



## Section 1. Registration Information

Reason for Resubmission	
1.1 Source Identification	
1.1.a. Facility Name	Lonesome Creek Generating Station
1.1.b. Parent Company #1 Name	Basin Electric Power Cooperative
1.1.c. Parent Company #2 Name	
1.2 EPA Facility Identifier	100000226819
1.3 Other EPA Systems Facility Identifier	
1.4 Dun and Bradstreet Numbers (DUNS)	
1.4.a. Facility DUNS	
1.4.b. Parent Company #1 DUNS	
1.4.c. Parent Company #2 DUNS	
1.5 Facility Location	
1.5.a. Street - Line 1	2648 140 Avenue NW
1.5.b. Street - Line 2	
1.5.c. City	Alexander
1.5.d. State	ND
1.5.e. Zip Code - Zip +4 Code	58831
1.5.f. County	MCKENZIE
1.5.g. Facility Latitude (in decimal degrees)	47.796740
1.5.h. Facility Longitude (in decimal degrees)	-103.577316
1.5.i. Method for determining Lat/Long	Interpolation - Digital map source (TIGER)
1.5.j. Description of location identified by Lat/Long	Storage Tank
1.5.k. Horizontal Accuracy Measure (meters)	25
1.5.l. Horizontal Reference Datum Code	North American Datum of 1983
1.5.m. Source Map Scale Number	
1.6 Owner or Operator	
1.6.a. Name	Basin Electric Power Cooperative
1.6.b. Phone	(701) 223-0441
1.6.c. Street - Line 1	1717 East Interstate Ave.
1.6.d. Street - Line 2	
1.6.e. City	Bismarck
1.6.f. State	ND
1.6.g. Zip Code - Zip +4 Code	58503-0564
Foreign Country	
Foreign State/Province	
Foreign Zip/Postal Code	
1.7 Name, title and email address of person or position responsible for RMP (part 68) implementation	
1.7.a. Name of person	John Jacobs
1.7.b. Title of person or position	Vice President of Operations
1.7.c. Email address of person or position	jjacobs@becpc.com



## Section 1. Registration Information

1.8 Emergency Contact	
1.8.a. Name	Joe Fiedler
1.8.b. Title of person or position	Operations and Maintenance Supervis
1.8.c. Phone	(701) 557-5281
1.8.d. 24-Hour Phone	(701) 390-3633
1.8.e. 24-Hour Phone Extension/PIN #	
1.8.f. Email address for emergency contact	jfiedler@bepec.com
1.9 Other Points of Contact	
1.9.a. Facility or Parent Company E-mail Address	
1.9.b. Facility Public Contact Phone Number	(701) 223-0441
1.9.c. Facility or Parent Company WWW Homepage Address	www.basinelectric.com
1.10 Local Emergency Planning Committee (LEPC)	Mckenzie County LEPC
1.11 Number of fulltime equivalent (FTEs) employees on site	3
1.12 Covered by	
1.12.a. OSHA PSM	Y
1.12.b. EPCRA section 302	Y
1.12.c. CAA Title V Air Operating Permit Program	
1.12.d. Air Operating Permit ID #	
1.13 OSHA Star or Merit Ranking	
1.14 Last Safety Inspection (by an External Agency) Date	
1.15 Last Safety Inspection Performed by an External Agency	Never had one
1.16 Will this RMP involve Predictive Filing?	
1.18 RMP Preparer Information	
1.18.a. Name	Divya Narasimhan- Trinity Consultants
1.18.b. Phone	(651) 275-9900
1.18.c. Street - Line 1	12445 55th Street N
1.18.d. Street - Line 2	Suite 2A
1.18.e. City	LAKE ELMO
1.18.f. State	MN
1.18.g. Zip	55042
Foreign Country	
Foreign State/Province	
Foreign Zip Code	



## Section 1. Registration Information

### Section 1.17 Process Specific Information

#### Process 1

Process ID #	1000059441		
Process Description	Anhydrous Ammonia System		
1.17.a. Program Level	3		
1.17.b. NAICS Code(s)	221112 (Fossil Fuel Electric Power Generation)		
1.17.c. Chemical(s)			
	Chemical Name	CAS Number	Quantity
	Ammonia (anhydrous)	7664-41-7	17000



Section 2. Toxics: Worst Case

Scenario 1

Process Name	Anhydrous Ammonia System
2.1 Chemical	
2.1.a. Name	Ammonia (anhydrous)
2.1.b. Percent Weight of Chemical	100
2.2 Physical State	Liquid
2.3 Model Used	SLAB
2.4 Scenario	Liquid spill and vaporization
2.5 Quantity Released (lbs)	8500
2.6 Release Rate (lbs/min)	850
2.7 Release Duration (mins)	10
2.8 Wind Speed (meters/sec)	1.5
2.9 Atmospheric stability class	F
2.10 Topography	Rural
2.11 Distance to endpoint (miles)	2.17
2.12 Estimated residential population within distance to endpoint (numbers)	250
2.13 Public receptors within distance to endpoint	
2.13.a. Schools	
2.13.b. Residences	Y
2.13.c. Hospitals	
2.13.d. Prison/Correctional Facilities	
2.13.e. Recreational Areas	
2.13.f. Major commercial, office or industrial areas	Y
2.13.g. Other	
2.14 Environmental receptors within distance to endpoint	
2.14.a. National or State Parks, Forests or Monuments	
2.14.b. Officially Designated Wildlife Sanctuaries, Preserves or Refuges	
2.14.c. Federal Wilderness Area	
2.14.d. Other	
2.15 Passive mitigation considered	
2.15.a. Dikes	
2.15.b. Enclosures	
2.15.c. Berms	
2.15.d. Drains	
2.15.e. Sumps	
2.15.f. Other	
2.16 Graphic file	



Section 3. Toxics: Alternative Release

Scenario 1

Process Name	Anhydrous Ammonia System
3.1 Chemical	
3.1.a. Name	Ammonia (anhydrous)
3.1.b. Percent Weight of Chemical	100
3.2 Physical State	Liquid
3.3 Model Used	SLAB
3.4 Scenario	Flex hose crack or release
3.5 Quantity Released (lbs)	2460
3.6 Release Rate (lbs/min)	492
3.7 Release Duration (mins)	5
3.8 Wind Speed (meters/sec)	3
3.9 Atmospheric stability class	D
3.10 Topography	Rural
3.11 Distance to endpoint (miles)	0.56
3.12 Estimated residential population within distance to endpoint (numbers)	60
3.13 Public receptors within distance to endpoint	
3.13.a. Schools	
3.13.b. Residences	Y
3.13.c. Hospitals	
3.13.d. Prison/Correctional Facilities	
3.13.e. Recreational Areas	
3.13.f. Major commercial, office or industrial areas	Y
3.13.g. Other	
3.14 Environmental receptors within distance to endpoint	
3.14.a. National or State Parks, Forests or Monuments	
3.14.b. Officially Designated Wildlife Sanctuaries, Preserves or Refuges	
3.14.c. Federal Wilderness Area	
3.14.d. Other	
3.15 Passive mitigation considered	
3.15.a. Dikes	
3.15.b. Enclosures	
3.15.c. Berms	
3.15.d. Drains	
3.15.e. Sumps	
3.15.f. Other	
3.16 Active mitigation considered	
3.16.a. Sprinkler systems	
3.16.b. Deluge systems	
3.16.c. Water curtain	
3.16.d. Neutralization	
3.16.e. Excess flow valve	
3.16.f. Flares	



### Section 3. Toxics: Alternative Release

3.16.g. Scrubbers	
3.16.h. Emergency shutdown systems	Y
3.16.i. Other	
3.17 Graphic file	



## Section 7. Prevention Program: Program Level 3

### Program 1

Prevention Program Description:	
7.1 NAICS Code for process	
7.1.a. Process Name	1000059441 (Anhydrous Ammonia System)
7.1.b. NAICS	221112 (Fossil Fuel Electric Power Generation)
7.2 Chemicals	
Ammonia (anhydrous)	
7.3 Date on which the safety information was last reviewed or revised	10/15/2014
7.4 Process Hazard Analysis (PHA)	
7.4.a. Date of last PHA or PHA update	10/30/2013
7.4.b. Technique used	
7.4.b.1. What if	
7.4.b.2. Checklist	
7.4.b.3. What if/Checklist Combined	
7.4.b.4. HAZOP	Y
7.4.b.5. Failure mode & effects analysis	
7.4.b.6. Fault tree analysis	
7.4.b.7. Other	
7.4.c. Expected or actual date of completion of all changes resulting from last PHA or PHA update	12/31/2014
7.4.d. Major hazards identified	
7.4.d.1. Toxic release	Y
7.4.d.2. Fire	Y
7.4.d.3. Explosion	
7.4.d.4. Runaway reaction	
7.4.d.5. Polymerization	
7.4.d.6. Overpressurization	Y
7.4.d.7. Corrosion	
7.4.d.8. Overfilling	Y
7.4.d.9. Contamination	
7.4.d.10. Equipment failure	Y
7.4.d.11. Loss of cooling, heating, electricity, instrument air	
7.4.d.12. Earthquake	
7.4.d.13. Floods	
7.4.d.14. Tornado	Y
7.4.d.15. Hurricanes	
7.4.d.16. Other	
7.4.e. Process controls in use	
7.4.e.1. Vents	Y
7.4.e.2. Relief valves	Y
7.4.e.3. Check valves	Y
7.4.e.4. Scrubbers	
7.4.e.5. Flares	
7.4.e.6. Manual shutoffs	Y



### Section 7. Prevention Program: Program Level 3

7.4.e.7. Automatic shutoffs	Y
7.4.e.8. Interlocks	Y
7.4.e.9. Alarms and procedures	Y
7.4.e.10. Keyed bypass	
7.4.e.11. Emergency air supply	
7.4.e.12. Emergency power	Y
7.4.e.13. Backup pump	
7.4.e.14. Grounding equipment	
7.4.e.15. Inhibitor additions	
7.4.e.16. Rupture disks	
7.4.e.17. Excess flow device	Y
7.4.e.18. Quench system	
7.4.e.19. Purge system	
7.4.e.20. None	
7.4.e.21. Other	
7.4.f. Mitigation systems in use	
7.4.f.1. Sprinkler system	Y
7.4.f.2. Dikes	
7.4.f.3. Fire walls	
7.4.f.4. Blast walls	
7.4.f.5. Deluge system	
7.4.f.6. Water curtain	
7.4.f.7. Enclosure	
7.4.f.8. Neutralization	
7.4.f.9. None	
7.4.f.10. Other	
7.4.g. Monitoring/detection systems in use	
7.4.g.1. Process area detectors	Y
7.4.g.2. Perimeter monitors	
7.4.g.3. None	
7.4.g.4. Other	
7.4.h. Changes since last PHA update	
7.4.h.1. Reduction in chemical inventory	
7.4.h.2. Increase in chemical inventory	
7.4.h.3. Change in process parameters	
7.4.h.4. Installation of process controls	
7.4.h.5. Installation of process detection systems	
7.4.h.6. Installation of perimeter monitoring systems	
7.4.h.7. Installation of mitigation systems	
7.4.h.8. None recommended	
7.4.h.9. None	Y
7.4.h.10. Other	
7.5 Date of most recent review or revision of operating procedures	10/15/2014
7.6 Training	



### Section 7. Prevention Program: Program Level 3

7.6.a. Date of most recent review or revision of training programs	12/09/2013
7.6.b. Type of training provided	
7.6.b.1. Classroom	Y
7.6.b.2. On the job	Y
7.6.b.3. Other	
7.6.c. Type of competency testing used	
7.6.c.1. Written test	
7.6.c.2. Oral test	
7.6.c.3. Demonstration	Y
7.6.c.4. Observation	Y
7.6.c.5. Other	
7.7 Maintenance	
7.7.a. Date of most recent review or revision of maintenance procedures	10/15/2014
7.7.b. Date of most recent equipment inspection or test	10/15/2014
7.7.c. Equipment most recently inspected or tested (equipment list)	In-process installation
7.8 Management of change	
7.8.a. Date of most recent changes that triggered management of change procedures	
7.8.b. Date of most recent review or revision of management of change procedures	09/11/2014
7.9 Date of most recent pre-startup review	
7.10 Compliance audits	
7.10.a. Date of most recent compliance audits	
7.10.b. Expected or actual date of completion of all changes resulting from the most recent compliance audits	
7.11 Incident investigation	
7.11.a. Date of most recent incident investigation	
7.11.b. Expected or actual date of completion of all changes resulting from the incident investigation	
7.12 Date of most recent review or revision of employee participation plans	12/09/2013
7.13 Date of most recent review or revision of hot work permit procedures	12/09/2013
7.14 Date of most recent review or revision of contractor safety procedures	10/16/2014
7.15 Date of most recent evaluation of contractor safety performance	



## Section 9. Emergency Response

9.1 Written emergency response (ER) plan	
9.1.a. Is your facility included in the written community emergency response plan?	Y
9.1.b. Does your facility have its own written emergency response plan?	
9.2 Does your facility's ER plan include specific actions to be taken in response to accidental releases of regulated substances?	
9.3 Does your facility's ER plan include procedures for informing the public and local agencies responding to accidental releases?	
9.4 Does your facility's ER plan include information on emergency health care?	
9.5 Date of most recent review or update of your facility's ER plan	
9.6 Date of most recent ER training for your facility's employees	
9.7 Local agency with which your facility's ER plan or response activities are coordinated	
9.7.a. Name of agency	McKenzie County LEPC
9.7.b. Phone number	(701) 444-3654
9.8 Subject to	
9.8.a. OSHA Regulations at 29 CFR 1910.38	Y
9.8.b. OSHA Regulations at 29 CFR 1910.120	
9.8.c. Clean Water Act Regulations at 40 CFR 112	Y
9.8.d. RCRA Regulations at 40 CFR 264, 265, 279.52	Y
9.8.e. OPA-90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, 30 CFR 254	
9.8.f. State EPCRA Rules of Laws	Y
9.8.g. Other	



## Executive Summary

### Introduction

Basin Electric Power Cooperative (BEPC), Lonesome Creek Station (LCS) is a natural gas-fired peaking station located northwest of Williston, North Dakota. The facility utilizes anhydrous ammonia as part of the Selective Catalytic Reduction process. Anhydrous ammonia is stored in two interconnected tanks, each containing a maximum of 8,500 lbs of ammonia. Since LCS has more than 10,000 pounds of anhydrous ammonia, it is required to submit a Risk Management Plan ("RMP") and comply with the requirements of 40 C.F.R. Part 68. The facility is subject to the Program 3 requirements for anhydrous ammonia.

### Management System

The BEPC LCS RMP Program is led by an RMP Management Team dedicated to the establishment of management systems that successfully implement the various elements of the Program. BEPC has also established written procedures to ensure that the safety of employees, the public, and the environment is maintained during plant operations and when changes are implemented.

### Prevention Program

#### Employee Participation

All employees affected or potentially affected by the ammonia process are aware of the RMP Program implemented in the facility. Those employees directly involved with operation and maintenance of the ammonia system are intimately involved with the development and execution of the program and have input as procedures and policies are established.

#### Process Safety Information

The facility maintains accurate and current process safety information covering the hazards, technology and equipment in the ammonia process.

#### Process Hazard Analysis

Another important aspect of the prevention program is the assessment of the hazards associated with the process. BEPC follows a program for systematically identifying and evaluating potential hazards associated with the operation of the ammonia process. This includes the regular conduct of Process Hazard Analyses to analyze the hazards of the process, specific process conditions and controls, potential equipment failures, and previous incidents.

#### Operating Procedures

Written operating procedures are maintained that provide clear instructions for safely conducting activities involved in the ammonia process. The operating procedures are readily accessible to employees who work with or maintain the ammonia process. These procedures are reviewed at least annually to ensure they are current and accurate. In addition, through the Management-of-Change program, the operating procedures will be reviewed as often as necessary to confirm that they reflect current operating practice, and changes in process chemicals, technology, and equipment.

### Training

BEPC trains, and periodically re-trains through refresher training, employees involved in operating the ammonia process concerning the hazards of the process and the routine and non-routine tasks required to safely perform their jobs.

### Contractors

BEPC has implemented a contractor safety program that includes procedures to hire and use contractors who will perform their work without compromising the safety and health of facility or contractor employees. This program helps ensure that contractors and their employees are fully aware of the potential dangers involved with the LCS ammonia process. This awareness should lead to reduced risks for accidents, thus improved safety for both contractor employees, BEPC employees, and the public.

### Mechanical Integrity

The ammonia system has been designed, constructed, and installed using good engineering practices and conforms to industry standards. BEPC's Mechanical Integrity program assures that the system is also maintained to minimize the risk of accidental ammonia release.

### Hot Work Permit

An established hot work permit procedure for fire prevention is in place to ensure all safety precautions are taken before any hot work is started in a non-designated hot work area.

### Management of Change and Pre-startup Review

The facility has developed a management of change and pre-startup safety review program to manage changes to the ammonia process. The purpose of this program is to ensure that changes to the equipment and processes are justified and have Operations, Maintenance, and Engineering Department's concurrence, with appropriate management approval. The program covers changes to process chemicals, technology, equipment, structures, operational procedures, changes in key staff, and training.

### Incident Investigation

The BEPC Incident Investigation program is used to investigate incidents and near misses in order to determine the root cause(s) so that corrective actions can be implemented, thereby preventing similar incidents or accidents from occurring in the future.

### Compliance Audits

BEPC has a program established to self-evaluate the effectiveness of the RMP Program by identifying deficiencies and ensuring corrective actions for on-going program improvement.



## Executive Summary

### Five Year Accident History

The BEPC LCS facility has not had any RMP reportable accidents. BEPC is confident that the policies and programs in place at the facility will help maintain this record in the years ahead.

### Emergency Response Program

BEPC LCS maintains an Emergency Action Plan that details procedures for how to handle emergency situations quickly and effectively with minimum hazard to the employees involved. After employee safety, the procedures are in place to minimize damage to equipment, minimize interruption of operations, and coordinate outside assistance. BEPC LCS is also included in the community emergency response plan and appropriate mechanisms are in place to notify emergency responders when there is a need for a response.

### Planned Changes to Improve Safety

As a new facility, BEPC LCS is committed to ensuring all the RMP Program elements are properly and timely implemented. The facility will ensure that the employees are fully trained in the operation and maintenance of the ammonia process, emergency response, chemical and equipment hazards, and all the requirements of the Program prior to working on the ammonia process. One of the first training events is an RMP Program Training session for all BEPC personnel that will be involved with the Program implementation. The objective of the training is to provide an understanding of the RMP Program and requirements, the RMP rule and purpose of the Program, and how employees can be involved in the ongoing implementation and improvement of the Program.