Other if Other text box displays to specify.	S	Please refer to Section 3.3, 3.4
L3.17	Control Equipment by Emission Unit	Describe the range and frequency of your control device monitoring choices	Text box	S	Please refer to Section 3.3, 3.4
L3.18	For Fabric Filters Only	Pressure Drop Range	Numeric in inches of H2O	S	Please refer to Section 3.3, 3.4
L3.19	For Fabric Filters Only	Material Filter Media	Drop Down List: Teflon, Polyester, Fiberglass, Polypropylene, Cotton, Other if other text box displays to specify	S	Please refer to Section 3.3, 3.4
L3.19.1	For Fabric Filters Only	Other Material Filter Media, please specify	Text box	S	Please refer to Section 3.3, 3.4
L3.20	For Fabric Filters Only	Total filter Face Area of Control Device	Numeric in square feet	S	Please refer to Section 3.3, 3.4
L3.21	For Fabric Filters Only	Bag Cleaning Method	Drop Down List: Pulse Jet, Shaking, Reverse Air, Other if Other text box displays to specify	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L3.21.1	For Fabric Filters Only	Other Bag Cleaning Method, please specify	Text box	S	Please refer to Section 3.3, 3.4
L3.22	For Cyclones Only	Inlet Duct Velocity	Numeric	S	Please refer to Section 3.3, 3.4
L3.23	For Cyclones Only	Cyclone Body Length	Numeric in inches	S	Please refer to Section 3.3, 3.4
L3.24	For Cyclones Only	Internal diameter	Numeric in inches	S	Please refer to Section 3.3, 3.4
L3.25	For Cyclones Only	Pressure Drop Range	Numeric in inches of H2O	S	Please refer to Section 3.3, 3.4
L3.26	For Scrubbers Only	Total Liquor Flow Rate	Numeric in gallons/minute	S	Please refer to Section 3.3, 3.4
L3.27	For Scrubbers Only	Recycled Liquor Flow Rate	Numeric in gallons/minute	S	Please refer to Section 3.3, 3.4
L3.28	For Scrubbers Only	Normal Liquor PH Range	Numeric	S	Please refer to Section 3.3, 3.4
L3.29	For Scrubbers Only	Pressure Drop Range	Numeric in inches of H2O	S	Please refer to Section 3.3, 3.4
L3.30	For Thermal Oxidation Only	Minimum Operating Temperature	Numeric in degrees Fahrenheit	S	Please refer to Section 3.3, 3.4
L3.31	For Thermal Oxidation Only	Residence Time	Numeric in seconds	S	Please refer to Section 3.3, 3.4
L3.32	For Catalytic Oxidation Only	Catalyst Material	Text box	S	Please refer to Section 3.3, 3.4
L3.33	For Catalytic Oxidation Only	Catalyst Lifetime	Text box	S	Please refer to Section 3.3, 3.4
L3.34	For Catalytic Oxidation Only	Residence Time	Numeric in seconds	S	Please refer to Section 3.3, 3.4
L3.35	For Catalytic Oxidation Only	Minimum Operating Temperature	Numeric in degrees Fahrenheit	S	Please refer to Section 3.3, 3.4
L3.36	For Catalytic Oxidation Only	Catalyst Inlet Temperature	Numeric in degrees Fahrenheit	S	Please refer to Section 3.3, 3.4
L3.37	For Catalytic and Non-Catalytic Reduction Only	Catalyst Material	Text box	S	Please refer to Section 3.3, 3.4
L3.38	For Catalytic and Non-Catalytic Reduction Only	Catalyst Lifetime	Text box	S	Please refer to Section 3.3, 3.4
L3.39	For Catalytic and Non-Catalytic Reduction Only	Number of Catalyst Beds	Numeric	S	Please refer to Section 3.3, 3.4
L3.40	For Catalytic and Non-Catalytic Reduction Only	Total Catalyst Bed Volume	Numeric	S	Please refer to Section 3.3, 3.4
L3.41	For Catalytic and Non-Catalytic Reduction Only	Residence Time	Numeric in seconds	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L3.42	For Catalytic and Non-Catalytic Reduction Only	Operating Temperature Range	Numeric in degrees Fahrenheit	S	Please refer to Section 3.3, 3.4
L3.43	For Catalytic and Non-Catalytic Reduction Only	Pressure Drop Range	Numeric in inches of H2O	S	Please refer to Section 3.3, 3.4
L3.44	For Catalytic and Non-Catalytic Reduction Only	Additive Injection	Drop Down List: Anhydrous Ammonia, Liquid Ammonia, Urea	S	Please refer to Section 3.3, 3.4
L3.44.1	For Catalytic and Non-Catalytic Reduction Only	Additive Injection Rate	Numeric	S	Please refer to Section 3.3, 3.4
L3.45	For Catalytic and Non-Catalytic Reduction Only	Maximum Ammonia Slip	Numeric in ppm	S	Please refer to Section 3.3, 3.4
L3.46	For Catalytic and Non-Catalytic Reduction Only	NOX Control Efficiency % Reduction	Numeric	S	Please refer to Section 3.3, 3.4
L4.0	TV only-Continuous Monitoring Systems	Does this facility use Continuous Monitoring Systems?	Yes/No Radio Buttons if Yes, accordion section expands with CEMS questions	S	Please refer to Section 3.3, 3.4
L4.0.1	TV only-Continuous Monitoring Systems	Facility Name	Applies to Title V Initial and Renewal and Construction Permits only if modification to an existing source. Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.4
L4.1	TV only-Continuous Monitoring Systems	Monitoring Equipment Number	Duplicate section for each new piece of Monitoring Equipment; Every EP-ME join in L1.27 requires n ME in L4.1; System will not allow an orphan ME	S	Please refer to Section 3.3, 3.4
L4.2	TV only-Continuous Monitoring Systems	Manufacturer	Text box	S	Please refer to Section 3.3, 3.4
L4.3	TV only-Continuous Monitoring Systems	Model Name	Text box	S	Please refer to Section 3.3, 3.4
L4.4	TV only-Continuous Monitoring Systems	Model Number	Text box	S	Please refer to Section 3.3, 3.4
L4.5	TV only-Continuous Monitoring Systems	Model Year	Text box	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L4.6	TV only-Continuous Monitoring Systems	Installation Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4
L4.7	TV only-Continuous Monitoring Systems	Type of Monitor	Drop Down List: (allows select more than one): Point in Situ, Path in Situ, Extractive, Dilution, Other, if Other text box displays to specify	S	Please refer to Section 3.3, 3.4
L4.7.1	TV only-Continuous Monitoring Systems	Other Type of Monitor, please specify	Text box	S	Please refer to Section 3.3, 3.4
L4.8	TV only-Continuous Monitoring Systems	Measurement Basis	Radio Buttons: Wet or Dry	S	Please refer to Section 3.3, 3.4
L4.9	TV only-Continuous Monitoring Systems	Pollutants/Parameters Monitored by this CEM	Drop Down List: SO ₂ , NO _x , VOC, CO, Diluent CO ₂ , Diluent O ₂ , H ₂ S, HCL, Opacity, Total Hydrocarbons, TRS, Other if Other text box displays to specify	S	Please refer to Section 3.3, 3.4
L4.9.1	TV only-Continuous Monitoring Systems	Other Pollutant, please specify	Text box	S	Please refer to Section 3.3, 3.4
L4.10	TV only-Continuous Monitoring Systems	Emission Point Number Associated with this CEM	New row for each new EP	S	Please refer to Section 3.3, 3.4
L4.11	TV only-Continuous Monitoring Systems	Emission Unit Number Associate with this CE	New row for each new EU	S	Please refer to Section 3.3, 3.4
L4.12	TV only-Continuous Monitoring Systems	Type of Pollutant/Parameter	Text box	S	Please refer to Section 3.3, 3.4
L4.13	TV only-Continuous Monitoring Systems	Performance Test	40 CFR 60 Appendix B Yes/No Radio Button; 40 CFR 75 Appendix A Yes/No Radio Button	S	Please refer to Section 3.3, 3.4
L4.13.1	TV only-Continuous Monitoring Systems	If Yes for either, Test Date	Pop up Calendar selection tool	S	Please refer to Section 3.3, 3.4
L4.13.2	TV only-Continuous Monitoring Systems	Did it pass?	Yes/No Radio Button	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L4.14	TV only-Continuous Monitoring Systems	What was the span value for this pollutant/parameter?	Text box	S	Please refer to Section 3.3, 3.4
L4.15	TV only-Continuous Monitoring Systems	How did you determine the span value?	Drop Down List: Procedures outline in 40 CFR 60 Appendix B, Procedure outlined in 40 CFR 75 Appendix A, Requirements of applicable rule, 1.5 of the Emission Limit, Other if other text box displays to specify	S	Please refer to Section 3.3, 3.4
L4.15.1	TV only-Continuous Monitoring Systems	Other span value determination, please specify	Text box	S	Please refer to Section 3.3, 3.4
L4.16	TV only-Data Reduction Procedures for Opacity Monitors Only	Inside Stack or Duct Diameter at the location of the CMS	Numeric in inches; hide if no Opacity Monitors listed in L4.9	S	Please refer to Section 3.3, 3.4
L4.17	TV only-Data Reduction Procedures for Opacity Monitors Only	Has a stack exit correlation factor been applied to opacity measurements?	Yes/No Radio Button if Yes, text box displays to describe	S	Please refer to Section 3.3, 3.4
L4.17.1	TV only-Data Reduction Procedures for Opacity Monitors Only	If Yes, describe factor	Text box	S	Please refer to Section 3.3, 3.4
L4.18	TV only-Data Reduction Procedures for Opacity Monitors Only	What averaging period is used?	Radio Buttons: 6 minutes or Other, if other text box displays to specify	S	Please refer to Section 3.3, 3.4
L4.18.1	TV only-Data Reduction Procedures for Opacity Monitors Only	Other averaging period, please specify	Text box	S	Please refer to Section 3.3, 3.4
L4.19	TV only-Data Reduction Procedures for Opacity Monitors Only	Is a combiner system used?	Yes/No Radio Button if Yes, text box displays to explain	S	Please refer to Section 3.3, 3.4
L4.20	TV only-Data Reduction Procedures for Opacity Monitors Only	Explain how the stack exit opacity is calculated from the monitor signals	Text box	S	Please refer to Section 3.3, 3.4

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
L4.21	TV only-Data Reduction Procedures for Gas Monitors only	Are the data reduced to hourly averages?	Yes/No Radio Button; hide if no Gas Monitors listed in L4.9	S	Please refer to Section 3.3, 3.4
L4.22	TV only-Data Reduction Procedures for Gas Monitors only	Explain how the data are converted to units of the emission standard and the appropriate averaging time	Text box	S	Please refer to Section 3.3, 3.4
L5.0	TV only-Primary Data Acquisition System (DAS) information	Type of System	Drop Down List: Chart Recorder, Digital Recorder, Computer, Microprocessor, Telemetry, Other, if other text box displays to specify type of system	S	Please refer to Section 3.3, 3.4
L5.0.1	TV only-Primary Data Acquisition System (DAS) information	Other type of system, please specify	Text box	S	Please refer to Section 3.3, 3.4
L5.1	TV only-Primary Data Acquisition System (DAS) information	Manufacturer	Text box	S	Please refer to Section 3.3, 3.4
L5.2	TV only-Primary Data Acquisition System (DAS) information	How often does the DAS record sample values?	Text box	S	Please refer to Section 3.3, 3.4
L5.3	TV only-Primary Data Acquisition System (DAS) information	DAS full scale values during normal operation	Pollutant Monitor in units or Diluent Monitor in units	S	Please refer to Section 3.3, 3.4
L5.4	TV only-Primary Data Acquisition System (DAS) information	DAS resolution or the smallest scale division	Pollutant Monitor in units or Diluent Monitor in units	S	Please refer to Section 3.3, 3.4
L5.5	TV only-Primary Data Acquisition System (DAS) information	Is there a secondary DAS?	Yes/No Radio Button if Yes, text box displays to describe	S	Please refer to Section 3.3, 3.4
L5.5.1	TV only-Primary Data Acquisition System (DAS) information	If Yes, describe secondary DAS	Text box	S	Please refer to Section 3.3, 3.4
L5.6	TV only-Primary Data Acquisition System (DAS) information	Additional Comments	Text box	S	Please refer to Section 3.3, 3.4

10.1.9.4 Title V Emissions Module**10.1.9.4.1 Title V Emissions Module Process**

Provide easy to use interface to collect potential pollutants for each unit/process, and/or each stack/vent/release point. Specific forms may be viewed at [Operating Permits – Title V Permit Forms and Instructions – Part 1 Application – Forms 1.3, 1.4, 1.5 and 3.0.](#)

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.5.

10.1.9.4.2 Title V Emissions Module Requirements

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
M1.0	Insignificant Activities	Facility Name	Facility Name populates from Facility Module based on Facility Number as 1:1 join in tables	S	Please refer to Section 3.3, 3.5
M1.1	Insignificant Activities	Emission Unit Number	Displays tabular format with list of pollutants across top columns, new row for each emission unit; alpha numeric text box	S	Please refer to Section 3.3, 3.5
M1.2	Insignificant Activities	Emission Unit Description	Displays tabular format with list of pollutants across top columns, new row for each emission unit; alpha numeric text box	S	Please refer to Section 3.3, 3.5
M1.3	Insignificant Activities	PM-10	Particulate Matter 10 microns. Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.4	Insignificant Activities	Total PM	Particulate Matter. Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.5	Insignificant Activities	SO2	Sulfur Dioxide. Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.6	Insignificant Activities	NOX	Nitrous Oxides. Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.7	Insignificant Activities	VOC	Volatile Organic Compounds. Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.8	Insignificant Activities	CO	Carbon Monoxide. Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.9	Insignificant Activities	Lead	Pb. Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.10	Insignificant Activities	Fluorides	Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.11	Insignificant Activities	High Risk Toxics	Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.12	Insignificant Activities	Sulfur Acid Mists	Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
M1.13	Insignificant Activities	Toxics - not high risk group	Provide potential emissions in pounds/year	S	Please refer to Section 3.3, 3.5
M1.14	Insignificant Activities	Facility Totals	Column totals in tons/year	S	Please refer to Section 3.3, 3.5
M2.0	Potential Toxic Emissions Significant Activity	Facility Name	Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.5
M2.1	Potential Toxic Emissions Significant Activity	CAS number of Hazardous Air Pollutant	Displays in tabular format with new row for each hazardous air pollutant. Following fields as column headers. Search or drop down list? 28 defined HAPs	S	Please refer to Section 3.3, 3.5
M2.2	Potential Toxic Emissions Significant Activity	Chemical Name of Hazardous Air Pollutant	Text box	S	Please refer to Section 3.3, 3.5
M2.3	Potential Toxic Emissions Significant Activity	Potential Emissions	Tons/Year	S	Please refer to Section 3.3, 3.5
M2.4	Potential Toxic Emissions Significant Activity	Facility Totals	Column totals in tons/year	S	Please refer to Section 3.3, 3.5
M3.0	Potential Emissions Significant Activities	Facility Name	Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.5
M3.1	Potential Emissions Significant Activities	Air Pollutant	Displays tabular format with new row for each air pollutant selected from list (PM-2.5, PM-10, Total PM, SO2, NOX, VOC, CO, Lead, Ozone, NH3); following fields as column headers;	S	Please refer to Section 3.3, 3.5
M3.2	Potential Emissions Significant Activities	Potential Emissions	Tons/Year facility totals not by emission unit	S	Please refer to Section 3.3, 3.5
M3.3	Potential Emissions Significant Activities	Which condition(s) listed subject this facility to obtaining an Operating Permit?	Radio Buttons multiple selections allowed: Source is subject to the provisions of Title IV of the Act 567 IAC 22.120-148; Source is a major source 567 IAC 22.100: Potential to emit 100 tons per year or more of any air pollutant, Potential to emit, in the aggregate, 10 tpy or more any hazardous air pollutant or 25 tpy or more of any combination of hazardous	S	Please refer to Section 3.3, 3.5

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
			air pollutants, For nonattainment areas as specified in 567 IAC 22.100		
M3.4	Potential Emissions by Emission Unit	Emission Unit Number	Text box	S	Please refer to Section 3.3, 3.5
M3.5	Potential Emissions by Emission Unit	Emission Unit Description	Text box	S	Please refer to Section 3.3, 3.5
M3.6	Potential Emissions by Emission Unit	Emission Point Associated with EU	Text box	S	Please refer to Section 3.3, 3.5
M3.7	Potential Emissions by Emission Unit	Emission Point Description	Text box	S	Please refer to Section 3.3, 3.5
M3.8	Potential Emissions by Emission Unit	Control Equipment Number Associated with this EU	Text box	S	Please refer to Section 3.3, 3.5
M3.9	Potential Emissions by Emission Unit	Monitoring Equipment Number Associated with this EU	Text box	S	Please refer to Section 3.3, 3.5
M3.10	Potential Emissions by Emission Unit	Raw Material Processed or Fuel Used	Text box	S	Please refer to Section 3.3, 3.5
M3.16	Potential Emissions by Emission Unit	Federally Enforceable Operating Limit	Text box	S	Please refer to Section 3.3, 3.5
M3.17	Potential Emissions by Emission Unit	Permit or Rule establishing limit	Text box; generally expecting construction permit number here	S	Please refer to Section 3.3, 3.5
M3.18	Potential Emissions by Emission Unit	Air Pollutant	Displays tabular format with new row for each air pollutant selected from list (PM-2.5, PM-10, Total PM, SO2, NOX, VOC, CO, Lead, Ozone, NH3); following fields as column headers;	S	Please refer to Section 3.3, 3.5
M3.19	Potential Emissions by Emission Unit	Emission Factor	Text box	S	Please refer to Section 3.3, 3.5
M3.20	Potential Emissions by Emission Unit	Emission Factor Units	Text box	S	Please refer to Section 3.3, 3.5
M3.21	Potential Emissions by Emission Unit	Emission Factor Source	Drop Down List: CEM, Stack Test, Mass Balance, AP-42, EPA-WebFIRE, EPA-TANKS, EPA-L&E, Worksheet, Other if other text	S	Please refer to Section 3.3, 3.5

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
			box displays to specify		
M3.21.1	Potential Emissions by Emission Unit	Other Source Emission Factor, please specify	Text box	S	Please refer to Section 3.3, 3.5
M3.22	Potential Emissions by Emission Unit	Ash or Sulfur %	Numeric	S	Please refer to Section 3.3, 3.5
M3.23	Potential Emissions by Emission Unit	Potential Hourly Uncontrolled Emissions	Numeric in pounds/hour	S	Please refer to Section 3.3, 3.5
M3.24	Potential Emissions by Emission Unit	Combined Control Efficiency %	Numeric	S	Please refer to Section 3.3, 3.5
M3.25	Potential Emissions by Emission Unit	Potential Hourly Controlled Emissions	Numeric in pounds/hour	S	Please refer to Section 3.3, 3.5
M3.26	Potential Emissions by Emission Unit	Potential Annual Controlled Emissions	Numeric in tons/year	S	Please refer to Section 3.3, 3.5

10.1.9.5 Construction Permit Emissions Module

10.1.9.5.1 Construction Permit Emissions Module Process

Provide easy to use interface to collect pollutants for each unit/process, and/or each stack/vent/release point. Specific forms may be viewed at [Construction Permits – Construction Permitting Materials – Forms EU, EC, EI, and GHG](#).

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.5.

10.1.9.5.2 Construction Permit Emissions Module Requirements

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
N1.0	Emissions Inventory	Facility Name	Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.1	Emissions Inventory	PSD Classification	Radio Buttons: Major, Minor, Unknown	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.2	Emissions Inventory	Emission Point Associated with EU	Displays tabular format with list of pollutants across top columns, new row for each emission point; following fields as column headers; alpha numeric text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.3	Emissions Inventory	Emission Point Description	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.4	Emissions Inventory	Emission Unit Number	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
N1.5	Emissions Inventory	Emission Unit Description	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.6	Emissions Inventory	PM 2.5	Particulate Matter 2.5 microns. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.7	Emissions Inventory	PM 10	Particulate Matter 10 microns. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.8	Emissions Inventory	Total PM	Particulate Matter. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.9	Emissions Inventory	SO2	Sulfur Dioxide. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.10	Emissions Inventory	NOX	Nitrous Oxide. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.11	Emissions Inventory	VOC	Volatile Organic Compounds. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.12	Emissions Inventory	CO	Carbon Monoxide. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.13	Emissions Inventory	Lead	Pb. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.14	Emissions Inventory	Single HAP	Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.15	Emissions Inventory	Total HAP	Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.16	Emissions Inventory	Total Stack/Vent Emissions	Subtotal columns	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.17	Emissions Inventory	Fugitive Emissions	New row for each EP with Fugitive Emissions	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.18	Emissions Inventory	Total Fugitive Emissions	Subtotal columns	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N1.19	Emissions Inventory	Total Plant Emissions	Sum of two subtotal columns	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.0	Greenhouse Gas Emissions Inventory	Greenhouse gases are not emitted from any of the emission units this project	Check box only for Yes; if not checked accordion expands with GHG questions	S	Please refer to Section 3.3, 3.5, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
N2.1	Greenhouse Gas Emissions Inventory	Facility Name	Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.2	Greenhouse Gas Emissions Inventory	Emission Point Associated with EU	Displays tabular format with list of pollutants across top columns, new row for each emission point; following fields as column headers; alpha numeric text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.3	Greenhouse Gas Emissions Inventory	Emission Point Description	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.4	Greenhouse Gas Emissions Inventory	Emission Unit Number	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.5	Greenhouse Gas Emissions Inventory	Emission Unit Description	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.6	Greenhouse Gas Emissions Inventory	CO2	Carbon Dioxide. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.7	Greenhouse Gas Emissions Inventory	HFCs	Hydrofluorocarbons. Provide Potential or Permitted Emission Rate in pounds/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.8	Greenhouse Gas Emissions Inventory	CH4	Methane. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.9	Greenhouse Gas Emissions Inventory	N2O	Nitrous Oxide. Provide Potential or Permitted Emission Rate in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.10	Greenhouse Gas Emissions Inventory	PFCs	Perfluorocarbons. Provide Potential or Permitted Emission Rate in pounds/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.11	Greenhouse Gas Emissions Inventory	SF6	Sulfur hexafluoride. Provide Potential or Permitted Emission Rate in pounds/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.12	Greenhouse Gas Emissions Inventory	Total Stack/Vent Emissions	Subtotal columns	S	Please refer to Section 3.3, 3.5, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
N2.13	Greenhouse Gas Emissions Inventory	Fugitive Emissions	New row for each EP with Fugitive Emissions	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.14	Greenhouse Gas Emissions Inventory	Total Fugitive Emissions	Subtotal columns	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N2.15	Greenhouse Gas Emissions Inventory	Total Project Emissions	Sum of two subtotal columns	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.0	Emission Calculations	Facility Name	Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.1	Emission Calculations	Emission Point ID	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.2	Emission Calculations	Emission Calculation Method	Drop Down List: Emission Factors, Stack Test, Mass Balance, Other if other text box displays to specify	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.3	Emission Calculations	Other Calculation Method, please specify	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.4	Emission Calculations	Air Pollutant	Displays tabular format with new row for each air pollutant selected from list (PM-2.5, PM-10, Total PM, SO ₂ , NO _x , VOC, CO, Lead, Single HAP, Total HAP); following fields as column headers	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.5	Emission Calculations	Emission Factor	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.6	Emission Calculations	Emission Factor Units	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.7	Emission Calculations	Emission Factor Source	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.8	Emission Calculations	Control Efficiency %	Numeric	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.9	Emission Calculations	Potential Hourly Emissions	Numeric in pounds/hour	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.10	Emission Calculations	Annual Hours of Operation	Numeric	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N3.11	Emission Calculations	Potential Annual Emissions	Numeric in tons/year	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.0	Requested Limits	Requested Operation Hour Limits	Text box; Optional	S	Please refer to Section 3.3, 3.5, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
N4.1	Requested Limits	Requested Production Limits	Text box; Optional	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.2	Requested Limits	Requested Material Usage Limits	Text box; Optional	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.3	Requested Limits	Requested Emission Limits	Text box; Optional	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.4	Requested Limits	Rationale for Requested Limit	Text box; if a limit is requested, this is a required field	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.5	For Spray Paint Booth Only	VOC or HAP Content Limits	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.6	For Cooling Towers Only	TDS Limits	Numeric in ppm	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.7	For Boilers Only	Quantity of Fuel Burned Limit	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7
N4.8	For Boilers Only	Fuel Material Content Limit	Text box	S	Please refer to Section 3.3, 3.5, 10.2.2.7

10.1.9.6 Dispersion Modeling Module

10.1.9.6.1 Dispersion Modeling Module Process

Provide easy to use interface to collect necessary modeling information. Current forms are part of this RFP as RFP-DNR eApp-Attachment 7a-Construction Permit Application Forms, RFP-DNR eApp-Attach 7b-Construction Permit Application Instructions, RFP-DNR eApp-Attach 7c-Construction Permit Templates & Registrations, RFP-DNR eApp-Attach 8a-Title V Operating Permit Application Forms, and RFP-DNR eApp-Attach 8b-Title V Operating Permit Application Instructions.

Response Code (S/M/T/N): S

Comment: Please refer to Section 3.6.

10.1.9.6.2 Dispersion Modeling Module Requirements

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
O1.0	Project Emissions	Facility Name	Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O1.1	Project Emissions	Pollutant	Displays tabular format with new row for each air pollutant selected from list (PM-2.5, PM-10, SO ₂ , NO _x non intermittent sources only, NO _x all sources combined, CO); following fields as column headers	S	Please refer to Section 3.3, 3.6, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
O1.2	Project Emissions	Total increase in emissions from this project	Numeric in pounds/hour or tons/year	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O1.3	Project Emissions	Total decrease in emissions from this project	Numeric in pounds/hour or tons/year	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O1.4	Project Emissions	Net change in emission from this project	Sum of O1.2 + O1.3	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O1.5	Project Emissions	Significant Emission Rate (SER)	Each pollutant shows allowable threshold in read only box. System evaluates if net change (O1.4) >= and shows Yes/No for O1.6	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O1.6	Project Emissions	Net change is >= corresponding SER	Read only box displays value from O1.4 compared to value from O1.5	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O2.0	Air Resource Availability	Only calculate Air Resource Availability for each pollutant in the project emissions section that is greater than zero		S	Please refer to Section 3.3, 3.6, 10.2.2.7
O2.1	Air Resource Availability	Pollutant	Displays tabular format with new row for each air pollutant selected from list (PM-2.5, PM-10, SO ₂ , NO _x non intermittent sources only, NO _x all sources combined, CO); following fields as column headers	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O2.2	Air Resource Availability	Averaging Period	Displays averaging period for selected pollutant in a read only box.	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O2.3	Air Resource Availability	Modeled Concentration	Numeric in µg/m ³	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O2.4	Air Resource Availability	Current Background Concentration	Numeric in µg/m ³	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O2.5	Air Resource Availability	Total concentration	Sum of O2.3 + O2.4	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O2.6	Air Resource Availability	Modeling Determination Threshold (MDT)	Each pollutant shows allowable threshold in read only box. System evaluates if net change (O2.5) >= and shows Yes/No	S	Please refer to Section 3.3, 3.6, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
O2.7	Air Resource Availability	Net change is >= corresponding MDT	Read only box displays value from O2.5 compared to value from O2.6	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O3.0	Modeling Determination	Is modeling required?	Displays tabular format with new row for each air pollutant selected from list (PM-2.5, PM-10, NO2, SO2, CO) with Yes/No flag for each pollutant based on O1.6 & O2.7	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.0	Emission Source Characteristics	Facility Name	Facility Name populates from Facility Module	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.1	Emission Source Characteristics	Modeling Contact	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.2	Emission Source Characteristics	Modeling Contact Phone	All phone numbers will store only the number. The special characters will be displayed as a mask in the user interface. Mask will be (nnn) nnn-nnnn. This field will be varchar 15 to match One Stop Standard. The input mask will be displayed while the user is entering the information.	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.3	Emission Source Characteristics	Modeling Contact email	Email address must have a valid domain name format	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.4	Emission Source Characteristics	Calculations	Displays tabular format with new row for each emission point; following fields as column headers	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.5	Emission Source Characteristics	Emission Point ID	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.6	Emission Source Characteristics	Permit Number	Text box 16 characters	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.7	Emission Source Characteristics	Emission Unit Name	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
O4.8	Emission Source Characteristics	Throughput	Numeric	S	Please refer to Section 3.3, 3.6, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
04.9	Emission Source Characteristics	Throughput Units	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.10	Emission Source Characteristics	Emission Factor	Numeric	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.11	Emission Source Characteristics	Emission Factor Units	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.12	Emission Source Characteristics	Rate Basis	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.13	Emission Source Characteristics	Point Source	Displays tabular format with new row for each emission point; following fields as column headers	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.14	Emission Source Characteristics	Emission Point ID	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.15	Emission Source Characteristics	Permit Number	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.16	Emission Source Characteristics	Emission Unit Name	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.17	Emission Source Characteristics	PM2.5	Particulate Matter 2.5 microns. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.18	Emission Source Characteristics	PM10	Particulate Matter 10 microns. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.19	Emission Source Characteristics	SO2	Sulfur Dioxide. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.20	Emission Source Characteristics	NO2	Nitrous Dioxide. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.21	Emission Source Characteristics	CO	Carbon Monoxide. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
04.22	Emission Source Characteristics	Lead	Pb. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.23	Emission Source Characteristics	Ozone	O3. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.24	Emission Source Characteristics	Rate Basis	Radio Buttons: Potential or Actual	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.25	Emission Source Characteristics	Height	Numeric in feet	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.26	Emission Source Characteristics	Diameter	Numeric in inches	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.27	Emission Source Characteristics	Exit Temperature	Numeric in degrees Fahrenheit	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.28	Emission Source Characteristics	Discharge Style	Drop Down List: Vertical (without rain cap or obstruction), Vertical with rain cap or obstruction, Downward discharge (gooseneck), Horizontal discharge, Vent inside building, Fugitive, Other if Other text box displays to specify	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.29	Emission Source Characteristics	Flow Rate	Numeric in SCFM	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.30	Emission Source Characteristics	Non-point Source	Displays tabular format with new row for each emission point; following fields as column headers	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.31	Emission Source Characteristics	Emission Point ID	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.32	Emission Source Characteristics	Permit Number	Text box 16 characters	S	Please refer to Section 3.3, 3.6, 10.2.2.7

Number	Description	Requirement	Validation rules	Response Code (S/M/T/N)	Comment
04.33	Emission Source Characteristics	Emission Unit Name	Text box	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.34	Emission Source Characteristics	PM2.5	Particulate Matter 2.5 microns. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.35	Emission Source Characteristics	PM10	Particulate Matter 10 microns. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.36	Emission Source Characteristics	SO2	Sulfur Dioxide. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.37	Emission Source Characteristics	NO2	Nitrous Dioxide. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.38	Emission Source Characteristics	CO	Carbon Monoxide. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.39	Emission Source Characteristics	Lead	Pb. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.40	Emission Source Characteristics	Ozone	O3. Provide Potential or Actual Emission Rate in pounds/hour	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.41	Emission Source Characteristics	Rate Basis	Radio Buttons: Potential or Actual	S	Please refer to Section 3.3, 3.6, 10.2.2.7
04.42	Emission Source Characteristics	Height	Numeric in feet	S	Please refer to Section 3.3, 3.6, 10.2.2.7

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10.5.1 Infrastructure Security

enfoTech provides the following data security features for our IT infrastructure and data.

- **Next-Gen Network Firewall Protection with Unified Threat Management**
 - Built on the top-ranking Unified Threat Management platform
 - Provides Gateway Anti-Virus, Anti-Spyware, Intrusion Prevention, and Application Intelligence and Control to for intelligent, real-time network security protection against the latest blended threats
 - Monitors for anomalous data, generating alerts if unauthorized data packets are found
- **Secure Remote Access**
 - Allows authorized users to access your data from anywhere

- Provides network authentication, grants access and maintains security privileges for remote connections
- **Penetration Testing results and mitigation**
 - Use 3rd party service (Trustwave- www.trustwave.com) as penetration tester.
 - Provide scanning report monthly or on demand by the 3rd party service (Trustwave- www.trustwave.com)
- **Server Security Protections:**
 - Access the application with SSL (RSA 2048 bit encryption) security protection.
 - Balance traffic load with Network Load Balancer (f5) connecting Web servers (extendable up-to 32 Web servers) which will receive requests from the external Clients through SSL (RSA 2048 bit encryption) protected communication channel.
 - Allow only few administrators or managers include infrastructure manager, maintenance manager, release manager, DB administrator who are authorized can access hosting servers.
- **Managed anti-virus:**
 - Use Firewall native anti-virus protection as hardware protection mechanism
 - Use AVG as software anti-virus protection mechanisms
- **Logging and Monitoring:**
 - Log and record user log-in/out activities and time, transaction events, password changes, and security breach events, etc.
 - Centralize logs in a monitoring center and alert to stakeholders.

10.5.2 enfoTech Admin Procedures to Protect Client's Data

- enfoTech maintains an Electronic Commerce Security Policy that every employee must comply
- All employee before starting working at enfoTech must sign an acknowledgement to consent that they have read, understand, and will comply with enfoTech security policies
- In addition, all employee working on the client's project must sign an additional acknowledgement to consent that they will comply with any security policies and procedures required by the client, before being granted access to the project related information.
- enfoTech enforces the Security Policy to protect our client's data through the following procedures:
 1. **Access Control:** Client's data will be stored in a secured Data Center and no data access will be allowed. enfoTech project manager will grant limited access to employee under a need-to-know basis based on service requirements directed by the client project manager.
 2. **Data Center Monitoring :** enfoTech is a Tier II Internet Service Provider. In addition to the software support services, enfoTech currently provides 6 professionals exclusively to monitor hosting environment. Jason Huang, enfoTech Executive Vice President has final responsibility of all hosting resources and directs all technical staff to support hosting tasks, monitor work load, and add additional resources if needed.

Please see a Table above for professionals and their role and responsibility.

Qualifications	Jason Huang	Roger Yang	Lih Fan Soong	Gang Yao	Jacky Tseng
Years of Professional Experiences	25	11	15	13	14
Years with enfoTech	18	9	10	12	13
Profession	ChE	CIS	PHY	CIS	CIS

Qualifications	Jason Huang	Roger Yang	Lih Fan Soong	Gang Yao	Jacky Tseng
Degree in Education	MS	MS	PhD	MS	MS
Confirmation of availability to support the Project	Yes	Yes	Yes	Yes	Yes
1. Architecture Design	✓	✓	✓		✓
2. Hardware Installation, Configuration, Maintenance	✓	✓	✓	✓	✓
3. Firewall configuration, Virus Elimination, SSL, and all OS and associated software updates, Security	✓		✓	✓	✓
4. Performance Monitoring, System Load Balancing, Disaster Recovery, Backup and Restore	✓	✓	✓	✓	✓
5. Database updates, performance tuning and database related support	✓	✓	✓	✓	✓
6. System updates, performance tuning and system related support	✓		✓	✓	✓

Our Data Center is being auto-monitored on 24x7 basis with a beeper alert to support personnel when an excursion occurs that will require human intervention. The support Team monitors server logs and respond to situation as necessary. Redundant servers, proactive monitoring, and skilled professionals enable us to provide 100% up-time since inception of our Data Center services.

We review our Security Policy annually and make necessary changes deemed required. If Policy is changed, new Policy will be communicated to all employees. All employee must provide written confirmation that they read, understand and will comply with the new Policy.