



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

233 Peachtree Street Ste. 600
Atlanta, GA 30303

NOTICE OF AMENDMENT

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 17, 2012

Mr. Carlos Reyes
Co-President & General Manager Operations
EcoElectrica L.P.
Street 337, KM 3.7 Bo Tallaboa Poniente
Penuelas, PR 00624

CPF 2-2012-0005M

Dear Mr. Reyes:

Between April 23 and 27, 2012, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Southern Region, Office of Pipeline Safety inspected the EcoElectrica, L.P. (EcoElectrica) operations, maintenance, and emergency response (OMER) manual of written procedures for the Costa Sur Pipeline in Penuelas, Puerto Rico, pursuant to Chapter 601 of 49 United States Code. The representative initiated the inspection on site during the above described dates and completed the inspection of the OMER in the PHMSA Southern Region office subsequent to the on-site visit.

On the basis of the inspection, PHMSA has identified apparent inadequacies within EcoElectrica's OMER manual of written procedures, as described below:

1. §192.453 General.

The corrosion control procedures required by §192.605(b)(2), including those for the design, installation, operation, and maintenance of cathodic protection systems, must be carried out by, or under the direction of, a person qualified in pipeline corrosion control methods.

EcoElectrica's OMER procedures did not describe, in the detail required, the qualifications of the person(s) responsible for the design, installation, operation, and maintenance of cathodic protection systems.

EcoElectrica's OMER Manual Section III n) *Corrosion Protection* stated, "Regulations require corrosion control procedures for the design, installation, operation, and maintenance of cathodic protection systems, be under the direction of a person qualified in pipeline corrosion control methods." However, the procedures did not convey a) the specific required qualifications of the person(s) (i.e. skills, education, training, and experience) that are commensurate with the difficulty and importance for control of external, internal, and atmospheric corrosion; and, b) the documentation required to substantiate such qualifications, including maintaining the documentation (records).

2. **§192.459 External corrosion control: Examination of buried pipeline when exposed. Whenever an operator has knowledge that any portion of a buried pipeline is exposed, the exposed portion must be examined for evidence of external corrosion if the pipe is bare, or if the coating is deteriorated. If external corrosion requiring remedial action under §§192.483 through 192.489 is found, the operator shall investigate circumferentially and longitudinally beyond the exposed portion (by visual examination, indirect method, or both) to determine whether additional corrosion requiring remedial action exists in the vicinity of the exposed portion.**

EcoElectrica's OMER did not contain written procedures requiring EcoElectrica, when it has knowledge that any portion of its buried pipeline is exposed, to examine the exposed portion for evidence of external corrosion if the pipe is bare, or for coating deterioration if it is coated. Moreover, there were no procedures requiring EcoElectrica to take remedial action(s) under §§192.483 through 192.489 if external corrosion is found. Also, there were no procedures requiring EcoElectrica to investigate circumferentially and longitudinally beyond the exposed portion of the buried pipeline (by visual examination, indirect method, or both) to determine whether additional corrosion requiring remedial action exists in the vicinity of the exposed portion.

3. **§192.467 External corrosion control: Electrical isolation.**
 - (a) **Each buried or submerged pipeline must be electrically isolated from other underground metallic structures, unless the pipeline and the other structures are electrically interconnected and cathodically protected as a single unit.**

EcoElectrica's OMER did not contain written procedures to ensure that each buried or submerged pipeline be electrically isolated from other underground metallic structures, unless the pipeline and the other structures are electrically inter-connected and cathodically protected as a single unit.

4. **§192.475 Internal corrosion control: General.**
 - ... (b) **Whenever any pipe is removed from a pipeline for any reason, the internal surface must be inspected for evidence of corrosion. If internal corrosion is found—**
 - (1) **The adjacent pipe must be investigated to determine the extent of internal corrosion:**
 - (2) **Replacement must be made to the extent required by the applicable paragraphs of §§192.485, 192.487, or 192.489; and,**
 - (3) **Steps must be taken to minimize the internal corrosion.**

EcoElectrica's OMER procedures did not require EcoElectrica to inspect for evidence of internal corrosion whenever any pipe is removed from its pipeline for any reason. The

procedures also did not require EcoElectrica to investigate the adjacent pipe to determine the extent of internal corrosion, to replace the pipe to the extent required by the applicable paragraphs of §§192.485, 192.487, or 192.489; and, to take steps to minimize the internal corrosion if internal corrosion is found.

5. §192.485 Remedial measures: Transmission lines.

(a) General corrosion. Each segment of transmission line with general corrosion and with a remaining wall thickness less than that required for the MAOP of the pipeline must be replaced or the operating pressure reduced commensurate with the strength of the pipe based on actual remaining wall thickness. However, corroded pipe may be repaired by a method that reliable engineering tests and analyses show can permanently restore the serviceability of the pipe. Corrosion pitting so closely grouped as to affect the overall strength of the pipe is considered general corrosion for the purpose of this paragraph.

EcoElectrica's OMER procedures did not adequately require that a segment of transmission line with general corrosion, and with a remaining wall thickness less than that required for the MAOP of the pipeline, be replaced or the operating pressure reduced commensurate with the strength of the pipe based on actual remaining wall thickness. The procedures also did not convey what is considered to be general corrosion.

Moreover, the OMER stated in the atmospheric corrosion paragraph of Section III n) *Corrosion Protection*, "*Procedures will be developed to replace pipe or reduce the MAOP if localized or general corrosion reduced the wall thickness. The method to determine remaining wall strength will use R Streng or ASME B-31G.*" The placement of this statement in this paragraph of the manual incorrectly implies that this regulatory requirement only applies to atmospheric corrosion when, in fact, it also applies to internal corrosion and to non-atmospheric external general corrosion as well.

6. §192.485 Remedial measures: Transmission lines.

. . . (b) Localized corrosion pitting. Each segment of transmission line pipe with localized corrosion pitting to a degree where leakage might result must be replaced or repaired, or the operating pressure must be reduced commensurate with the strength of the pipe, based on the actual remaining wall thickness in the pits.

EcoElectrica's OMER procedures were not in the detail required to assure that EcoElectrica would replace, repair, or reduce the operating pressure commensurate with the strength of the pipe, based on the actual remaining wall thickness in the corrosion pits, any transmission line pipe with localized corrosion pitting to a degree where leakage might result.

For example, EcoElectrica's OMER procedures stated in the atmospheric corrosion paragraph of Section III n) *Corrosion Protection*, that "*Procedures will be developed to replace pipe or reduce the MAOP if localized or general corrosion reduced the wall thickness. The method to determine remaining wall strength will use R Streng or ASME B-31G.*" However, use of ASME/ANSI B31G and RSTRENG are not applicable when the corrosion depth is more than 80 percent of the of the pipe wall thickness. Defects deeper than 80 percent of the wall thickness should be repaired or removed to prevent leakage.

7. **§192.485 Remedial measures: Transmission lines.**

... (c) Under paragraphs (a) and (b) of this section, the strength of pipe based on actual remaining wall thickness may be determined by the procedure in ASME/ANSI B31G or the procedure in AGA Pipeline Research Committee Project PR 3-805 (with RSTRENG disk). Both procedures apply to corroded regions that do not penetrate the pipe wall, subject to the limitations prescribed in the procedures.

While EcoElectrica's OMER procedures stated that EcoElectrica will use RSTRENG or ASME B-31G to determine remaining wall strength, the procedures were not in the detail required to explain that the procedures in ASME/ANSI B31G or the procedure in AGA Pipeline Research Committee Project PR 3-805 (with RSTRENG disk) only apply to corroded regions that do not penetrate the pipe wall and are subject to the limitations prescribed in the procedures.

8. **§192.605 Procedural manual for operations, maintenance, and emergencies.**

... (b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

... (11) Responding promptly to a report of a gas odor inside or near a building, unless the operator's emergency procedures under § 192.615(a)(3) specifically apply to these reports.

EcoElectrica's OMER procedures did not require EcoElectrica to respond promptly to a report of a gas odor inside or near a building. That is, OMER Manual procedure *LNGT-051 Emergency Plan – Natural Gas Export Pipeline* did not convey that a report of a gas odor inside or near a building was a condition requiring a prompt response.

9. **§192.605 Procedural manual for operations, maintenance, and emergencies.**

... (c) Abnormal operation. For transmission lines, the manual required by paragraph (a) of this section must include procedures for the following to provide safety when operating design limits have been exceeded:

(1) Responding to, investigating, and correcting the cause of:

(i) Unintended closure of valves or shutdowns;

(ii) Increase or decrease in pressure or flow rate outside normal operating limits;

(iii) Loss of communications;

(iv) Operation of any safety device; and,

(v) Any other foreseeable malfunction of a component, deviation from normal operation, or personnel error, which may result in a hazard to persons or property.

EcoElectrica's OMER procedures did not address the items in §§192.605(c)(1)(i) - (v).

While EcoElectrica's OMER Manual Section III c) *Investigation of Failures* described abnormal operations and referenced a "*Standard Operating Procedure titled Accident Notification and Investigation*," the referenced procedure was not available at the time of the inspection nor was it in the OMER Manual. Moreover, there were no procedures to explain how EcoElectrica would respond to, investigate, and correct the cause of an abnormal operation on the Costa Sur Pipeline.

- 10. §192.605 Procedural manual for operations, maintenance, and emergencies.**
... (c) **Abnormal operation.** For transmission lines, the manual required by paragraph (a) of this section must include procedures for the following to provide safety when operating design limits have been exceeded:
... (2) **Checking variations from normal operation after abnormal operation has ended at sufficient critical locations in the system to determine continued integrity and safe operation.**

EcoElectrica's OMER procedures did not explain how EcoElectrica would check variations from normal operations at sufficient critical locations in the system after an abnormal operation has ended so as to determine the continued integrity and safe operation of the Costa Sur Pipeline.

- 11. §192.605 Procedural manual for operations, maintenance, and emergencies.**
... (c) **Abnormal operation.** For transmission lines, the manual required by paragraph (a) of this section must include procedures for the following to provide safety when operating design limits have been exceeded:
... (3) **Notifying responsible operator personnel when notice of an abnormal operation is received.**

Although EcoElectrica's OMER Manual Section III c) *Investigation of Failures* described abnormal operations, the OMER procedures did not explain how EcoElectrica would comply with the requirements to notify responsible operator personnel when notice of an abnormal operation on the Costa Sur Pipeline is received.

- 12. §192.619 What is the maximum allowable operating pressure for steel or plastic pipelines?**
(a) **No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following:**
... (1) **The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part. However, for steel pipe in pipelines being converted under §192.14 or uprated under subpart K of this part, if any variable necessary to determine the design pressure under the design formula (§192.105) is unknown, one of the following pressures is to be used as design pressure**
....

EcoElectrica's OMER procedures for determining the maximum allowable operating pressure (MAOP) of the Costa Sur Pipeline did not require the MAOP be determined for the recently installed meter station (a segment of the Costa Sur Pipeline) that is located at the beginning of the line.

- 13. §192.719 Transmission lines: Testing of repairs.**
(a) **Testing of replacement pipe.** If a segment of transmission line is repaired by cutting out the damaged portion of the pipe as a cylinder, the replacement pipe must be tested to the pressure required for a new line installed in the same location. This test may be made on the pipe before it is installed.

Although EcoElectrica's OMER Manual Section III o) *Field Repairs of Leaks* required the testing of replacement pipe that is installed to repair a leak, the procedures did not require the testing of replacement pipe that is installed due to a non-leaking repair.

14. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

(a) Identify covered tasks;

EcoElectrica's written qualification program *Procedure LNGT-060 Transmission Pipeline Operator Qualification (OQ) Program* Revision #0 dated March 13, 2012 (*Procedure LNGT-060*) did not include provisions to allow EcoElectrica to adequately identify covered tasks. This inadequacy was evidenced by the list of covered tasks in the program that were broad in nature such as tasks "... 5.1-Line Operation ... 5.4-Cathodic Protection Testing ... 5.5-Corrosion Control."

15. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

... (b) Ensure through evaluation that individuals performing covered tasks are qualified;

EcoElectrica's written qualification program *Procedure LNGT-060* was not in the detail required to ensure through evaluation that individuals performing covered tasks were qualified. *Procedure LNGT-060* did not

- Convey that "*Qualified*" means an individual has been evaluated and can: (a) Perform assigned covered tasks and (b) Recognize and react to abnormal operating conditions (see §192.803).
- Convey that an *abnormal operating condition* (AOC) means a condition identified by EcoElectrica that may indicate a malfunction of a component or deviation from normal operations that may: (a) Indicate a condition exceeding design limits; or (b) Result in a hazard(s) to persons, property, or the environment (see §192.803).
- Identify AOCs that are applicable to the Operator Qualification (OQ) rule.
- Identify specific AOCs or require training of individuals performing covered tasks to recognize and react to AOCs where a component malfunction or deviation from normal operations may result in exceeding design limits or in a hazardous condition. Operators must demonstrate that the ability to recognize and react to AOCs is a part of each individual's evaluation for qualification.
- Address whether or not EcoElectrica employs contractors or other entities, such as through mutual assistance agreements, to provide individuals to perform covered tasks.
- Explain how it would verify that appropriate methods were used to qualify contractors or other entities or how EcoElectrica would ensure these individuals were qualified.

16. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

... (c) Allow individuals that are not qualified pursuant to this subpart to perform a covered task if directed and observed by an individual that is qualified;

EcoElectrica's written qualification program *Procedure LNGT-060* did not include the provision to allow individuals who are not qualified in accordance with Part 192, Subpart N to perform a covered task if directed and observed by an individual that is qualified.

17. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

... (d) Evaluate an individual if the operator has reason to believe that the individual's performance of a covered task contributed to an incident as defined in Part 191;

EcoElectrica's written qualification program *Procedure LNGT-060* did not include the provision to evaluate an individual if EcoElectrica has reason to believe the individual's performance of a covered task contributed to an incident as defined in Part 191.

18. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

... (e) Evaluate an individual if the operator has reason to believe that the individual is no longer qualified to perform a covered task;

EcoElectrica's written qualification program *Procedure LNGT-060* did not include the provision to evaluate an individual if EcoElectrica has reason to believe that the individual is no longer qualified to perform a covered task.

19. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

... (f) Communicate changes that affect covered tasks to individuals performing those covered tasks;

EcoElectrica's written qualification program *Procedure LNGT-060* did not include the provision to communicate changes that affect covered tasks to individuals performing those covered tasks.

Procedure LNGT-060 did not require EcoElectrica to communicate the following:

- OQ Plan information for employee and/or contract individuals performing covered tasks.
- The process for a non-qualified contracted individual to perform a covered task.
- The process for contracted individual disqualification and requalification.
- The process for communicating any OQ Plan changes to contractors.

Procedure LNGT-060 did not identify how changes to procedures, tools, standards and other elements used by individuals in performing covered tasks are to be communicated to the individuals, including contractor individuals, and how these changes are implemented in the evaluation method(s).

20. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

. . . (g) Identify those covered tasks and the intervals at which evaluation of the individual's qualifications is needed;

EcoElectrica's written qualification program *Procedure LNGT-060* did not include provisions to identify the intervals at which the evaluation of an individual's qualifications is needed.

21. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

. . . (h) After December 16, 2004, provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities;

EcoElectrica's written qualification program *Procedure LNGT-060* was not in the detail required to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities. Moreover, *Procedure LNGT-060* did not contain specific criteria for the initial training qualification of individuals performing covered tasks; and, it did not contain criteria for the retraining and reevaluation of individuals if their qualifications are questioned.

22. §192.805 Qualification program.

Each operator shall have and follow a written qualification program. The program shall include provisions to:

. . . (i) After December 16, 2004, notify the Administrator or a state agency participating under 49 U.S.C. Chapter 601 if the operator significantly modifies the program after the Administrator or state agency has verified that it complies with this section.

EcoElectrica's written qualification program *Procedure LNGT-060* did not include the provision to notify the Administrator or a state agency participating under 49 U.S.C. Chapter 601 if EcoElectrica significantly modifies the program after the Administrator or state agency has verified (i.e., after acceptance by PHMSA of program corrections subsequent to the first PHMSA inspection of the program) that it complies with §192.805.

Response to this Notice


This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.237. Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the

portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b). If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue a Final Order.

If, after opportunity for a hearing, your plans or procedures are found inadequate as alleged in this Notice, you may be ordered to amend your plans or procedures to correct the inadequacies (49 C.F.R. § 190.237). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 30 days of receipt of this Notice. This period may be extended by written request for good cause. Once the inadequacies identified herein have been addressed in your amended procedures, this enforcement action will be closed.

It is requested (not mandated) that EcoElectrica, L.P. maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/ revision of plans, procedures) and submit the total to Wayne T. Lemoi, Director, Southern Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 2-2012-0005M** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,



Wayne T. Lemoi
Director, Office of Pipeline Safety
PHMSA Southern Region

Enclosure: *Response Options for Pipeline Operators in Compliance Proceedings*