## Document Information

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<th>EER Requirements</th>
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## Document Approvals

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tbody>
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<td>Mary Montoya, ITD/ASB</td>
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<td>Robert Samaniego, EPD/AQB</td>
<td>Business Lead</td>
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**Notes:**
- The document provides information about the Excess Emissions Reporting Project Requirements Specifications.
- The document includes details about the title, file name, version number, issue by, issue date, and status.
- The document approvals section lists the names and roles of the individuals who have approved the document, along with their signature and date.
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<th>Author</th>
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<td>11/7/10</td>
<td>Keith Fraser, Bob Girsberger</td>
<td>Initial version, containing workflow documentation only.</td>
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<td>Keith Fraser, Bob Girsberger</td>
<td>Update based on feedback, and addition of future registration workflow</td>
</tr>
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<td>Bob Girsberger</td>
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<td>1.3</td>
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<td>Bob Girsberger</td>
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<td>1.4</td>
<td>2/4/11</td>
<td>Bob Girsberger</td>
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<td>Bob Girsberger</td>
<td>Update based on feedback received from version 1.4</td>
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Excess Emissions Reporting Project Requirements Specifications

REQUIREMENTS SPECIFICATIONS

Excess Emissions Reporting

1. INTRODUCTION

1.1. SOFTWARE OVERVIEW

The Federal Clean Air Act requires that owners or operators of permitted air facilities (minor or major sources) provide the appropriate governing state or tribal agency with a written report of all events where an emission has occurred in excess of permitted amounts, usually within 48 hours of the event. Information typically reported includes:

- The emissions point where the excess emission was released.
- The quantity and duration of the excess emission.
- The cause of the excess emission.
- Steps taken to limit the excess emission.

The New Mexico Environment Department (NMED), Air Quality Bureau (AQB) wishes to develop an information system capable of receiving excess emissions reports electronically from the regulated community. This system will support both the activities of the regulated community in submitting an excess emissions report, as well as the activities of AQB in responding to the submission of a report.

1.2. PROJECT DESCRIPTION

This initial project will analyze and document the workflow, functional requirements, and data requirements for an excess emissions reporting system. Subsequent projects will use this information to design, build, and ultimately implement an excess emissions reporting system. In order to develop the best possible understanding of the needs of the potential users of an EER system, a workshop was held to elicit information from both AQB staff and representatives of the regulated community regarding the processes and procedures followed in the submission and subsequent processing of an excess emissions report. The information gathered at this workshop was collated, documented, and used to develop models that graphically represent the workflows to be supported. The developed models focus on the typical workflows to be supported by the new system, along with any significant variations which must be accommodated. The workflow documentation was published for review among stakeholders, and revised where appropriate. The developed workflow documentation was then used as discussion material during a second workshop to elicit detailed functional and data requirements for the new EER system from AQB staff and the regulated community. Other materials considered during this workshop included previously communicated high-level requirements, forms currently in use for EER reporting, and
internal standard operating procedures in place at AQB. A technical session was also conducted during this second workshop, where NMED IT staff discussed the specifics of the technical environment where the new EER system will eventually reside. The gathered functional, data, and technical requirements for the new system were categorized and documented, provided to NMED stakeholders for review, and revised where appropriate. The workflow and requirements documentation resulting from this project will form the input material for a subsequent, as yet unscheduled, project to create a design for the new EER system.

1.3. DELIVERABLES
The following sections describe the required tasks and subtasks to be performed as part of this project, along with their corresponding deliverables and due dates:
A. Deliverable Number 1 - Initiate Project

<table>
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<th>Deliverable One</th>
<th>Due Date</th>
<th>Compensation</th>
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<tr>
<td>Initiate Project</td>
<td>10/25/10</td>
<td>$9,024.00 Including NM GRT</td>
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<tr>
<th>Task Item</th>
<th>Sub Tasks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiate Project</td>
<td>1.1. Review background materials</td>
<td>In preparation for project activities, the Contractor will review all NMED-provided background materials associated with EER project efforts to-date.</td>
</tr>
<tr>
<td></td>
<td>1.2. Develop draft project plan</td>
<td>The Contractor will develop a draft version of the project plan. The Contractor will develop a schedule based on the due dates in this Scope of Work to guide the execution of the tasks. The Contractor will document project control mechanisms, including risk and issue management procedures, change control procedures, and communication mechanisms. The Contractor will circulate the draft project plan to the project stakeholder group prior to the project kickoff meeting.</td>
</tr>
<tr>
<td></td>
<td>1.3. Facilitate project kickoff meeting (conference call)</td>
<td>The Contractor will conduct a meeting (via conference call) with the project stakeholders to review the draft project plan, the project tasks and associated schedule. The purpose of the meeting will be to ensure that all project participants understand the goals of the project, the expected outcomes, and the roles and responsibilities of all stakeholders.</td>
</tr>
<tr>
<td></td>
<td>1.4. Finalize project plan</td>
<td>Following the project kickoff meeting, and draft project plan review period, the Contractor will incorporate all Procuring Agency changes into a final version of the project plan to the satisfaction of the Procuring Agency.</td>
</tr>
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</table>

### Task Item | Sub Tasks | Description |
--- | --- | --- |
Document EER Workflow | 2.1. Prepare for EER workflow definition workshop | The Contractor will prepare an agenda and supporting materials for the workflow definition workshop to be held with Procuring Agency staff and selected Air Facility staff members wishing to participate in the analysis effort. |
 | 2.2. Conduct EER workflow definition workshop (onsite) | The Contractor will facilitate a two-day workshop intended to elicit information about the workflows associated with submitting an excess emissions report and the subsequent processing of the report. Day one of this workshop will cover a general overview of the workflows associated with EER submittal and processing, along with a more detailed investigation of the internal processing performed by AQB staff. Day two will cover submittal of the report (performed by air facility staff). For each day, the default workflow will be discussed, along with any administrative workflows (such as account registration) and any other significant workflow variations that may occur periodically. |
 | 2.3. Produce draft EER workflow document | Using the information gathered during the workflow definition workshop, the Contractor will create a draft document that defines the workflows and their associated steps, dependencies, actors, and any data interactions that take place. This draft document will be provided to Procuring Agency staff for their review. |
 | 2.4. Review EER workflow document | Procuring Agency staff will review the correctness and completeness of the draft workflow document developed by the Contractor, and will provide the Contractor with feedback on the document. |
 | 2.5. Finalize EER workflow document | The Contractor will discuss the Procuring Agency’s feedback, resolving any questions or issues, and will incorporate all resulting Procuring Agency changes into a final version of the workflow document. |
## C. Deliverable Number 3 – Analyze and Document EER Requirements

<table>
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<th>Description</th>
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<tr>
<td>Analyze and Document EER Requirements</td>
<td>3.1. Prepare for EER requirements gathering workshop</td>
<td>The Contractor will prepare an agenda and supporting materials for the EER Requirements gathering workshop to be held with Procuring Agency staff and selected Air Facility staff members wishing to participate in the analysis effort.</td>
</tr>
<tr>
<td></td>
<td>3.2. Conduct EER requirements gathering workshop (onsite)</td>
<td>The Contractor will facilitate a two-day workshop with Procuring Agency staff and selected Air Facility staff members, intended to elicit and document requirements for an application to support excess emissions reporting. Existing high-level requirements will be confirmed and explored in greater detail. The workflows documented as part of the preceding deliverable will be used as a basis for discussion to generate further functional and informational requirements for an EER application. A meeting will also be held with NMED technical staff to elicit technical requirements for a new EER application, including a discussion of any EER-specific requirements for integration with the Secure Extranet Portal (SEP).</td>
</tr>
<tr>
<td></td>
<td>3.3. Produce draft EER requirements document</td>
<td>Using the information gathered during the requirements gathering workshops, the Contractor will develop a draft requirements specification document that details the functional, information and technical requirements for a new EER application. This draft requirements specification document will be provided to Procuring Agency staff for their review.</td>
</tr>
<tr>
<td></td>
<td>3.4. Review draft EER requirements document</td>
<td>Procuring Agency staff will review the correctness and completeness of the draft requirements specification document developed by the Contractor, and will provide the Contractor with feedback on the document.</td>
</tr>
<tr>
<td></td>
<td>3.5. Finalize EER requirements document</td>
<td>The Contractor will discuss the Procuring Agency’s feedback, resolving any questions or issues, and will incorporate all resulting Procuring Agency changes into a final version of the requirements specification document.</td>
</tr>
</tbody>
</table>
1.4. DOCUMENT OVERVIEW
This document has been organized according to the template Requirements Specifications document provided by NMED in October 2010.

**System Overview**
Details the current workflows as well as the future workflows to be supported by the new system software components.

**Functional Requirements**
Provides an itemized list of the capabilities to be provided by the new system software components.

**Operational Requirements**
Details the operational implications of implementing and supporting the new system software components in the NMED technical environment.

**Logical Data Model**
Outlines the flow of information needed to support the system software components, and includes a logical specification of the data elements and data structure required.

**Physical Data Model**
Outlines the physical implementation of the above logical data structure.

**Design Considerations**
Outlines some key issues identified during the requirements analysis that will need to be considered during design tasks.
2. SYSTEM OVERVIEW

2.1. SYSTEM DESCRIPTION

The future Excess Emissions Reporting (EER) application will be a secure, web-based application that will be integrated with NMED’s existing Secure Extranet Portal (SEP) environment and will also be integrated at the database level with NMED’s existing TEMPO database which supports the Air Quality Bureau in their management of environmental data. The future EER application will consist of the following high-level software components depicted in the diagram below:

Each of these high-level software components can be described in more detail as follows:

- **Secure Extranet Portal (SEP):**
  The SEP provides a framework for secure user authentication and access to NMED applications at the following key points in time:
  - During the registration process for new users, where a user may request access to SEP and to specific applications supported by it, including EER.
  - During the SEP login process for existing users, where the user may be asked to answer challenge questions, in addition to providing an encrypted password with their user ID.
During EER document submittal/certification where the user may be asked to answer challenge questions as part of a CROMERR-compliant certification process. The existing SEP portal currently in place at NMED supports most of the security and CROMERR requirements that are likely to be required for the EER application, however it is possible that some further modifications to SEP may be necessary, pending the outcome of the EPA review of NMED’s plan for supporting CROMERR.

• **EER Data Capture Module:**
  This module will allow facility representatives to enter data pertaining to an excess emissions event and upload associated documents. The data and documents may pertain to an excess emissions report (‘initial’, ‘final’, ‘initial/final’, or ‘update’) an affirmative defense form, or a root cause analysis, if one is requested by NMED. The user will gain access to this module through the SEP and will therefore already be authenticated. An upload capability is also envisaged, where users may upload a file containing EER data in a standardized, agreed format, for import into the EER public database. Validation of data will take place at the time of data entry/upload where possible, using lookup data provided by the TEMPO database. For all entered/uploaded data, a CROMERR-compliant certification process will be supported, allowing the user to view the data and documents to be certified, affirm that the data is correct to the best of his/her knowledge, and also provide identifying data (such as challenge question responses or PIN codes) in a secure manner.

• **EER Administration Module:**
  The EER administration module will be available only to AQB staff, and will allow the administration of user security rights within the EER data capture module. It will also provide access to a series of reports that have been identified as necessary for compliance monitoring and enforcement purposes. This module will also allow the rejection of successfully certified submissions where the facility representative has identified a significant error that must be corrected.

• **EER Databases:**
  The ERR application will store the reported EER data and documents in the EER schema located in the NMED DMZ. A job will pull submitted and certified data into the NMED internal network to the EER Staging schema. The EER Staging schema will be a temporary location that will be used to transform and then load the data into the main TEMPO production database and have no user interface. The EER database located in the NMED DMZ will be the repository for all excess emissions data and documents until they are certified. The facility representative may return to the EER data capture module as often as required to edit the entered data until the data is ready to be certified.

• **TEMPO Data Load Routine:**
  Once EER data and documents have been entered and certified by the facility representative, the data/documents will be loaded from the staging database used during data entry and validation, into the main TEMPO production database via the EER staging database. The EER Staging database will pull submitted and certified data and
documents from the EER database located in the NMED DMZ every three minutes. All data moved from the NMED DMZ to the NMED internal network will be initiated by in the NMED internal network. The data in the EER Staging database will then be loaded into the TEMPO database using existing mvTempo scripts. This data load will transform the data from the data structure used to support the EER data entry application into the native TEMPO database structure.

- **TEMPO Databases:**
  The main production TEMPO database resides within the NMED firewall and is the master repository for environmental information at AQB. All data and documents pertaining to excess emissions will ultimately reside in this database, once certified by the facility representative. An external TEMPO database that is located in the NMED DMZ will be used by the EER application to provide facility information. The external TEMPO database is read-only and updated from the main TEMPO database nightly. The external TEMPO database provides a central place for any application that needs to use TEMPO stored data.

### 2.2. BUSINESS PROCESS

During the workflow definition workshop for this project, Windsor worked with NMED staff and facility representatives to document the current workflow for submission of excess emissions data and documents by regulated facilities. After discussion of the deficiencies of the current process and possible opportunities for improvement, a proposed future workflow was also defined. Along with the functional and data requirements detailed elsewhere in this document, this new workflow will form the basis for the design of the new excess emissions reporting application.

#### 2.2.1. CURRENT WORKFLOW

##### 2.2.1.1. SUBMISSION

**2.2.1.1.1. Overview**

Air facilities that experience an excess emissions event are currently required to provide a report of the excess emission to NMED AQB staff. An initial report must be provided no later than the end of the next business day after discovery of the event. If all information is available to the regulated facility within this time then the initial report is also considered final (or ‘initial/final’). If additional research is required to gather all of the necessary information regarding the emission, then a separate ‘final’ report must be submitted no later than 10 calendar days after the end of the event. For events with a longer duration, the regulated facility may also submit interim ‘update’ reports, containing additional information not originally included in the ‘initial’ report. Reports are currently submitted by email using an MS Excel spreadsheet that is attached to the email (until recently they were submitted as a MS Word form by email). NMED currently employs a contractor who reviews the submitted spreadsheet and confirms that all required data has been provided. If all data has been provided, the contractor will enter the details of the excess emission into an MS Access database. If data is incorrect/missing, the contractor will advise...
NMED, who will contact the regulated facility (either by telephone or by email) and advise them of the need to correct the errors/omissions and resubmit the spreadsheet. The regulated facility may choose to submit an affirmative defense form explaining the nature and cause of the excess emission no more than 30 calendar days after the ‘final’ excess emission report is submitted. The affirmative defense form is filed by NMED for future reference by compliance and enforcement staff, and the receipt date of the affirmative defense form is entered into the MS Access database.

### Task Descriptions

- **Gather Excess Emissions Reporting Data.**
  After an excess emission event, the regulated facility gathers data and supporting documentation for the excess emission report. Depending on the event, the amount of data collected and the number of people asked to contribute may vary.

- **Submit EER Spreadsheet via Email.**
  The regulated facility submits the excess emission report via e-mail to a generic NMED Air e-mail (eereports.aqb@state.nm.us). Since NMED does not respond that a
submission has been received, NMED recommends that an e-mail return receipt be included on the e-mail, so that a response will be sent when NMED opens the e-mail.

Depending on the length of time of the event, the report can have different levels of detail as indicated by checking one of four check boxes in Section I.

- **Initial** – When the excess emission event takes place over a multiple-day period, an ‘Initial’ report is created that includes only a minimum of general information about the event. The ‘Initial’ report must be received by the end of the next business day after the discovery of the event. At a minimum, the regulated facility and discovery date are required to be reported.

- **Final** - After the end of the excess emission event, the regulated facility has 10 calendar days to complete and submit the ‘Final’ report. All ten sections of the form must be completed.

- **Initial/Final** - When the excess emission event occurs within a 24-hr period, and all information required can be completed, just an ‘Initial/Final’ report form is submitted. All ten sections of the form must be completed.

- **Update** – After an ‘Initial’ version has been submitted, an updated version can be submitted to correct form errors. Updates are also submitted for ongoing events. Once the ‘Final’ or ‘Initial/Final’ form has been submitted, no updates are allowed.

The regulated facility names each file submitted based on a standard naming convention. The file allows NMED to quickly identify the type of report, the failure point, and the date of failure.

- **Forward Spreadsheet to Contractor.**
  The NMED AQB Data entry staff periodically checks the excess emission reporting e-mail inbox for new submissions (eereports.aqb@state.nm.us) and forwards the report to a contractor. In addition, the excess emission report is printed and filed by NMED.

- **Contractor Reviews Submitted Spreadsheet.**
  After receiving the report, the contractor reviews the report for completeness, based on business rules developed by NMED. The rules describe which fields are required to be completed based on the type of report (‘initial’, ‘final’, ‘initial/final’, or ‘update’), as well as the type of regulated facility and reporting regulation. In addition, the date and time the e-mail was received by NMED is checked to confirm compliance with the excess emission reporting regulation.

- **Notify Submitter of Rejected EER Submittal.**
  When an excess emission report does not satisfy the business rules for completeness or when clarification is required, the contractor will notify NMED of the issue(s). NMED will then notify the regulated facility that additional information, or clarification is
required. This step has generally been conducted via phone, instead of e-mail as a method to speed up the response.

- **Revise Excess Emissions Reporting Data.**
  As needed, the regulated facility will provide the additional information required by NMED in order to process their report.

- **Contractor Loads Spreadsheet into Access DB.**
  Once the contractor has reviewed the submitted spreadsheet, the information on the reports is entered into a Microsoft Access database, including the date and time the excess emission report was submitted to NMED. Each version of the report that is received is entered as a separate record from previous submissions to preserve the history of the data.

  The Access database is made available by the contractor to NMED and includes several analysis and compliance reports.

- **Submit Affirmative Defense Form.**
  Within 30 days of the excess emission ‘Final’ report submission, the regulated facility prepares and submits via e-mail the affirmative defense form and supporting documentation. The form and documentation are used to describe the cause, and how the regulated facility limited emissions during the emission event.

- **File Affirmative Defense Form.**
  The affirmative defense form and supporting documentation are filed with the excess emission report by NMED.

- **Enter Affirmative Defense Receipt Date into Access DB.**
  The date and time that the affirmative defense report and supporting documentation was received at NMED is recorded in the Access database.

### 2.2.1.2. PROCESSING

#### 2.2.1.2.1. Overview

NMED AQB staff currently reviews the circumstances of an excess emissions event by reviewing all filed paperwork (EER documents, affirmative defense forms, and associated paperwork) for permit compliance issues, and by reviewing historical data pertaining to a regulated facility for evidence that might indicate a trend of non-compliance. If AQB staff determines that further information should be gathered about the excess emission, it may choose to perform one or both of the following tasks:

- Request that a root causes analysis be performed by the regulated facility. The regulated facility has up to 60 calendar days to provide the results of the root cause analysis to
AQB.

- Inspect the regulated facility. An AQB staff member will perform an on-site inspection of the regulated facility and emissions unit that experienced the excess emission. Using the submitted document, along with the results of the root cause analysis and/or inspection (if either were performed), AQB compliance staff will decide if enforcement action is required for the excess emission. In cases where enforcement action is necessary, AQB enforcement staff will issue a Notice of Violation (NOV) and an amount that must be paid as a penalty for the violation. Some negotiation may take place between the regulated facility and AQB over the NOV and penalty amount, leading to collection of the penalty by AQB.

AQB Compliance monitoring and enforcement activities are currently minimal, due to staffing limitations and a lack of tools for analyzing EER data.

### 2.2.1.2.2. Task Descriptions

- **Perform Compliance Review.**
  AQB Compliance reviews the reports generated by the Access database, as well as the excess emission and affirmative defense reports, to understand the event and the
explanation of how and why it occurred. Depending on the information, AQB compliance staff may determine that a Root Cause Analysis will be requested, and/or an inspection of the regulated facility must be performed.

- **Request Root Cause Analysis.**
  A written request is sent by AQB Compliance to the regulated facility asking that a root cause analysis be performed. The request needs to be made within 90 days after the submission of the excess emission ‘Final’ report.
  Although allowed by regulation, no root cause analysis has been requested by NMED in recent history, except as part of an enforcement action.

- **Gather Root Cause Analysis Data.**
  The regulated facility gathers the information required to complete the root cause analysis report and supporting documentation.

- **Submit Root Cause Analysis.**
  Although AQB Compliance recommends a root cause analysis method, the regulated facility may conduct a root cause analysis using a method of their choosing. They are required to use the Root Cause Analysis Summary Form developed by the Department. This is done via e-mail and must be submitted to AQB within 60 days of the root cause analysis request.

- **Review Root Cause Analysis.**
  AQB Compliance reviews the root cause analysis documentation to determine if the regulated facility has fully identified the reason for the excess emission, and if there is a risk of another similar event occurring (a ‘systemic’ problem). The report is meant to help a regulated facility determine the steps necessary to prevent another similar excess emission event.

- **Perform Inspection.**
  AQB Compliance may require that an inspection of the regulated facility be performed in response to the information provided in the excess emission reporting process. Annual inspections of some major facilities occur and may use the information from previous excess emission reports as input into the inspection process.

- **Make Enforcement Decision.**
  AQB Compliance makes a decision whether to forward the excess emission violation to AQB Enforcement, or take no further action based on the gathered information.

- **Issue NOV and Penalty Demand.**
  AQB Enforcement issues the enforcement notice and the penalty amount to the regulated facility.
- **Negotiate Settlement.**
  Depending on circumstances, AQB Enforcement may negotiate a settlement with the regulated facility that is different than the penalty amount that was originally determined.

- **Collect Penalty.**
  AQB Enforcement collects the penalty from the regulated facility and ensures compliance with the enforcement action.

### 2.2.1.3. CURRENT WORKFLOW VARIATIONS

#### 2.2.1.3.1. Initial Submission Not Finalized
The current workflow does not allow for an easy method of identifying excess emissions submissions where there has been an ‘initial’ submission, but no ‘final’ submission has been submitted. It would be theoretically possible to query the MS Access database to identify these submissions, but this is not currently being done. In the future workflow, AQB would like this ability built in to the EER application in some fashion.

#### 2.2.1.3.2. Rejection of a Finalized Submission
If a regulated facility discovers that a ‘final’ submission in fact contains errors then the facility may work directly with AQB to void out the previous submission and provide a new ‘final’ submission with corrections. The ability to accept a new ‘final’ submission in cases where an ‘honest’ mistake needs to be rectified should be preserved in the future EER application.

### 2.2.2. FUTURE WORKFLOW

#### 2.2.2.1. REGISTRATION

##### 2.2.2.1.1. Overview
Regulated facility users will be required to register to use the future EER application, which will follow the steps created by the Air Emission Inventory Reporting (AEIR) project, which will provide a familiar and consistent process to regulated facility users.

The registration process requires the submission of a signature authorization form that is signed by the regulated facility user, and sent to AQB. The form will be checked to confirm that the user exists and confirm the electronic signature authority.

In addition to the signature authorization form, the user will need to use the EER online registration form to complete the process. The EER online registration form will be accessed through the NMED Secure Extranet Portal (SEP), where the user will enter the regulated facility and role they want to register. Users that register as the facility administrator will have their registration requests sent in an e-mail directly to AQB to review and a regulated facility can have more than one facility administrator (an alternate). Users that register as a facility
submitter/certifier will first have their requests sent in an e-mail to their facility administrator for an initial approval. The facility administrator will click on a link contained in the e-mail to approve the user, which will then send a secondary e-mail request to AQB to confirm. AQB staff will use the written signature authorization and the online registration request to determine whether to approve or deny the registration request. The AQB staff will just need to click on the link in the e-mail to approve the user to use the EER online application.

Note: the EER registration process requires that the user has already registered for SEP.

### Excess Emissions Reporting - Registration - Future Workflow

#### 2.2.2.1.2. Task Descriptions

- **Submit Signature Authority**
  
  Regulated facility staff will submit a registration form to provide the signature authority for the user to access the EER application. This form will be available to download and print as part of the future EER registration process. The “wet-ink” signed form will be sent to AQB via mail (a faxed or scanned version of the document is not acceptable). The
original wet ink signed document must be maintained on file at the AQB. A scanned version of this original document can be attached to the TEMPO central file folder for the facility so that it may be readily accessible to AQB staff. The signature authority document must be submitted before the registration can be approved by the AQB. Prior to the launch of the future EER application, current EER submitter/certifiers will be sent a signature authority document for completion and return to NMED. This will expedite the EER registration process for these individuals once the application is available.

- **Log in to SEP**
  Regulated facility staff will log in to NMED’s Secure Extranet Portal (SEP) using a user name and password, then navigate to the EER registration page.

  Prior to using SEP, the regulated facility must register designated staff for both SEP and the EER application. During the registration process the user will establish a password, and the response to several challenge questions to meet CROMERR requirements.

- **Register for EER**
  After logging into SEP, the regulated facility staff will link to an online registration form that is part of the EER application. The form will allow the user to request registration for one or more facilities that they are associated with, and their role. There will be two roles that a user may register for:
  - *Facility Administrator* – The user is allowed to authorize others for rights to enter excess emissions data on behalf of a regulated facility. Design to support multiple access roles for future scalability
  - *Submitter/Certifier* – The user is authorized to enter the data in the EER application and is responsible for certifying that the submission is complete and accurate.

  When the facility administrator submits their request, an e-mail is generated to the AQB administrator that provides a description of the registration, as well as a link to approve the user.

  When the submitter/certifier submits their request, an e-mail is generated and sent to the EER Facility Administrator for the regulated facility that provides a description of the registration, as well as a link to approve the user.

- **Facility Admin Review EERRegistration.**
  The EER facility administrator will receive e-mail requests when facility users register as submitter/certifiers. The e-mail will have a link to approve the user, which will then send an e-mail request to AQB for a second approval.

- **Review EER Registration.**
  AQB will review the registration request e-mail received.
• **Review Signature Authority.**
  AQB will review the submitted signature authority to confirm that the user exists and is associated with the correct regulated facility.

• **Make Registration Determination.**
  Using the review of the online EER registration and the submitted signature authority document, AQB will either approve or deny the user access to the EER application. The approval will be made by pressing a link on the EER system generated registration e-mail. Pressing the approval link will allow the user to access the EER application with the approved role.

2.2.2.2. **SUBMISSION**

2.2.2.2.1. **Overview**

In the future workflow for submission, air facilities will use a web-based EER application to submit their gathered excess emissions data and documents. The application will be accessed through the NMED Secure Extranet Portal (SEP), which allows users to access multiple NMED applications through a single, secure authentication process. Entered excess emissions data may be saved, updated, and refined within the EER application. Once the regulated facility considers the excess emission data to be correct and complete (the EER application will perform validation checks to ensure this is the case), it will be submitted to AQB using a CROMERR-compliant certification process to confirm the authenticity of the submitter and to ensure non-repudiation of the entered excess emission data and documents. Once the submission has been completed, the new EER application will automatically email the submitter to inform them of the successful submission.

This process may be repeated by the regulated facility for the submission of an affirmative defense form and associated documents, should the regulated facility decide to submit one. This future approach to processing will minimize the amount of time spent by AQB supporting the air facilities in their efforts to submit data pertaining to excess emissions, should improve the air facilities’ visibility to the status and disposition of their submissions, and should also improve the overall quality of those submissions.
2.2.2.2. Task Descriptions

- **Gather Excess Emissions Reporting Data.**
  After an excess emission event, the regulated facility will gather the data and supporting documentation for the excess emission report. Depending on the event, the amount of data collected and the number of people asked to contribute may vary.

- **Log In to Web Application (SEP).**
  The regulated facility staff will log in to NMED’s Secure Extranet Portal (SEP) using a user name and password, then navigate to the new EER application.

  Prior to using SEP, the regulated facility must register designated staff for both SEP and the EER application. During the registration process the user will establish a password, and the response to several challenge questions.

- **Enter EER Data.**
  The regulated facility staff will enter the excess emission information using the EER
The data will be validated against data and business rules during data entry to ensure that once the data is submitted the form has been completed correctly. In addition, the user will be able to upload attachments to the report.

The application will allow the user to save data without submitting the data to allow for revisions to occur as well as have more than one staff member contribute to the reporting information. Note: This concept was not well received by the regulated community that participated during the workshop. There were concerns about storing working data on an NMED server that may not be what is submitted. This may result in removing this workflow feature.

• **Review/Certify Submitted Data (CROMERR).**
  When the regulated facility is ready to submit, a designated submitter for the excess emission report will need to answer a challenge question to begin the submission process. Once the challenge question has been answered correctly, the user will have the opportunity to review the submission. The user will then affirm that the submission is accurate and submit the data.
  Note: EPA does not have a single CROMERR compliant approach for the electronic signature required for submission. NMED is reviewing options for the electronic signature (i.e. pin number, challenge/response questions).

• **Auto-notify Submitter of Successful Certification.**
  The application will automatically notify the submitter either via e-mail or online response that their submission was successfully submitted.

• **Gather Affirmative Defense Data.**
  Within 30 days of the excess emission ‘Final’ report submission, the regulated facility will gather the data and supporting documentation for the affirmative defense report. Depending on the event, the amount of data collected to support the affirmative defense will vary.

• **Enter Affirmative Defense Data.**
  The regulated facility staff will enter the affirmative defense data that is associated to the excess emission information using the EER application. The user will also be able to upload attachments to the report. The affirmative defense data may be entered at the time of the excess emission data, however it may be entered at a later date.

The application will allow the user to save data without submitting the data to allow for revisions to occur as well as have more than one staff member contribute to the reporting information. Note: This concept was not well received by the regulated community that participated during the workshop. There were concerns about storing working data on an NMED server that may not be what is submitted. This may result in removing this...
2.2.2.3. **PROCESSING**

2.2.2.3.1. **Overview**

For future AQB processing of excess emissions, the EER application will analyze the current excess emission data for the regulated facility and any historical excess emissions at that regulated facility that will identify if the regulated facility is a candidate for a root cause analysis. AQB compliance staff will review the results of this analysis along with the submitted excess emission data/documents and the submitted affirmative defense data/documents to determine if further investigation of the excess emission event is required. If AQB compliance staff determines that further information should be gathered about the excess emission, it may choose to perform one or both of the following tasks:

- Request that a root cause analysis be performed by the regulated facility. The facility has up to 60 calendar days from the date of the request to provide the results of the root cause analysis to AQB. The submission process for the root cause analysis results will be identical to the process used for submission of excess emission data/documents and affirmative defense data/documents (see the future workflow for submission).

- Inspect the regulated facility. An AQB compliance staff member will perform an on-site inspection of the facility and emissions unit that experienced the excess emission. Using the submitted data/documentation, along with the results of the root cause analysis and/or inspection (if either were performed), AQB compliance staff will determine if enforcement action is required as a result of the excess emission. In cases where enforcement action is necessary, AQB enforcement staff will issue a Notice of Violation (NOV) and determine an amount that must be paid as a penalty for the violation. Some negotiation may take place between the regulated facility and AQB over the NOV and penalty amount, ultimately leading to collection of the penalty by AQB.

This future approach to processing will make the AQB internal compliance review process more efficient by providing better tools and easier access to data supporting that decision-making process. Likewise, the enforcement decision making process will also be more efficient through better access to data and documents that are stored in a non-repudiable manner in a single, central location.
2.2.2.3.2. Task Descriptions

- **Automated Evaluation for Root Cause Analysis**
  Using criteria that are yet to be established, the application will evaluate each excess emission report to suggest if the regulated facility should perform a root cause analysis. The criteria might use metrics such as the amount of emissions, and the number of events.

- **Perform Compliance Review.**
  AQB Compliance reviews the reports generated by the EER application, as well as the excess emission and affirmative defense reports, to understand the event and the explanation of how and why it occurred. Depending on the information, AQB compliance staff may determine that a root cause analysis will be requested, and/or an inspection of the regulated facility must be performed.

- **Request Root Cause Analysis.**
  AQB Compliance will use the new EER application to request that the regulated facility
perform a root cause analysis. The application will create either a letter that will be signed by AQB or generate an e-mail.

- **Perform Root Cause Analysis.**
  The regulated facility gathers the information required to complete the root cause analysis report and supporting documentation.

- **Log in to Web Application (SEP).**
  The regulated facility staff will log in to NMED’s Secure Extranet Portal (SEP) using a user name and password, then navigate to the EER application.

- **Enter Root Cause Analysis Data.**
  The regulated facility staff will enter the root cause analysis data that is associated with the excess emission information using the EER application. Since the regulated facility may use their own analysis methodology and documentation, the user will be able to upload attachments to the report.

  The application will allow the user to save data without submitting the data to allow for revisions to occur as well as have more than one staff member contribute to the reporting information.

  Note: This concept was not well received by the regulated community that participated during the workshop. There were concerns about storing working data on an NMED server that may not be what is submitted. This may result in removing this workflow feature.

- **Review/Certify Submitted Data (CROMERR).**
  When the regulated facility is ready to submit the root cause analysis, a designated submitter for the excess emission report will need to answer a challenge question to begin the submission process. Once the challenge question has been answered correctly, the user will have the opportunity to review the root cause analysis submission. The user will then affirm that the submission is accurate and submit the data.

- **Review Root Cause Analysis.**
  AQB Compliance reviews the root cause analysis documentation to determine if the regulated facility has fully identified the reason for the excess emission, and if there is a risk of another similar event occurring (a ‘systemic’ problem).

- **Perform Inspection.**
  AQB Compliance may require that an inspection of the regulated facility be performed in response to the information provided in the excess emission reporting process. Annual inspections of some major facilities occur and may use the information from previous excess emission reports as input into the inspection process.
• **Make Enforcement Decision.**
  AQB Compliance makes a decision whether to forward the excess emission violation to AQB Enforcement, or take no further action based on the gathered information.

• **Issue NOV and Penalty Demand.**
  AQB Enforcement issues the enforcement notice and the penalty amount to the regulated facility.

• **Negotiate Settlement.**
  Depending on circumstances, AQB Enforcement may negotiate a settlement with the regulated facility that is different than the penalty amount that was originally determined.

• **Collect Penalty.**
  AQB Enforcement collects the penalty from the regulated facility and ensures compliance with the enforcement action.

2.2.2.4. FUTURE WORKFLOW VARIATIONS

2.2.2.4.1. Initial Submission Not Finalized
The future EER application will support the identification of ‘initial’ excess emissions reports that do not have a corresponding ‘final’ excess emissions report by either providing a report or an online query (through the user interface). In addition, it will be possible to provide regulated facility staff with a ‘tickler’ email’ reminding them that they have not yet provided a ‘final’ excess emissions report after a set period of time.

2.2.2.4.2. Rejection of a Finalized Submission
The future EER application will support the rejection of a submitted, certified, ‘final’ excess emissions report in cases where the regulated facility has identified an error that it wishes to correct. The CROMERR certification process will retain a non-repudiable copy of the rejected submission. The EER application will allow a replacement ‘final’ excess emissions report to be created, submitted, and certified.

2.2.2.4.3. Usage of EER data by other sections within AQB
The future EER application will write all gathered EER data and documents to the TEMPO database. The TEMPO database is a single, centralized source for this data, making it available for querying by other NMED users. Depending on the technical and data architecture of the EER application, it may also be possible to use the underlying EER application database for this purpose also.

2.2.2.4.4. EER Facility User Maintenance
The future EER application will allow the facility administrator user the ability to manage the submitter and certifier users for their regulated facility, including approving or unapproving submitter/certifiers requests to the EER application. This is to ensure that the facility can make adjustments to the roles assigned to their users. This will reduce the user maintenance effort by AQB.

2.2.2.4.5 AQB EER Administration
The future EER application will allow the AQB administrator the ability to manage the facility administrators and submitter/certifiers for all facilities. This is to ensure that the AQB can manage unexpected issues that may arise.
3. FUNCTIONAL REQUIREMENTS

3.1. FUNCTIONAL HIERARCHY DIAGRAM

The functional requirements have been developed based on the future workflow diagrams and descriptions in section 2.2.2

3.2. FUNCTIONAL REQUIREMENTS

3.2.1. GENERAL SYSTEM REQUIREMENTS

The EER application will write all submitted and certified EER, Affirmative Defense, and Root Cause analysis data and documents to the TEMPO database using the intermediate EER Staging schema. The EER Staging schema will pull submitted and certified data from the EER schema located in the NMED DMZ into the NMED internal network on a schedule job. The data and documents in the EER Staging schema will then be loaded into TEMPO using existing mvTempo scripts. The TEMPO database is a single, centralized source for this data, making it available for viewing and querying by other NMED users.

3.2.2. REQUIREMENTS INVOKING THE SYSTEM

The EER application will be invoked only from NMED’s Secure Extranet Portal (SEP). The EER application cannot be invoked separately, because SEP authenticates and authorizes the user to access the application.

The EER application will be accessible only to registered users of the Secure Extranet Portal (SEP).

The EER application will direct the user to the EER application “home page” if they are an authorized user of the EER application. Otherwise, the user will directed to an EER registration page.

3.2.3. GRAPHICAL USER REQUIREMENTS

The graphical user requirements will be used throughout the EER application to provide a consistent look and feel for the user. In addition, because many of the potential users of the EER application already use the Annual Emission Inventory Record (AEIR) application design elements will be reused to provide a similar graphical experience.

The EER application will comply with NMED's web design, and color palette standards.

The EER application will display the standard New Mexico Environment logo and banner on each form, excluding look-up forms.

The EER application will display a form title on each form.
8. The EER application will display an asterisk next to required data entry fields.

9. The EER application will display the application version number in the footer of each page.

10. The EER application will display error messages at the top of each page or next to field where the error occurred in an easy to read and understand format.

### 3.2.4. APPLICATION SPECIFIC REQUIREMENTS

#### Registration

11. The EER application will provide an online form for use during registration in the EER application. The form will support the selection of one or more facilities, and the user’s role for that facility.

12. The EER application will support two roles for EER users:
   1. Facility Administrator – The user is allowed to authorize others for rights to enter excess emissions data on behalf of a regulated facility. The user also can enter data in the EER application and is responsible for certifying that the submission is complete and accurate.
   2. Submitter/Certifier – The user is authorized to enter the data in the EER application and is responsible for certifying that the submission is complete and accurate.

13. The EER application will send an e-mail to the AQB administrator when a user submits a request to be a Facility Administrator. The e-mail will include the user’s information (e.g. name, phone number, and e-mail, address), and the facility identifying information (e.g. Agency Interest Id, and Facility name). In addition, the e-mail will include a link that can be pressed to approve the user.

14. The EER application will send an e-mail to the EER Facility Administrator when a user submits a request to be a Submitter/Certifier. The e-mail will include the user’s information (e.g. name, phone number, and e-mail, address), and the facility identifying information (e.g. Agency Interest Id, and Facility name). The e-mail will also include a link that can be pressed to approve the user by the Facility Administrator.

15. The EER application will send an e-mail to the AQB administrator after the EER Facility Administrator has approved a request to be a Submitter/Certifier. The e-mail will include the user’s information (e.g. name, phone number, and e-mail, address), and the facility identifying information (e.g. Agency Interest Id, and Facility name). The e-mail will also include a link that can be pressed to approve the user by the AQB administrator.

16. The EER application will allow the AQB administrator to either approve or deny the user’s access to the EER application, upon review of the request for online EER
registration and the submitted signature authority document. The approval will be made by pressing a link on the EER system generated registration e-mail or through the use of the AQB EER Administration application module.

| 17 | The EER application will allow for more than one facility administrator. |
| 18 | The EER application will require that there must be at least one facility administrator in order to allow the completion of the registration request for the submitter/certifier role. |
| 19 | The EER application will create a registration request for each owner organization that is requested by a user. |
| 20 | The EER application will allow the AQB administrator the ability to either approve or reject a user’s registration request. |
| 21 | The EER application will require that each request for a registration be specific to an owner organization. |

**Registration Data**

| 22 | The EER Application will require the user to specify one or more facilities for each owner organization that they are associated with and their role to the facility. |
| 23 | The EER application will establish the credentials of the user from SEP authentication and authorization process. |

**Enter EER Data**

| 24 | The EER application will support entry of excess emission data by regulated facility staff. |
| 25 | The EER application will validate the data against data and business rules during data entry to ensure that once the data is submitted the form has been completed correctly. |
| 26 | The EER application will allow the user to save excess emissions data and documents without certifying the data to allow for revisions to occur as well as have more than one staff member contribute to the reporting information. |
| 27 | The EER application will allow for the linking of multiple excess emission reports to a single event with the same activity number. |
| 28 | The EER application will allow for the single submission of multiple excess emission reports that are related to multiple emission units (i.e. for each emission unit there will be one excess emission report). Each EER report will need to be reviewed separately during certification. (multiple documents under the grey bar) |
| 29 | The EER application will support the upload of document attachments in the PDF file format, and then linking them to an excess emissions report by regulated facility staff. |
| 30 | The EER application will require that the final or initial/final submission include at least one attached file (e.g. calculations) |
| 31 | The EER application will require that an attached file for an EER will be classified |
Excess Emissions Reporting Project Requirements Specifications

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<td>(e.g. via a dropdown list). If the category is “Other”, then a short description will be required.</td>
<td>32 The EER application will allow the user to download and view the attached documents associated to the EER before certification.</td>
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<tr>
<td>33 The EER application will allow for the printing of the EER during and after the submission.</td>
<td>34 The EER application will display historical EER submissions, which includes the ability to filter the list of EER submissions.</td>
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<tr>
<td>35 The EER application will lock the final or initial/final EER submission from additional changes or attachments once the submitter/certifier has affirmed the EER.</td>
<td>36 The EER application will allow for the deletion of a EER by the facility, including any attachments, that have not been certified and submitted.</td>
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<td>37 The EER application will automatically notify the submitter/certifier via e-mail and online response that their excess emissions data/documents submission was successfully certified. The e-mail response will include the TEMPO activity number.</td>
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<tr>
<th><strong>EER Review/Certify Submitted Data (CROMERR)</strong></th>
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<tr>
<td>38 The EER application will provide the regulated facility user with the opportunity to review the submitted excess emissions data/documents to be certified, once a challenge question has been answered correctly.</td>
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<tr>
<td>39 The EER application will require a submitter/certifier to answer a challenge question when the submitter/certifier is ready to certify and submit an excess emissions report data/documents. This challenge question will be provided by functionality within SEP.</td>
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<td>40 The EER application will require the submitter/certifier to affirm that the excess emissions document/data submission is accurate in order to complete the certification of the submission. This may only be done once a challenge question has been answered and the submission has been reviewed by the submitter/certifier.</td>
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<tr>
<td>41 The EER application will create a non-repudiatable copy of the submission once the submitter/certifier has affirmed the EER.</td>
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<th><strong>Enter Affirmative Defense Data</strong></th>
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<td>42 The EER application will support entry of affirmative defense data that is associated to the excess emission information by regulated facility staff.</td>
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<td>43 The EER application will validate the affirmative defense form against data and business rules during data entry to ensure that once the data is submitted the form has been completed correctly. The affirmative defense data may be entered at the time of the excess emission data, however it may be entered at a later date.</td>
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<tr>
<td>44 The EER application will allow the user to save affirmative defense data and documents without certifying the data to allow for revisions to occur as well as have</td>
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more than one staff member contribute to the reporting information.

45 The EER application will support the upload of document attachments in the PDF file format, and then linking them to an affirmative defense submission by regulated facility staff.

46 The EER application will require that an attached file for an affirmative defense will be classified (e.g. via a dropdown list). If the category is “Other”, then a short description will be required.

47 The EER application will display the due date of the affirmative defense based on the submission of the final or initial/final report (the affirmative defense is due 30 days after the submission of the initial/final or final report).

48 The EER application will allow the user to download and view the attached documents associated to the affirmative defense before certification.

49 The EER application will allow for the printing of the affirmative defense during and after the submission.

50 The EER application will display historical affirmative defense submissions that are associated to the submitted EER.

51 The EER application will lock the submitted affirmative defense submission from additional changes or attachments once the submitter/certifier has affirmed the affirmative defense.

52 The EER application will allow for the deletion of an affirmative defense form by the facility, including any attachments, that have not been certified and submitted.

53 The EER application will automatically notify the submitter/certifier via e-mail and online response that their affirmative defense data/documents submission was successfully certified.

**Affirmative Defense Review/Certify Submitted Data (CROMERR)**

54 The EER application will provide the regulated facility user with the opportunity to review the submitted affirmative defense data/documents to be certified, once a challenge question has been answered correctly.

55 The EER application will require a submitter/certifier to answer a challenge question when the submitter/certifier is ready to certify and submit an affirmative defense report data/documents. This challenge question will be provided by functionality within SEP.

56 The EER application will require the submitter/certifier to affirm that the affirmative defense document/data submission is accurate in order to complete the certification of the submission. This may only be done once a challenge question has been answered and the submission has been reviewed by the submitter/certifier.

57 The EER application will create a non-repudiatable copy of the affirmative defense submission once the submitter/certifier has affirmed the affirmative defense.
Evaluation for Root Cause Analysis

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<td>58</td>
<td>The EER application will evaluate each excess emission report to suggest if the regulated facility should perform a root cause analysis. The criteria for this evaluation have yet to be established, and might include metrics such as the amount of emissions, and the number of events.</td>
</tr>
<tr>
<td>59</td>
<td>The EER application will produce a request that the regulated facility perform a root cause analysis, if requested by AQB Compliance staff. The application will create either a letter that will be signed by AQB or generate an e-mail.</td>
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<tr>
<td>60</td>
<td>The EER application will support review of the root cause analysis documentation by AQB Compliance to determine if the regulated facility has fully identified the reason for the excess emission, and if there is a risk of another similar event occurring (a ‘systemic’ problem).</td>
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<tr>
<td>61</td>
<td>The EER application will support the review of the Root Cause Analysis Evaluation report by AQB Compliance staff, as well as the excess emission and affirmative defense submittals, to understand the event and the explanation of how and why it occurred. AQB compliance staff will use this data to determine whether a root cause analysis will be requested, and/or an inspection of the regulated facility must be performed.</td>
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Enter Root Cause Analysis Data

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<td>62</td>
<td>The EER application will support entry of root cause analysis data that is associated with the excess emission by regulated facility staff.</td>
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<tr>
<td>63</td>
<td>The EER application will be validate the root cause analysis data against data and business rules during data entry to ensure that once the data is submitted the form has been completed correctly.</td>
</tr>
<tr>
<td>64</td>
<td>The EER application will allow the regulated facility user to save root cause analysis data without certifying the data to allow for revisions to occur as well as have more than one staff member contribute to the reporting information.</td>
</tr>
<tr>
<td>65</td>
<td>The EER application will support the upload of document attachments in the PDF file format, and then linking them to a root cause analysis submission by regulated facility staff.</td>
</tr>
<tr>
<td>66</td>
<td>The EER application will require that an attached file for a root cause analysis will be classified (e.g. via a dropdown list). If the category is “Other”, then a short description will be required.</td>
</tr>
<tr>
<td>67</td>
<td>The EER application will allow the user to download and view the attached documents associated to the root cause analysis before certification.</td>
</tr>
<tr>
<td>68</td>
<td>The EER application will allow for the printing of the root cause analysis during and after the submission.</td>
</tr>
<tr>
<td>69</td>
<td>The EER application will display historical root cause analysis submissions that are</td>
</tr>
</tbody>
</table>
The EER application will lock the submitted root cause analysis submission from additional changes or attachments once the submitter/certifier has affirmed the root cause analysis.

71. The EER application will allow for the deletion of a root cause analysis form by the facility, including any attachments that have not been certified and submitted.

72. The EER application will automatically notify the submitter/certifier via e-mail and online response that their root cause analysis data/documents submission was successfully certified.

Root Cause Analysis Review/Certify Submitted Data (CROMERR)

73. The EER application will provide the regulated facility user with the opportunity to review the submitted root cause analysis data/documents to be certified, once a challenge question has been answered correctly.

74. The EER application will require a submitter/certifier to answer a challenge question when the submitter/certifier is ready to certify and submit a root cause analysis report data/documents. This challenge question will be provided by functionality within SEP.

75. The EER application will require the submitter/certifier to affirm that the root cause analysis document/data submission is accurate in order to complete the certification of the submission. This may only be done once a challenge question has been answered and the submission has been reviewed by the submitter/certifier.

76. The EER application will create a non-repudiatable copy of the root cause analysis submission once the submitter/certifier has affirmed the root cause analysis.

Facility Administration

77. The EER application will allow a facility administrator to manage the users for a facility. This feature allows the facility administrator the ability to approve or deny (or remove) submitter/certifiers who are associated with the regulated facility(ies) that they administer. This is to ensure that the facility can make adjustments to the roles assigned to their users.

78. The EER application will provide the regulated facility staff with a ‘tickler’ e-mail, reminding them that they have not yet provided a ‘final’ excess emissions report after a set period of time.

79. The EER application will not allow a Facility Administrator to inactivate another Facility Administrator user for their organization.

AQB Administration

80. The EER application will allow an AQB user to manage the users for all facilities, including changing the role and status of all users for a selected facility.

81. The EER application will allow an AQB Administrator to inactivate a Facility
The EER application will allow AQB to define an outage or grace period in days from a specific date for individual facilities. This is to accommodate situations when the application is not available for submission or an extension has been requested. The time period will be used to determine if the facility met the requirements regarding submission time periods.

83 The EER application will provide a portal for members of the public to view and print excess emissions reports and associated documentation.

84 The portal will provide the capability to filter the reports at a minimum by date, AI number and emissions quantities per pollutant.

**Public Portal Discussion Item:** It was discussed during the review of this document on 1/11/11, that the requirements for a public portal to view excess emission reports and related documentation was primarily to reduce the time and effort required by AQB to respond to Freedom of Information Act (FOIA) requests. It was also mentioned that State of New Mexico is moving to an “open-government” concept of providing information that is publicly available and easily accessible. It was thought that other AQB programs may have a similar need to provide information and that the requirements might extend beyond excess emission reporting into a separate project. Until a determination can be made on how to proceed with the requirement for a public portal, the requirements will remain in this document.

### 3.2.5. REQUIRED STANDARD REPORTS

85 The EER application will support the creation of an excess emission report similar to the current form.

86 The EER application will support the creation of an affirmative defense report similar to the current form.

87 The EER application will support the creation of a summary root cause analysis form similar to the current form.

88 The EER application will support the identification of ‘initial’ excess emissions reports that do not have a corresponding ‘final’ excess emissions report by either providing a report or an online query (through the user interface).

89 The EER Application will create a report of submissions that have not been finalized.

### 3.2.6. DATA EXPORT

90 The EER application will allow for exporting the EER submission in a CSV file.
The EER application will allow for exporting the affirmative defense submission in a CSV file.

The EER application will allow for exporting the root cause analysis submission in a CSV file.

### 3.2.7. REMOTE DATA ACCESS

The EER application will not require that data be accessible outside of the application environment.

### 3.2.8. HELP SYSTEM

The EER application will provide information on each form to guide the user on the correct use of the application.
4. OPERATIONAL REQUIREMENTS

4.1. OPERATIONAL ENVIRONMENT

The EER application will be a web-based application that is accessed through a public intranet connection portal. The EER application will rely on TEMPO to provide facility, and emission unit data, however it will need to run independently from TEMPO.

94 The EER application will use SEP (Secure Extranet Portal) to manage user access to the application.

95 The EER application will connect to the application's database schema using an application user with the appropriate role set up according to standards set by NMED DBAs.

96 The EER application will be configurable to run under its own subdomain such as http://<appname>.<hostname> (as an example the NMED wiki runs under http://wiki.insider).

4.2. TARGET PLATFORM

The system will be designed as a Web based application and is expected to interface with pre-existing external systems for functionality like security and data retrieval. The following figure illustrates the distributed physical layers of the overall solution. In this architecture, the independent user interfaces, application services and data stores will reside on distributed physical machines.
4.2.1. SERVER SPECIFICATIONS
The following table indicates the planned hardware configurations for the Production, QA, and Test environments.

<table>
<thead>
<tr>
<th></th>
<th>Production</th>
<th>QA</th>
<th>Test (ENVT)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HTTP Servers</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(Apache Web Server)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Application Servers</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(Apache Tomcat 6.0.10 configured with Java VM 1.5.11)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RDBMS</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(Oracle 9i DB version 9.2.x)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RDBMS</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(Intranet Oracle 9i DB version 9.2.x)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.1.1. APPLICATION SERVER REQUIREMENTS
97 The EER application will run on an application server that uses Tomcat version 6.0.11 or above, and configured with JRE 1.5.11 and Servlet Specification 2.4 if the application is developed using Java.

4.2.1.2. DATABASE SERVER REQUIREMENTS
98 The EER application will use a database server that is configured with Oracle version 9i or above.

4.2.1.3. WEB SERVER REQUIREMENTS
99 The EER application will run on a web server that uses Apache version 2 or above.

4.2.2. CLIENT SPECIFICATIONS (LOCAL AND REMOTE)
To assure the high level of consistency across user workstations and to minimize future development costs, the proposed solution will require at a minimum the following software on a user’s workstation.
100 The EER application will be designed to run on any modern web browser supporting W3C standards (examples include Firefox, Safari, Internet Explorer v8) , with the following features:
- Javascript enabled
4.2.3. COMMUNICATION PROTOCOL NETWORK

101 The EER application will use standard TCP/IP protocol for network communications.

102 The EER application will use Secure Sockets Layer (SSL) for web server communications.

4.3. SYSTEM AVAILABILITY REQUIREMENTS

103 The EER application should be available at all times due to nature of excess emissions. Updates and maintenance, such as back-ups should be scheduled to cause the least impact to the users of the application.

4.4. SUPPORTABILITY

The EER application should be developed so that NMED staff will be able to maintain and enhance the software as needed. This is accomplished by using the following:

104 The EER application will be written in Java 5 or greater or PHP 5 using the NMED Kohana framework version 2 or greater.

105 The EER application will run on Tomcat 6 or greater using a war file for deployment, if the application is developed using Java.

106 The EER application configuration information will be maintained external to the application code. Application configuration values will not be maintained within the application code.

107 The EER application source code will be maintained in NMED subversion source code repository.

108 The EER application will not store usernames/passwords, machine names, IP addresses, email addresses, absolute file paths, log file location and configuration, etc (application configuration values) in the subversion repository.

109 The EER application will use common code libraries to make the application easier to support.

4.5. PERFORMANCE

110 The EER application should be developed and optimized to minimize page loading and response time to achieve an average of less than 3 second response times.
However, there are many factors that determine the performance of an application including items such as the quantity of data being processed, and the method used to access the application (e.g. dial-up modem, cable modem, or Ethernet).

### 4.6. SECURITY

Security is often one of the most critical components of any application. The importance of a robust, comprehensive, maintainable, and flexible security design will not only secure access but also allow for confidence in its application of business rules.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>The EER application will manage the roles that are specific to the application (administrator, and reader/writer) using tables within the EER schema.</td>
</tr>
<tr>
<td>112</td>
<td>The EER application will require that each table include at a minimum the user who created a given row, the date the row was created, who last updated the row and the date the row was last updated.</td>
</tr>
<tr>
<td>113</td>
<td>The EER application will be registered to SEP as a CROMERR application.</td>
</tr>
<tr>
<td>114</td>
<td>The EER application will be accessible only to registered users of the Secure Extranet Portal (SEP).</td>
</tr>
<tr>
<td>115</td>
<td>The EER application will not allow access to the system unless the user is authenticated in SEP. If a user entered the URL, or a bookmark is invoked, the user will be directed to the SEP login page.</td>
</tr>
<tr>
<td>116</td>
<td>The EER application will log a user out of the application after a configurable period of time.</td>
</tr>
<tr>
<td>117</td>
<td>The EER application will be invoked only from NMED’s Secure Extranet Portal (SEP). The EER application cannot be invoked separately, because SEP authenticates and authorizes the user to access the application.</td>
</tr>
<tr>
<td>118</td>
<td>The EER application that is running on DMZ servers will not access any internal database instance.</td>
</tr>
<tr>
<td>119</td>
<td>The EER application data will be pulled from the NMED DMZ database instance into the NMED internal database instance by a schedule job. The scheduled job, will initiate the load of data from the EER schema in the DMZ into the internal EER Staging schema. Data and document will never be pushed from DMZ database instance into the internal database instance.</td>
</tr>
</tbody>
</table>

### 4.7. RESOURCE REQUIREMENTS

#### 4.7.1. SERVER RESOURCE SPECIFICATIONS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>The EER application will be developed to initially support 50 concurrent users.</td>
</tr>
</tbody>
</table>
The EER application will minimize session state, and pool resources allowing concurrent users to share resources.

4.7.2. DATABASE RESOURCE SPECIFICATIONS
The specific database resource requirements for data volumes have not yet been determined. It is understood that select TEMPO data is made available in the ENVP (outside the firewall) environment for NMED applications to use. The data is refreshed nightly and contains facility and emission unit data that will be needed for the EER application.

4.8. ERROR HANDLING

4.8.1. APPLICATION

The EER application will produce a clear text readable application log file from a secure server location within the application runtime environment (i.e. within the test environment if the application is running in test, available in the QA environment if the application is running in QA). The log files will be read-only, at a minimum, to all developers.

The EER application error log files will not contain user credentials or other confidential user information.

The EER application error log files will rollover after a reasonable period to prevent the overuse of disk space.

4.8.2. ORACLE PROCESSES

The EER application will log Oracle procedure errors that can be reviewed. Procedures that encounter errors will roll back the transactions to a beginning state.

The EER application Oracle error log files will not contain user credentials or other confidential user information.

The EER application Oracle error log files will rollover after a reasonable period to prevent the overuse of disk space.

4.9. BACK UP AND RECOVERY

The EER application should be backed-up on a regular schedule, such as nightly, due to the predicted high use of the application by the regulated facilities. Since the application allows for the saving of interim (not yet submitted and certified) data, it is important that as much data be available in case of a database failure.

4.10. DATA RETENTION
The EER application will store data in an application specific EER database. The data will be migrated into the TEMPO database on a regular schedule.

129 The EER application will maintain data as required by the state of New Mexico. Note: There are no specific requirements for data retention by CROMERR requirements or other EPA guidelines.

The text below is from the New Mexico Commission of Public Records regarding data retention policies for data stored in TEMPO.

(http://www.nmcpr.state.nm.us/nmac/parts/title01/01.018.0667.htm)

1.18.667.216 TOOLS FOR ENVIRONMENTAL MANAGEMENT ORGANIZATION (TEMPO) DATABASE:
A. Program: environment (air quality, ground water, petroleum, hazardous waste)
B. Maintenance system: numerical by primary key
C. Description: database used to track enforcement actions, compliance reporting, permitting and operating conditions of facilities regulated by the air quality bureau and the ground water bureau of the department. Data includes facility name, facility identifying number, address, permit application data, emissions or discharge report data, complaints data, enforcement data, permit invoicing data, compliance report data, etc.
D. Retention:
   (1) Air quality enforcement data: permanent
   (2) Asbestos enforcement data: permanent
   (3) Air quality permit data:
      (a) Title five permit application file data: permanent
      (b) New source review permit application file data: permanent
   (4) Emissions inventory report data: five years after close of calendar year in which created
   (5) Waster water discharge permits data: five years from termination of permit
E. Confidentiality: Portions of record may contain confidential information per CFR 40 Subsection 53.15 (i.e., trade secrets and confidential or privileged information).
F. Input: all documents used as input for the tools for environmental management organization system are filed in the air quality enforcement files, asbestos enforcement files, landfill inspection files, quarterly monitoring data information files, and air quality permit files. Those documents include the following general permit for quarrying and screening operations (GCP-2), general permit for concrete batch plants (GCP-5), permit for combustion sources and related equipment (GCP-4), etc.
G. Output: Because the tools for environmental management organization system is a data-based system, ad hoc and regularly scheduled reports may be generated upon request or demand. When produced these reports are forwarded to the requesting entity. Those reports include the following national emissions inventory, air facility subsystem, permit status reports, etc.

4.11. DATA MIGRATION
The EER application will not require migration of existing or historical EER data.

4.12. REUSE

130 The EER application reports generated from inside the NMED firewall will use the
NMED Reportr service.

131 The EER application will use the NMED CSS stylesheets as an http service (http://devreso.<hostname>...) for standard NMED web page styling – the resource differs for Test, QA and Prod and should be identified in the application.

132 The EER application development will use previously developed mvTempo migration scripts will be analyzed for potential reuse by the EER application.

4.13. SYSTEM DOCUMENTATION

133 The EER application will include with each deployed version, updated API docs in HTML format with programmer supplied comments.

134 The EER application will include with each deployed version, updated data model documentation in HTML format.

135 The EER application will include with each deployed version, updated PL/SQL API docs in HTML format with programmer supplied comments.

136 The EER application will include with each deployed version, updated database DDL scripts.

137 The EER application will include with each deployed version, updated application build scripts and deployment instructions.

138 The EER application will include with each deployed version, updated application release notes that identify application features to tie back to the Requirements document.

139 The EER application will include with each deployed version, updated class diagrams.

140 The EER application will include with each deployed version, updated list of dependent libraries and associated versions and source of the libraries.

4.14. SYSTEM INTERFACES

4.14.1. USER INTERFACES

141 The EER application will be consistent with NMED’s recommended Web Design Standards. Presentation standards will be developed using Cascading Style Sheets (CSS) provided by NMED as a service (Devreso).

4.14.2. HARDWARE INTERFACES

There are no additional hardware interfaces required for the EER application other than the current NMED hardware and network configuration.
4.14.3. SOFTWARE INTERFACES

Data management for the application will be in Oracle. In addition, the database will be integrated with the TEMPO master database which is currently managed on the Intranet database platform.

The EER application will maintain the certified EER, affirmative defense, and root cause analysis document along with the certification information (e.g. signature, date and time of certification, agreement questions affirmed, and the certificate) in the EER schema to ensure that certified documents cannot be altered without detection.

Note: The TEMPO schema’s ability to store documents was discussed during a meeting of technical requirements. It was determined that data elements needed to ensure the document was not tampered with for CROMERR requirements could not be accommodated (e.g. signature, certificate, date and time of certification). Alteration of the table to include the needed elements would not be allowed.

The EER application should copy certified data (EER, Affirmative Defense, Root Cause Analysis) and related attachments every three minutes from the EER schema that is in the NMED DMZ inside to a EER staging schema.

The EER application staging schema located within the NMED internal network will push new records received from the EER schema immediately into the TEMPO schema (i.e. the adding of the certified EER, Affirmative Defense, or Root Cause Analysis data...
Excess Emissions Reporting Project Requirements Specifications

| 146 | The EER application will create a new EER document record in TEMPO for the associated facility (TEMPO Agency Interest) for each “Initial” or “Initial/Final” EER report received. |
| 147 | The TEMPO generated Activity Number will be pushed to the EER schema in the NMED DMZ once it has been created. |
| 148 | The EER application will associate EER, Affirmative Defense, and Root Cause analysis data when an “Initial” or “Initial/Final” EER report has already been created. |
| 149 | The TEMPO schema will store the contents from the EER, Affirmative Defense, and Root Cause analysis forms in the TEMPO schema to allow for searching and report creation. |
| 150 | The TEMPO schema will store the EER, Affirmative Defense, and Root Cause analysis forms that are converted to PDF, as well as supporting attachments. |
| 151 | The EER application will use the data available in the TEMPO subset schema available in the NEMD DMZ, which is updated from the TEMPO schema nightly. Note: The TEMPO subset schema is currently available in the NMED DMZ and being used by the AEIR application. |
| 152 | The EER application registration page will be accessible from the SEP application for users that have not been approved to use the EER application. |
| 153 | The EER application will be accessible from the SEP application for approved EER users. |

4.14.4. COMMUNICATIONS INTERFACES

| 154 | The EER application will communicate with the Reportr and Devreso services using http to ensure secure communication between the services and the EER application. |
| 155 | The EER application will send an email acknowledgement, using SMTP, to the email address of the user that certifies and submits EER, Affirmative Defense, and Root Cause analysis data. |
| 156 | The EER application will send an email, using SMTP, to a configurable list of NMED users that are to be notified when a user requests access to the EER application. The email will include a link to an AQB administrative approval form. |
| 157 | The EER application will send an email, using SMTP, to a facility administrator(s) when a user at the facility requests access to be a Submitter/Certifier. The email will include a link to a facility administrative approval form. |
| 158 | The EER application will send an email, using SMTP, at the request of AQB, notifying the facility that they have requested to perform a root cause analysis. |
4.15. OTHER SYSTEM SPECIFIC OPERATIONAL REQUIREMENTS

4.15.1. REPORTING

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>159</td>
<td>The EER application will use Reportr for internal reports, a web service developed by NMED that uses queries and custom templates by in-house NMED developers.</td>
</tr>
<tr>
<td>160</td>
<td>The EER application will use a report tool for queries from the EER schema in the DMZ that will support output in the following formats: PDF, XML, HTML, CSV, XLS, RTF, TXT. To comply with CROMERR requirements it is expected that the submitted and certified nonrepudiable report will be created in a PDF format. The PDF format provides for a read-only and human readable format using a common PDF viewer application to comply with CROMERR requirements.</td>
</tr>
<tr>
<td>161</td>
<td>The EER application will use a report tool for queries from the EER schema in the DMZ that will be extensible to any data source.</td>
</tr>
</tbody>
</table>
5. LOGICAL DATA MODEL AND DATA FLOW
The logical and physical data model and data flow diagram will be produced as a part of the design phase of the project. The data requirements listed in section 5.6 will be used in the creation of the logical and physical data models.

5.1. LOGICAL DATA MODEL

5.2. APPLICATION DATA FLOW DIAGRAMS

5.2.1. PHYSICAL DATA MODEL

5.3. DESCRIPTION

5.4. ENTITY RELATIONSHIP DIAGRAMS

5.5. DATABASE SCHEMA

5.6. DATA REQUIREMENTS

Integration

<table>
<thead>
<tr>
<th></th>
<th>The EER Application data model should be designed to either integrate or allow for integration with other AQB applications. This would be to allow for easier analysis of similar data. An example would be to reuse the Annual Air Emission Reporting (AEIR) application data model.</th>
</tr>
</thead>
<tbody>
<tr>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

Data - Submittal

<table>
<thead>
<tr>
<th></th>
<th>The EER Application will allow for 1 of 4 types of submission:</th>
</tr>
</thead>
<tbody>
<tr>
<td>163</td>
<td>- Initial</td>
</tr>
<tr>
<td></td>
<td>- Update</td>
</tr>
<tr>
<td></td>
<td>- Initial/Final</td>
</tr>
<tr>
<td></td>
<td>- Final</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>The EER application will save the user, signature information, date and time of each certified submission with the data, and the locked submitted file(s).</th>
</tr>
</thead>
<tbody>
<tr>
<td>164</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>The EER Application will allow the user to select the facility for the EER if the user is associated to more than one facility.</th>
</tr>
</thead>
<tbody>
<tr>
<td>165</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>The EER Application will store the Activity Number the first time an excess emission report is created and then submitted. The Activity number is created in TEMPO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>166</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>The EER Application will require the user to enter the location, either lat/long, or UTM if the emission is from a portable source that has relocated since the permit was issued.</th>
</tr>
</thead>
<tbody>
<tr>
<td>167</td>
<td></td>
</tr>
</tbody>
</table>
The EER Application will require the excess emission report information from the current hard copy form:

**SECTION I - GENERAL INFORMATION (Note 1)**
- A. Ali Number
- B. Activity Number
- C. Company Name
- D. Facility Name
- E. Emitter Source
- F. Portable Source
- G. If portable source, location (see instructions)
- H. TV Permit No.
- I. NSR Permit No.
- J. Initial Report
- K. Update Report
- L. IHRA Permit
- M. Final Report
- N. Failure Permit No.
- O. Failure Permit Description
- Q. Release Pt. Description
- R. Spill Date
- S. Spill Time
- T. Spill Date
- U. Spill Time
- V. Corrected Date
- W. Corrected Time
- X. Due Date
- Y. Person Reporting
- Z. Office Phone No.
- AA. Cell Phone No.
- BB. Email Address

**SECTION II - REPORTING REQUIREMENT (check all that apply) (Note 2)**
- A. 20.2.7 NMVOC
- B. 20.2.7 NMVOC (Title V)
- C. 40 CFR 60 (NSPS)
- D. 40 CFR 63 (NACT)

**SECTION III - EVENT TYPE (check all that apply) (Note 3)**
- A. Malfunction
- B. Startup
- C. Shutdown
- D. Emergency
- E. Title V Deviation
- F. Scheduled Maintenance
- G. 5 or 5M notification (see instructions)
- H. Yes
- J. No
- K. NA
- L. Inherent Process
- M. Defense Claim (see instructions)
- N. Yes
- O. No

**SECTION IV - CAUSE AND NATURE OF EVENT (Detailed Description) (Note 4)**

**SECTION V - STEPS TAKEN TO LIMIT DURATION OF EXCESS EMISSION (Note 5)**

**SECTION VI - CORRECTIVE MEASURES TAKEN (Detailed Description) (Note 6)**

**SECTION VII - EMISSIONS ARE IN EXCESS OF THE FOLLOWING REQUIREMENT (Note 7)**
- A. Permit No.
- B. Condition
- C. Regulatory Citation
- D. Section
- E. Text

**SECTION VIII - EXCESS EMISSION DETAILS (Note 8)**

**SECTION IX - DURATION OF EVENT (Note 9)**
- A. NO:
- B. SO2
- C. CO
- D. PM
- E. VOC
- F. H2S
- G. opacity
- H. Visible Emissions
- I. Other (specify)

**SECTION X - EMISSION LIMIT OR STANDARD (Indicate units)**
- A. NO:
- B. SO2
- C. CO
- D. PM
- E. VOC
- F. H2S
- G. opacity
- H. Visible Emissions
- I. Other (specify)

**SECTION XI - AVERAGING PERIOD (Indicate units)**
- A. NO:
- B. SO2
- C. CO
- D. PM
- E. VOC
- F. H2S
- G. opacity
- H. Visible Emissions
- I. Other (specify)

**SECTION XII - EXCESS EMISSIONS FOR CEMS (Indicate for opacity and visible emissions)**
- A. NO:
- B. SO2
- C. CO
- D. PM
- E. VOC
- F. H2S
- G. opacity
- H. Visible Emissions
- I. Other (specify)

**SECTION XIII - NUMBER OF EXCEEDENCES OF EMISSION LIMIT OR STANDARD**
- A. NO:
- B. SO2
- C. CO
- D. PM
- E. VOC
- F. H2S
- G. opacity
- H. Visible Emissions
- I. Other (specify)

**SECTION XIV - AVERAGE EMISSION RATE FOR AVERAGING PERIOD (Indicate units)**
- A. NO:
- B. SO2
- C. CO
- D. PM
- E. VOC
- F. H2S
- G. opacity
- H. Visible Emissions
- I. Other (specify)

**SECTION XV - BASIS OF ESTIMATE (check all that apply, attach supporting data) (Note 6)**
- A. Compliance Testing
- B. Continuous Emission Monitor
- C. Calculation
- D. Operating Log
- E. Other (specify)

**SECTION X - CERTIFICATION (Note 9)**

The EER Application will require the following sections to be completed if the report is Initial/Final, or Final:

a. Whether report is for a stationary or portable source (I,E,F)
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>UTM or Lat/Long info for a portable source (I.G)</td>
</tr>
<tr>
<td>c.</td>
<td>Failure point number and description (I.N,O)</td>
</tr>
<tr>
<td>d.</td>
<td>Release point number and description (I.P,Q)</td>
</tr>
<tr>
<td>e.</td>
<td>Cause and Nature of Event (IV)</td>
</tr>
<tr>
<td>f.</td>
<td>Steps Taken to Limit Duration of Excess Emission (V)</td>
</tr>
<tr>
<td>g.</td>
<td>Corrective Measure Taken (VI)</td>
</tr>
<tr>
<td>h.</td>
<td>Emissions are in Excess of the Following Requirement (VII)</td>
</tr>
<tr>
<td>i.</td>
<td>Duration of Event (VIII.1)</td>
</tr>
<tr>
<td>j.</td>
<td>Emission Limits or standards (VIII.2)</td>
</tr>
<tr>
<td>k.</td>
<td>Excess Emissions for Event (VIII.4)</td>
</tr>
<tr>
<td>l.</td>
<td>Average Emission Rate for Averaging Period (VIII 6)</td>
</tr>
<tr>
<td>m.</td>
<td>Basis of Estimate (IX)</td>
</tr>
<tr>
<td>n.</td>
<td>Certification (X)</td>
</tr>
</tbody>
</table>

170 The EER Application will record the affirmative defense information required by the current form (continued on next pages):
**AFFIRMATIVE DEFENSE DEMONSTRATION FORM**

TO BE USED FOR MALFUNCTION PURSUANT TO 202.7.111 NMAC, STARTUP OR SHUTDOWN PURSUANT TO 202.7.112 NMAC OR EMERGENCY PURSUANT TO 202.7.113 NMAC

The following information must be submitted to the address above no later than 20 days after submission of the final report for the excess emission.

<table>
<thead>
<tr>
<th>SECTION I - GENERAL INFORMATION: (Note 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. All Number:</td>
</tr>
<tr>
<td>B. Activity Number:</td>
</tr>
<tr>
<td>C. Company Name:</td>
</tr>
<tr>
<td>D. Facility Name:</td>
</tr>
</tbody>
</table>

| E. NVR Permit No.:                      |
| F. NS Permit No.:                       |
| G. Malfunction:                        |
| H. Startup:                             |
| I. Shutdown:                           |
| J. Emergency:                          |

| K. Failure Pt. No.:                     |
| L. Failure Pt. Description:             |
| M. Release Pt. No.:                    |
| N. Release Pt. Description:            |

| O. Discovery Date:                     |
| P. Discovery Time:                     |
| Q. 1st Business Day After Discovery:   |
| R. Initial Report Submitted Date:      |
| S. Final Report Submitted Date:        |

| T. Person Reporting:                   |
| U. Office Phone:                       |
| V. Cell Phone:                         |
| W. Email Address:                      |

**Note:** The owner or operator must provide the following information (as applicable) to claim the affirmative defense. Additional pages should be attached if more space is required. Attach all supporting documentation (i.e., contemporaneous logs, charts, maintenance records, calculations, etc.).

<table>
<thead>
<tr>
<th>SECTION II - DETAILED INFORMATION REQUIRED FOR AFFIRMATIVE DEFENSE: (Note 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. List the direct cause and all contributing causes of the excess emission in the table below (i.e.; identify the reasons why the cause(s) in the preceding step existed working back to the direct cause).</td>
</tr>
<tr>
<td>TYPE OF CAUSE</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Direct</td>
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<td>Direct</td>
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</tbody>
</table>

Additional comments (if required):

B. Could this event have been foreseen and avoided or planned for?  [ ] Yes  [ ] No

If NO, please explain:

C. Why were your operation and maintenance practices unable to prevent this event? Include documentation of the facility maintenance program and the manufacturer’s recommended maintenance for each emission unit involved in this event (if applicable).
D. For the duration of the event, explain how the air pollution control equipment or process equipment was maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions.

E. Explain how the quantity and duration of the excess emission (including any bypass) were minimized during this event. Why was this quantity and duration the minimum possible for this event?

F. Was the owner or operator's actions during this event documented by properly signed, contemporaneous operating logs, or other relevant evidence? Attach documentation.
   - Yes [ ] No [ ]
   If NO, please explain:

SECTION III – DETAILED INFORMATION REQUIRED FOR MALFUNCTION, STARTUP OR SHUTDOWN: (Note 3)

PLEASE NOTE – Complete all fields in Section III if you are claiming an affirmative defense for malfunction, startup or shutdown. Do not complete if you are claiming an affirmative defense for emergency.

A. Explain all steps taken to minimize the impact of the excess emission on ambient air quality. Please provide documentation.

B. Were emission monitoring systems (if applicable) kept in operation during this event? [ ] Yes [ ] No [ ] NA [ ]
   If NO, please explain:

SECTION IV – DETAILED INFORMATION REQUIRED FOR MALFUNCTION OR EMERGENCY: (Note 4)

PLEASE NOTE – Complete all fields in Section IV if you are claiming an affirmative defense for malfunction or for emergency. Do not complete if you are claiming an affirmative defense for startup or shutdown.

A. Provide a chronology in the table below including when the event was discovered and when the repairs were commenced and completed.

<table>
<thead>
<tr>
<th>DATE (mm/dd/yyyy)</th>
<th>TIME (hh:mm)</th>
<th>ACTION TAKEN</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
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</table>

NMED Air Quality Bureau Affirmative Defense Demonstration Form Page 2 of 4
Explain why the chronology above indicates that the repairs were made as expeditiously as possible.

Was off-shift labor or overtime used?  
☐ Yes ☐ No
If NO, please explain:

B. Identify each excess emission event in the preceding 12 months in the table below that involved the same emissions unit(s) (failure point) identified in this excess emission event.

<table>
<thead>
<tr>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
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</tbody>
</table>

C. For each excess emission event described in item B, list those with the same or similar direct or contributing cause for this excess emission event in the table below.

<table>
<thead>
<tr>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
<th>DATE (mm/dd/yyyy)</th>
<th>ACTIVITY NUMBER</th>
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</table>

Explain why the cause(s) for the events listed above was (were) not resolved (if applicable).

SECTION V – DETAILED INFORMATION REQUIRED FOR STARTUP OR SHUTDOWN: (Note 5)

PLEASE NOTE – Complete all fields in Section V if you are claiming an affirmative defense for startup or shutdown. Do not complete if you are claiming an affirmative defense for malfunction or for emergency.

A. Was this excess emission caused by an intentional bypass of air pollution control equipment?  
☐ Yes ☐ No
If YES, please explain why an intentional bypass was required:

NMED Air Quality Bureau  Affirmative Defense Demonstration Form  Page 3 of 4
The EER Application will allow multiple excess emission activities to be related to one another.

The EER application will allow the user to download and view attached documents before certification.
<table>
<thead>
<tr>
<th>173</th>
<th>The EER application will require that the initial report include the discovery date and time, and the start date and time of the event. Additional information such as AI number, facility and operator will be defaulted.</th>
</tr>
</thead>
<tbody>
<tr>
<td>174</td>
<td>The EER application will require that the start date must be on or after the discovery date. (start date &gt;= discovery date)</td>
</tr>
<tr>
<td>175</td>
<td>The EER application will require that the discovery or the start cannot be after the current date. (start or discovery date &lt;= current date)</td>
</tr>
<tr>
<td>176</td>
<td>The EER application will warn that there is a 4 day or greater difference between start and discovery dates. The user must confirm that this is correct.</td>
</tr>
</tbody>
</table>