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VERSION 07.22.08

**20.2.7 NMAC – EXCESS EMISSIONS**

**INSTRUCTIONS FOR ROOT CAUSE AND CORRECTIVE ACTION ANALYSIS SUMMARY FORM**

**PLEASE NOTE:**

1. A reporting submittal form used for routine submittals required by permits and/or regulations (such as Title V Annual Compliance Certification reports and NSPS Subpart KKK semi-annual reports) is **NOT** required for submitting a Root Cause and Corrective Action Analysis (RCA).
2. The electronic versions of the RCA Summary Form, the RCA Worksheet and the Causal Factor Worksheets will expand automatically to accommodate text as needed.
3. The DOE Guideline Document, “ROOT CAUSE ANALYSIS GUIDANCE DOCUMENT”, DOE-NE-STD-1004-92, February 1992 can be downloaded from the AQB website at:  
[http://www.nmenv.state.nm.us/aqb/enforce\\_compliance/compliance.html](http://www.nmenv.state.nm.us/aqb/enforce_compliance/compliance.html).

**SECTION I - GENERAL INFORMATION (Note 1)**

The information in Section I must match the information that was submitted in the associated excess emissions report.

- A. *AI Number* – Identification number for the facility assigned by the Department database. If you do not know the AI number for your facility, contact the AQB.
- B. *Activity Number* – Identification number for the excess emission event assigned by the Department database. Not required for Initial Report or Initial/Final Report. If you do not know the activity number for an Update or a Final Report, contact the AQB.
- C. *Company Name* - Identify the owner or operator of the facility.
- D. *Facility Name* – Self explanatory.
- E. *TV Permit No.* – Permit number of current title V permit (i.e.; P456-R2-M1).
- F. *NSR Permit No.* - Permit number of current state construction permit (i.e.; 9456-M1, GCP-XXX, PSD-NM- 4343).
- G. *Startup* – Check if you are claiming an affirmative defense for startup (i.e., the setting into operation of any air pollution control equipment or process equipment [20.2.7.7.I NMAC]).
- H. *Shutdown* - Check if you are claiming an affirmative defense for shutdown (i.e.; the cessation of operation of any air pollution control equipment or process equipment [20.2.7.7.H NMAC]).
- I. *Malfunction* – Check if you are claiming an affirmative defense for malfunction (i.e., a sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown [20.2.7.7.E NMAC]).  
PLEASE NOTE - A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction.
- J. *Emergency* – Check if you are claiming an affirmative defense for emergency (i.e., any situation arising from sudden and reasonably unforeseeable events beyond the control of the permittee,

including an act of God that caused the source to exceed a technology-based emission limitation in the permit [20.2.7.113.A NMAC]).

PLEASE NOTE – An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, or careless or improper operation.

- K. *Dept. Request Date* – Date (mm/dd/yyyy) the Department made the written request for the submittal of the Root Cause and Corrective Action Analysis.
- L. *Failure Point No.* – Permit-based emission unit designation from permit for the specific piece of equipment that failed and caused the excess emission (i.e.; EU-25, ES-01, Unit No. 007).
- M. *Failure Point Description* – Description of the specific piece of equipment that failed and was the cause of the excess emission (i.e.; Inlet Turbine, Baghouse, Catalytic Converter).
- N. *Release Point No.* - Permit-based emission unit designation from the permit for the specific piece of equipment from which the excess emission was released (i.e.; FL-25, ES-01, Unit No. 007).
- O. *Release Point Description* – Description of the specific piece of equipment from which the excess emissions were released (i.e.; Emergency Flare, Turbine Stack, Baghouse Stack).
- P. *Person Reporting* - Self explanatory
- Q. *Office Phone*, R. *Cell Phone* - Office and cell phone numbers of person reporting.
- S. *Email Address* – Email address of person reporting.

## **SECTION II. – ROOT CAUSE AND CORRECTIVE ACTION ANALYSIS SUMMARY (Note 2)**

- A. *Identify in detail the root cause and all contributing causes of the excess emission* – The definitions below are provided for clarification. A more detailed discussion can be found in the DOE guidance document referenced above.

*Root Cause* - The cause that, if corrected, would prevent recurrence of this and similar occurrences. The root cause does not apply to this occurrence only, but has generic implications to a broad group of possible occurrences, and it is the most fundamental aspect of the cause that can logically be identified and corrected. There may be a series of causes that can be identified, one leading to another. This series should be pursued until each fundamental, correctable cause has been identified.

*Contributing Cause* - A cause that contributed to an occurrence but, by itself, would not have caused the occurrence. For example, in the case of a leak, a contributing cause could be lack of adequate operator training in leak detection and response, resulting in a more severe event than would have otherwise occurred. In the case of a system misalignment, a contributing cause could be excessive distractions to the operators during shift change, resulting in less-than-adequate attention to important details during system alignment.
- B. *Identify the root cause analysis method(s) indicated in item C:* - The DOE guidance document describes the root cause analysis methods listed in the summary form. If you are using a different root cause analysis methodology, check other and indicated the method used (include reference).
- C. *Explain why you chose the method indicated in item C.* – The DOE guidance document identifies criteria for selecting a root cause analysis method. Indicate the criteria used in making your choice. If you are using a root cause analysis methodology other than those indicated in the DOE guidance document, indicate and explain.
- D. *Identify the corrective action alternatives, such as changes in design, operation, and maintenance, evaluated to reduce the likelihood of a recurrence of an excess emission from the cause(s) identified in item B.* – List each corrective action alternative evaluated pursuant to 20.2.7.114.A.2.a NMAC.

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- E. *Identify the estimated cost of each corrective action alternative identified in item E.* - Indicate the estimated cost associated with each corrective action alternative evaluated pursuant to 20.2.7.114.A.2.b NMAC, including capital, labor, and other costs.
- F. *Describe the probable effectiveness of each corrective action alternative identified in item E* – Discuss the advantages and disadvantages of each corrective action alternative evaluated.
- G. *Identify and justify the corrective action alternative(s) chosen. If you determine that no corrective action alternative(s) are available, explain why.* – Based on the criteria discussed in items F and G, indicate which corrective action was chosen. If no corrective action alternatives were chosen, explain why.
- H. *Provide the implementation schedule for the corrective action alternative(s) identified in item H, and the dates on which progress reports will be submitted.* – If the corrective action alternatives have already been implemented, progress reports are not required.

### **SECTION III. – ATTACHMENTS (Note 3)**

The Root Cause Analysis Worksheet is mandatory. If you are using the DOE Guideline Document for conducting the RCA, the Causal Factor Worksheets are also mandatory. The “Other” fields are reserved for supporting documentation such as facility records, operating logs, economic analysis worksheets, etc.

### **SECTION IV - CERTIFICATION: (Note 4)**

The form must be signed by the company representative submitting the RCA. This signature constitutes a certification of the truth, accuracy and completeness of the contents of the form as well as all supporting documentation.