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BEFORE THE ARIZONA CORPORATION COMMISSION

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Arizona Corporation Commission

DOCKETED

ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

FEB 03 2015

ORIGINAL

DOCKETED BY

IN THE MATTER OF COMMISSION PIPELINE  
SAFETY SECTION STAFF'S COMPLAINT  
AGAINST DESERT GAS, LP FOR VIOLATIONS  
OF COMMISSION RULES.

DOCKET NO. G-20923A-15-0030

COMPLAINT

Arizona Corporation Commission ("Commission") Pipeline Safety Section Staff ("Staff"), for its Complaint and Petition for Order to Show Cause against Desert Gas, LP ("DG" or "Company"), a limited liability company and public service corporation, alleges:

**JURISDICTION**

1. The Commission is an agency of the State of Arizona, existing by virtue of article XV of the Arizona Constitution.

2. Respondent DG is a foreign limited partnership (organized in Delaware) authorized to transact business in Arizona. Formerly Desert Gas Services, LLC, DG is a wholly owned subsidiary of Spectrum LNG, LLC since it was purchased in October of 2011. DG constructs, owns and operates a liquefied natural gas ("LNG") facility in Ehrenberg, Arizona. DG's plant can liquefy approximately 50,000 - 60,000 gallons of natural gas per day.

3. DG is a pipeline operator as defined by Arizona Administrative Code ("A.A.C.") Rule R14-5-201(17).

4. Upon information and belief, DG is also a public service corporation because it furnishes LNG as fuel to Clean Energy Fuels Corp. ("CEF"). According to its 2013 Annual Report<sup>1</sup>,

<sup>1</sup> CEF's 2013 Annual Report, available at [http://www.cleanenergyfuels.com/pdf/Clean-Energy-revised-2013-Annual-Report\\_web-ready\\_4-7-14.pdf](http://www.cleanenergyfuels.com/pdf/Clean-Energy-revised-2013-Annual-Report_web-ready_4-7-14.pdf)

1 CEF provides natural gas for transportation to the refuse, transit, port, shuttle, taxi, intra- and  
2 interstate trucking, airport and municipal fleet markets and fuels more than 15,000 vehicles daily at  
3 over 175 locations across North America.

4 5. DG is also a common carrier as that term is defined under the Arizona Constitution,  
5 Article XV, Section 10 and is therefore a public service corporation because all common carriers  
6 other than municipal are public service corporations pursuant to the Arizona Constitution, Article  
7 XV, Section 2.

8 6. Pursuant to Arizona Revised Statutes ("A.R.S.") § 40-441, the Commission is the  
9 state agency charged with enforcement of pipeline safety. The Commission has adopted the Federal  
10 Safety Standards of the United States Department of Transportation ("DOT"), Pipeline and  
11 Hazardous Materials Safety Administration ("PHMSA") in A.A.C. Rules R14-5-201, -202, -203, -  
12 204, -205, -206, and -207. This proceeding is brought pursuant to that authority as well as the  
13 Arizona Constitution, Article XV, §§ 3, 4, 6, 10, 16, and 19, and A.R.S. §§ 40-321, -424, -425, and -  
14 442.

### 15 BACKGROUND

16 7. DG operates a high pressure natural gas liquefaction facility located approximately  
17 300 yards east of a natural gas compressor station for an interstate transmission pipeline in the  
18 vicinity of Ehrenberg, Arizona. Also within the vicinity is an interstate natural gas pipeline crossing  
19 the Colorado River approximately one half mile south of the facility, as well as a major truck stop,  
20 restaurant and motel within a half mile of the DG facility. The facility is automated and designed to  
21 take natural gas from the Transwestern North Baja Pipeline, remove contaminants, compress and  
22 refrigerate the natural gas until it is cryogenic liquid with a boiling point of - 260° Fahrenheit. The  
23 resulting liquefied natural gas ("LNG") is stored on site for transport by trucks operated by CEF.  
24 Each CEF truck has the capacity to carry approximately 9,500 gallons of LNG.

25 8. The facility has the capacity to store up to 104,000 gallons of LNG on site. Upon  
26 vaporization, the 104,000 gallons approximates to 8,590,000 cubic feet of natural gas.

27 9. LNG is a highly flammable, cryogenic, and potentially explosive product.

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1           10. Staff conducts an annual safety compliance audit of this facility as a part of its  
2 pipeline safety responsibilities.

3           11. The facility is located near the Colorado River and areas frequented by tourists,  
4 boaters, and tubing/rafting enthusiasts recreating in the river.

5           12. During an audit performed by Staff investigators on August 25, through August 29,  
6 2014, Staff determined that DG had installed a new methane compressor and associated piping. DG  
7 representatives confirmed that the new methane compressor and pipeline went into continuous  
8 service on July 28, 2014. Staff asked DG for records of qualified welding procedures, individual  
9 welders' qualification records, pipe specification records, nondestructive testing<sup>2</sup> records and  
10 qualification records of the individuals that had performed the nondestructive tests used during the  
11 installation and construction of the new methane compressor and associated piping.

12           13. A qualified welding procedure is a formal document establishing a set of welding  
13 methods which provide direction to a welder such that the welder can produce welds that meet the  
14 requirements of a design specification for which the procedure was developed. A procedure is  
15 developed for each material and each type of weld that will be used. The procedure is verified by  
16 testing (including testing by destructive means) to ensure the process will result in a weld that can  
17 withstand the tolerances required by the design and is then recorded as a qualified welding  
18 procedure. Thus the qualification includes both the procedure to be used and the testing proof that  
19 the specified weld will be sufficiently robust.

20           14. A welder qualification is a document verifying that a welder has demonstrated the  
21 skill and actually performed a compliant weld using a specified qualified welding procedure. A  
22 welder qualification is valid only for the welding procedures that were demonstrated for purposes of  
23 obtaining the qualification.

24           15. A DG representative stated that these records were not available and he would have  
25 to contact the Operations Director of DG and the contractor who performed the work to provide  
26 Staff with these records.

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28 <sup>2</sup> i.e. by use of x-ray imaging, ultrasound or other established means to determine the integrity of the equipment short of cutting and removing a sample segment for laboratory examination.

1           16.     On September 15, 2014, Staff emailed DG reiterating that DG needed to provide  
2 documentation and records of the installation of the new methane compressor and associated piping  
3 as discussed during the Audit.

4           17.     During the DG 2014 Audit Exit meeting on September 29, 2014, DG provided Staff  
5 with documentation addressing the welding procedures, welding qualification records,  
6 nondestructive testing of welds, and qualification records of the individuals who conducted the  
7 nondestructive testing.

8           18.     Based on Staff's review of the documentation, Staff determined that the contractor  
9 that had welded the process piping<sup>3</sup> to the compressor did not have qualified welding procedures at  
10 the time of construction.

11          19.     Because a welding process had not been established and qualified at the time the  
12 welds had been performed, the welds that were performed were not developed or tested for adequacy  
13 to meet the design specifications for stress and pressure that will be encountered during the operation  
14 of the compressor.

15          20.     The qualified welding procedures that were provided to Staff were dated September  
16 15, 2014, which is 49 days after the new methane compressor and piping was put into service on  
17 July 28, 2014. Records provided by DG indicate that the two welders who performed all  
18 construction welds related to the installation of the new methane compressor and process piping had  
19 been qualified on April 7, 2014, 160 days prior to when the procedure was qualified. That is to say,  
20 the documents indicate the welders were qualified before a welding procedure was tested to  
21 demonstrate that welds using that procedure would meet the design requirements for the new  
22 compressor and associated piping.

23          21.     Additional documentation provided by DG regarding nondestructive testing indicated  
24 only 11 out of 83 welds had been nondestructively tested (approximately 13%) prior to bringing the  
25 compressor online. DG did have a further 15 welds nondestructively tested on September 18, 2014,  
26 after the compressor was brought online and following Staff's inquiry regarding the nondestructive  
27 \_\_\_\_\_

28 <sup>3</sup> Process equipment includes all systems needed by a designed system to perform a process. In the context, process piping is piping that is necessary by design to compress and liquefy natural gas.

1 testing. Of the additional 15 welds that were nondestructively tested there were 8 failures indicating  
2 a more than a 50 percent failure rate. One failed weld discovered through the additional testing  
3 failed a second testing after a re-weld using the qualified procedure was performed.

4 22. On October 7, 2014, a formal Data Request letter was mailed to DG requesting  
5 documentation and records of the installation of the compressor and associated piping.  
6 Documentation received in response to the data request likewise reflected issues regarding the weld  
7 procedures and quality of the welds that were performed, as demonstrated by nondestructive testing.

8 23. Based upon the number of CEF trucks that load LNG from this facility every day and  
9 based upon the presence of other people in the area of the plant, a failure would have the potential of  
10 seriously injuring or killing many people in the immediate vicinity of the facility, as well as  
11 damaging interstate pipeline facilities that serve Southern and Central California. In light of the  
12 dangers, Staff believes that operating pipeline facilities of this nature without employing adequately  
13 qualified welding procedures and individuals with demonstrable knowledge, skill and ability to  
14 perform the necessary welds presents a public safety hazard, particularly in light of the unusually  
15 high percentage of failed welds.

## 16 COMPLAINT

### 17 Count One

#### 18 **(Qualified Welding Procedure)**

19 24. Staff incorporates the allegations of Paragraphs 1-20 herein.

20 25. DG did not have qualified welding procedures determined and demonstrated to be  
21 sufficient to meet the design criteria for the addition of the methane facility prior to constructing and  
22 bringing the facility into service. Failure to qualify welding procedures prior to construction of  
23 pipeline facilities is a violation of A.A.C. R14-5-202(B).

24 26. American Society of Mechanical Engineers ("ASME") code standard B31.3 (1996  
25 edition) 328.2.1(a) requires that "qualifications of the *welding procedures to be used* and of the  
26 performance of welders and welding operators shall conform to the requirements of the [Boiler  
27 Pressure Vessel] Code, Section IX". (Emphasis added.) Likewise, ASME B31.3 328.2.2 provides

28 ...

1 that "Each employer is responsible for qualifying any welding procedure that personnel *will* use."  
2 (Emphasis added.) Consequently, welding procedures must be qualified prior to being used.

3 27. 49 Code of Federal Regulations ("C.F.R.") 193.2013(b)(C) adopts ASME B31.3 for  
4 LNG facilities. Pursuant to Arizona Administrative Code ("A.A.C.") Rule R14-5-202(B), the  
5 Commission has adopted 49 C.F.R. part 193.

6 28. The new methane compressor and associated piping had been installed and brought  
7 into service as of July 28, 2014. However, the qualified welding procedures were not demonstrated  
8 and recorded as qualified until September 15, 2014. Therefore, DG did not qualify welding  
9 procedures until after the construction welds were performed and the facility was brought into  
10 service.

11 29. Because DG did not qualify welding procedures that would meet the design  
12 requirements until after construction of the facility addition, DG did not use qualified welding  
13 procedures in the construction of the compressor and piping addition. DG's failure to use qualified  
14 welding procedures during the construction of the facility addition is a violation of A.A.C. R14-5-  
15 202(B).

### 16 Count Two

#### 17 (Welder Qualifications)

18 30. Staff incorporates the allegations of Paragraphs 1-26 herein.

19 31. DG did not use welders who demonstrated the ability to use the qualified welding  
20 procedures by qualifying their welds (performing demonstration welds using the specified welding  
21 procedure). Failure to qualify welders on qualified welding procedures prior to installation of the  
22 new facility addition is a violation of A.A.C. R14-5-202.

23 32. ASME B31.3 (1996 edition) 328.2.1(a) requires that "qualifications of the welding  
24 procedures to be used and of the *performance of welders and welding operators* shall conform to  
25 the requirements of the [Boiler Pressure Vessel] Code, Section IX". Emphasis added.

26 33. 49 C.F.R. 193.2013(b)(C) adopts ASME B31.3 for LNG facilities. Pursuant to  
27 A.A.C. Rule R14-5-202(B), the Commission has adopted 49 C.F.R. part 193.

28 ...

1 34. DG failed to provide individual welding qualification records for the two welders  
2 identified by DG as having performed all the welds associated with the addition of the methane  
3 compressor. The welding procedures that were qualified for welding the piping to the addition of  
4 the methane compressor were not qualified until 49 days after completion of the construction.  
5 Consequently, the welders performing the welds related to the construction of the methane  
6 compressor and piping additions were not certified to use qualified welding procedures and were not  
7 using qualified welding procedures during the construction of the facility. These welds were last  
8 qualified 160 days prior to the qualification of the specific welding procedures necessary to meet the  
9 design criteria for the new facility. Therefore, documentation provided by DG demonstrates that the  
10 welders were not qualified on the qualified procedure at the time the construction welds were  
11 performed.

12 35. Because DG utilized welders who were not qualified to use qualified welding  
13 procedures specified for the installation of the compressor and piping addition, DG has violated  
14 A.A.C. R14-5-202(B).

15 **Count Three**

16 **(Nondestructive Testing of New Welds)**

17 36. Staff incorporates the allegations of Paragraphs 1-32 herein.

18 37. DG failed to provide documentation to demonstrate that 30 percent of each day's  
19 circumferentially welded pipe joints had been nondestructively tested during construction. Failure to  
20 perform the required number of nondestructive tests during the construction of a facility is a  
21 violation of A.A.C. R14-5-202(B).

22 38. National Fire Protection Association ("NFPA") code standard 59A 6.6.3.2 provides  
23 that, "all circumferential butt welds shall be examined fully by radiographic or ultrasonic  
24 inspection... [except that (2)] [p]ressure piping operating above -20° F (-29° C) shall have 30 percent  
25 of *each day's circumferentially welded pipe joints* nondestructively tested over the entire  
26 circumference in accordance with ASME B 31.3."

27 39. 49 C.F.R. 193.2013(b)(E) adopts NFPA 59A by reference for LNG facilities.  
28 Pursuant to A.A.C. R14-5-202(B), the Commission adopted 49 C.F.R. Part 193.

1 40. Prior to bringing the new methane compressor facility into service on July 28, 2014,  
2 DG tested only 11 of the 83 total welds (13 percent). After bringing the facility online on September  
3 18, 2014, and only after Staff inquired about the status of the nondestructive testing that had been  
4 performed, DG further nondestructively tested an additional 15 welds resulting in a total of 31  
5 percent of all welds being nondestructively tested.

6 41. NFPA 59A 6.6.3.2 requires that for each day that welds are performed,  
7 nondestructive testing must be performed on 30 percent of the circumferential welds performed that  
8 day. DG has failed to perform the required number of nondestructive tests according to the number  
9 of welds performed. Only 11 nondestructive tests were performed prior to bringing the facilities  
10 under pressure and into operation. Utilizing a 30 percent average of the total welds would require  
11 that DG have performed 25 nondestructive tests before the compressor addition was brought into  
12 operation.

13 42. Because DG did not perform nondestructive testing on 30 percent of each day's welds  
14 during construction, DG has not performed the required testing. DG's failure to timely perform the  
15 proper testing for the required number of welds is a violation of A.A.C. R14-5-202(B).

16 **Count Four**

17 **(Further Nondestructive Testing in the Event of Demonstrated Test Failures)**

18 43. Staff incorporates the allegations of Paragraphs 1-39 herein.

19 44. Documentation from DG demonstrates that DG did not perform additional testing  
20 following the discovery of defective welds. Failure to perform additional nondestructive testing of  
21 other welds following the discovery of failed welds during testing is a violation of A.A.C. R14-5-  
22 202(B).

23 45. Pursuant to ASME B31.3, 341.3.4, "When required spot or random examination  
24 reveals a defect: (a) two additional samples of the same kind (welded or bonded joints, by the same  
25 welder, bonder, or operator) shall be given the same type of examination; and ... (c) if any of the  
26 items examined as required by (a) above reveals a defect, two further samples of the same kind shall  
27 be examined for each defective item found by that sampling...."

28 ...



1 d. Has violated A.A.C. R14-5-202(B) by failing to perform the requisite number  
2 of nondestructive tests following the discovery of failed construction welds.

3 51. Staff requests that the Commission order DG to cease operation of the new methane  
4 compressor pending the completion of 100 percent testing of all welds using nondestructive testing.

5 52. Staff requests that the Commission impose a fine pursuant to A.R.S. § 40-424 in an  
6 amount not less than \$100 nor more than \$5,000 per each weld performed using an unqualified  
7 procedure as a violation of Commission Statutes, Rules, Regulations or Orders.

8 53. Staff requests that the Commission impose a fine pursuant to A.R.S. § 40-424 in an  
9 amount not less than \$100 nor more than \$5,000 per each weld performed by an unqualified welder  
10 as a violation of Commission Statutes, Rules, Regulations or Orders.

11 54. Staff requests that the Commission impose a fine pursuant to A.R.S. § 40-425 in an  
12 amount not less than \$100 nor more than \$5,000 for each separate violation of Commission Statutes,  
13 Rules, Regulations or Orders.

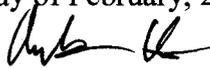
14 55. Staff requests that the Commission impose a fine pursuant to A.R.S. § 40-442 in an  
15 amount not less than \$100,000 for each day to a maximum of \$1,000,000 for each separate violation  
16 of Commission Statutes, Rules, Regulations or Orders.

17 56. Staff requests that the Commission impose a fine pursuant to Article XV, Sections 16  
18 and 19 of the Arizona Constitution in an amount not less than \$100 and no more than \$5,000 for  
19 each separate violation of Commission Statutes, Rules, Regulations or Orders.

20 57 Staff requests that the Commission provide such additional relief as may be  
21 appropriate.

22 58. Staff further requests the issuance of a procedural order setting this matter for  
23 hearing.

24 RESPECTFULLY SUBMITTED this 3<sup>rd</sup> day of February, 2015.

25   
26 \_\_\_\_\_  
27 Charles H. Hains  
28 Attorney, Legal Division  
Arizona Corporation Commission  
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(602) 542-3402

1 The original and thirteen (13) copies  
2 of the foregoing were filed this  
3<sup>rd</sup> day of February, 2015 with:

3 Docket Control  
4 Arizona Corporation Commission  
5 1200 West Washington Street  
6 Phoenix, Arizona 85007

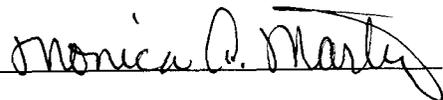
6 Copy of the foregoing mailed this  
7 3<sup>rd</sup> day of February, 2015 to:

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