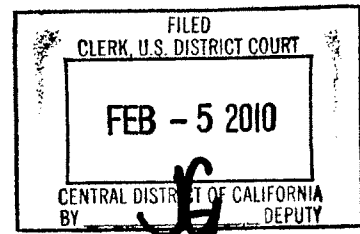


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UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA

UNITED STATES, THE STATES OF
CALIFORNIA, DELAWARE, FLORIDA,
ILLINOIS, INDIANA, NEVADA, NEW
MEXICO, NEW YORK, and TENNESSEE,
THE COMMONWEALTHS OF
MASSACHUSETTS AND VIRGINIA, and
THE DISTRICT OF COLUMBIA ex rel.
[UNDER SEAL]

Plaintiffs,

vs.

[UNDER SEAL]

Defendants.

Case No.: ED CV06-0055-GW

SECOND AMENDED COMPLAINT FOR
VIOLATION OF FEDERAL AND STATE
FALSE CLAIMS ACTS

JURY TRIAL DEMANDED

FILED IN CAMERA & UNDER SEAL
(AS REQUIRED BY 31 U.S.C. § 3730(b)(2))

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13 MEXICO, NEW YORK, and TENNESSEE,
THE COMMONWEALTHS OF
14 MASSACHUSETTS AND VIRGINIA, and
THE DISTRICT OF COLUMBIA ex rel.
15 JOHN HENDRIX,

16 Plaintiffs,

17 vs.

18 J-M MANUFACTURING COMPANY, INC.,
19 d/b/a JM Eagle, a Delaware corporation, and
FORMOSA PLASTICS CORPORATION,
20 U.S.A., a Delaware corporation,

21 Defendants.
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27
28

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I. INTRODUCTION

1
2 1. This action is based on a massive fraud defendants perpetrated for well over a
3 decade on the federal, state, and local governments to whom they sold polyvinyl chloride ("PVC")
4 pipe. This fraud, described in detail herein, constitutes a violation of the federal False Claims Act
5 ("FCA") and the various False Claims Acts of the states included in this Second Amended
6 Complaint (the "Complaint"). This fraud has caused federal, state, and local governments to
7 purchase and install PVC pipe that has only a fraction of the strength and endurance defendants
8 represented it to have. This, in turn, has caused failures of the PVC pipe in the field and has
9 resulted in PVC pipe in the ground that will need to be replaced in a fraction of the time that
10 defendants represented it would last, and that the federal, state, and local governments, relying on
11 those representations, expected it to last. Defendants perpetrated this fraud through the following
12 actions, among others:

- 13 a) using poor quality materials in the recipe of the PVC pipe, substituting those cheaper
14 materials for better materials that were used previously;
- 15 b) running the manufacturing process, called extrusion, at speeds that damaged the
16 quality of the PVC pipe while failing to properly maintain the manufacturing equipment;
- 17 c) cherry-picking, rather than randomly selecting, PVC pipe for testing, thus ensuring
18 that the test provided no result representative of the quality and strength of the PVC pipe
19 sold to the federal, state, and local governments;
- 20 d) consistently misrepresenting the quality and strength of the PVC pipe on the pipe
21 itself, as well as in corporate and sales literature;
- 22 e) presenting and causing their distributors to present false claims to the federal, state,
23 and local governments herein.

24 2. This action seeks to recover damages and civil penalties on behalf of the United
25 States, the States of California, Delaware, Florida, Illinois, Indiana, Nevada, New Mexico, New
26 York, and Tennessee, the Commonwealths of Massachusetts and Virginia, the District of
27 Columbia, and numerous political subdivisions and public water and sewer agencies located
28 within these States/Commonwealths/District (collectively the "real parties in interest" or "Real
Parties") arising from false statements and claims made, and caused to be made, by defendant J-M
Manufacturing Company, Inc. ("J-M"), currently doing business as JM Eagle™, and Formosa

1 Plastics Corporation, U.S.A. ("Formosa") in violation of the Federal False Claims Act, 31 U.S.C.
 2 §§ 3729 *et seq.*, and the following State False Claims Acts: California False Claims Act, Cal.
 3 Gov't Code §§ 12650 *et seq.*, Delaware False Claims And Reporting Act, 6 Del. C. §§ 1201 *et*
 4 *seq.*, District of Columbia False Claims Act, D.C. Code §§ 2-308.13 *et seq.*, Florida False Claims
 5 Act, Fla. Stat. Ann. §§ 68.081 *et seq.*, Illinois Whistleblower Reward and Protection Act, 740 Ill.
 6 Comp. Stat. Ann. §§ 175/1 *et seq.*, Indiana False Claims and Whistleblower Protection Act, Ind.
 7 Code Ann. §§ 5-11-5.5-1 *et seq.*, Massachusetts False Claims Law, Mass. Gen. Laws Ch. 12 §§
 8 5A *et seq.*, Nevada False Claims Act, Nev. Rev. Stat. Ann. §§ 357.010 *et seq.*, New Mexico Fraud
 9 Against Taxpayers Act, N.M. Stat. Ann. §§ 44-9-1 *et seq.*, New York False Claims Act, N.Y.
 10 State Fin. §§ 187 *et seq.*, Tennessee False Claims Act, Tenn. Code Ann. §§ 4-18-101 *et seq.*, and
 11 Virginia Fraud Against Taxpayers Act, Va. Code Ann. §§ 8.01-216.1 *et seq.* (collectively the
 12 "Acts"). The Real Parties defrauded by Defendants J-M and Formosa include, without limitation,
 13 the United States, the States of California, Delaware, Florida, Illinois, Indiana, Nevada, New
 14 Mexico, New York, and Tennessee, the Commonwealths of Massachusetts and Virginia, the
 15 District of Columbia, the political subdivisions and public water and sewer agencies set forth in
 16 Exhibit 1 (incorporated herein), and all other political subdivisions and public water and sewer
 17 agencies within the States of California, Delaware, Illinois, Indiana, Nevada, New Mexico, New
 18 York, and Tennessee, the Commonwealths of Massachusetts and Virginia, and the District of
 19 Columbia that purchased J-M's PVC pipe between January 18, 1996 and the present.

20 3. For the past 25 years, J-M has been in the business of manufacturing and selling
 21 PVC pipe for the transmission and distribution of water (potable and reclaimed) and for use in
 22 sewer systems. Federal military bases, State Roads and Highway Projects, cities, public water
 23 distribution, and sewer collection agencies are the primary purchasers of J-M's PVC pipe. J-M
 24 sells to these entities by enlisting distributors to act as middlemen between J-M and its customers.
 25 J-M's PVC pipe products are designed almost exclusively for use in water or sewer transport
 26 systems so that even parts sold to distributors are eventually installed in these systems. J-M's
 27 PVC water pipe products are used primarily in the "water main," the artery that typically runs
 28 down the middle of the street and carries water to the service laterals that branch off from the main

1 and supply the individual homes and businesses, and the “transmission line,” the trunk line that
2 transports water from the water treatment plant to the water mains. PVC pipe for use in water
3 mains is between four and 12 inches in diameter, whereas PVC pipe for use in the transmission
4 line is between 14 and 48 inches in diameter. J-M’s PVC pressure pipe products for “reclaimed
5 water” applications are used primarily to transport untreated water to or from water treatment
6 plants. Unlike J-M’s potable water pipe, which is blue in color, reclaimed water pipe is generally
7 purple in color. J-M’s PVC sewer pipe, which is green in color, is sold in a similar range of sizes
8 to the range for water pipe. J-M sells two general types of sewer pipe: “forced-sewer” pipe
9 designed for use in pressurized applications, and “gravity” sewer pipe for gravity-flow transport of
10 wastewater.

11 4. To encourage and enable Real Parties to purchase J-M pipe, J-M provided Real
12 Parties with copies of J-M’s catalogs describing J-M’s PVC pipe products. J-M’s outside
13 salespeople visited Real Parties regularly and brought new catalogs or updates to existing catalogs.
14 J-M also provided Real Parties with copies of “new product bulletins” and other sales literature
15 describing J-M’s products. J-M also provided copies of its catalogs and sales literature to
16 distributors, who in turn provided these materials to end-users, including Real Parties, to enable
17 them to order J-M products through the distributor. In each of its sales documents, J-M made
18 repeated representations that its PVC pipe products conform to applicable industry standards for
19 PVC pipe.

20 5. Real Parties purchased, were deeded, or otherwise acquired ownership of J-M pipe
21 in a variety of ways. For example, Real Parties acquired J-M pipe through direct transactions with
22 J-M. Real Parties also acquired J-M pipe through transactions involving contractors who installed
23 J-M pipe for the Real Parties, and distributors who sold J-M pipe. In each of these instances,
24 defendants’ false representations caused the submission of false claims and caused contractors,
25 distributors, and/or Real Parties’ engineers to falsely represent to Real Parties that the pipe
26 acquired by Real Parties conformed to Real Parties’ specifications. As a result, Real Parties were
27 deprived of money, property, or services that are recoverable under the applicable False Claims
28 Acts alleged herein.

1 6. In addition to the transactions described above, Real Parties often acquire PVC pipe
2 when they accept a newly constructed subdivision or other private project built by a private
3 developer ("Developer" and "Private Developer Transactions"). Private Developer Transactions
4 enable developers to complete subdivisions or other private projects without having to wait for
5 Real Parties to install the necessary PVC pipes. Frequently, private contracting companies install
6 the PVC parts in these subdivisions or private projects.

7 7. Although the PVC pipe is installed by Developers, the installation is strictly
8 regulated by the Real Parties because the PVC pipe is ultimately deeded to Real Parties. These
9 regulations dictate, among other requirements, which pipe manufacturers, and which products
10 from those manufacturers, may be used in the subdivision or private project.

11 8. In addition to strict compliance with Real Parties' parts specifications, Real Parties
12 also require Developers to provide a performance bond, in the amount of 100% of the projected
13 cost of the overall project, to ensure that funds will be available to correct any failure by the
14 Developer to complete the subdivision or private project in accordance with Real Parties'
15 specifications.

16 9. Only upon receiving certification that the development or private project was
17 completed in accordance with Real Parties' specifications will the subdivision or private project be
18 accepted, the performance bond released, and water and water maintenance services be provided
19 to the subdivision or other private project built by a Developer.

20 10. Upon the release of the performance bond, some Real Parties additionally require
21 that Developers post a warrant bond, normally in the amount of 5% to 10% of the performance
22 bond, to be released after one year.

23 11. Defendants' false representations caused Developers, their contractors, and/or Real
24 Parties' engineers to falsely represent to Real Parties that newly constructed subdivisions and
25 other private projects were equipped with PVC pipe conforming to Real Parties' specifications.
26 As a result, Real Parties were deprived of money, property, or services that are recoverable under
27 the applicable False Claims Acts as alleged herein.

28 12. Starting in at least 1997, J-M began knowingly to manufacture substandard PVC

1 pipes, selling them through distributors to military bases, State Roads and Highway Projects, and
2 public agencies, as well as to contractors installing portions of the water distribution and sewer
3 systems. J-M falsely represented to its customers, including Real Parties, that the PVC pipe
4 products sold to them conformed to applicable industry standards when in fact the products were
5 made using inferior materials, processing, and tooling that resulted in their having substandard
6 tensile strength, as measured by various tests. In making its false representations to its
7 distributors, contractors, and ultimate end-users, J-M intended that its false representations be used
8 to induce Real Parties to purchase its products. As a result, Real Parties have suffered, and will
9 continue to suffer, substantial damage. Starting in at least 1997, a substantial percentage of the
10 PVC pipe J-M supplied had tensile strengths below the minimum required by applicable industry
11 standards and Real Parties' contracts and specifications. As a result of the diminished tensile
12 strength, J-M's PVC pipe will have a shorter life span, be more likely to swell and leak, and need
13 to be replaced more quickly than pipe manufactured to specification.

14 13. The Federal and State False Claims Acts provide that any person who knowingly
15 submits or causes to be submitted a false or fraudulent claim to a governmental entity for payment
16 or approval is liable for a civil penalty of up to \$12,000 for each such claim, plus three times the
17 amount of the damages sustained by the government. The Acts allow any person having
18 information regarding a false or fraudulent claim against the government to bring an action on
19 behalf of himself (the "qui tam plaintiff" or "relator") and the government and to share in any
20 recovery.

21 14. Based on these provisions, qui tam plaintiff John Hendrix ("Hendrix") seeks to
22 recover damages and civil penalties arising from defendants' actions in presenting, or causing to
23 be presented, false claims, and defendants' actions in presenting, or causing to be presented, false
24 records and statements to federal, state, and local governmental entities to get false claims paid.

25 II. PARTIES

26 15. Qui tam plaintiff Hendrix ("Relator") is a resident of Clifton, New Jersey. After
27 graduating from college in December 2001, Relator began working for Defendant J-M on July 8,
28 2002, in its corporate headquarters in Livingston, New Jersey, as an engineer in J-M's Product

1 Assurance Division. Throughout his employment at J-M, the majority of Relator's job duties
2 involved advising J-M on the technical aspects of claims brought by J-M's customers for failing or
3 non-conforming product. To a lesser degree, Relator's job also involved sales and customer
4 service work, including advising current and prospective customers (primarily fellow engineers)
5 on technical aspects of J-M's products. On November 9, 2005, a little over a week after Relator
6 wrote a memo to J-M management highlighting the fact that the tensile strength of J-M's PVC
7 pipe was below that required by Underwriters Laboratories ("UL") to qualify for the UL Mark
8 stamped on its pipes, J-M terminated Relator's employment.

9 16. Real Parties, on whose behalf Relator brings this suit, are the United States, the
10 States of California, Delaware, Florida, Illinois, Indiana, Nevada, New Mexico, New York, and
11 Tennessee, the Commonwealths of Massachusetts and Virginia, the District of Columbia, the
12 political subdivisions and public water and sewer agencies set forth in Exhibit 1, and all other
13 political subdivisions and public water and sewer agencies within the States of California,
14 Delaware, Illinois, Indiana, Nevada, New Mexico, New York, and Tennessee, the
15 Commonwealths of Massachusetts and Virginia, and the District of Columbia, that purchased, or
16 were deeded or acquired from others, between January 18, 1996 and the present, certain types of J-
17 M's PVC pipe at issue in this litigation, as described more fully herein. Exhibit 1, incorporated
18 herein, identifies by name, without limitation, some examples of the Real Parties that purchased,
19 were deeded, or otherwise acquired J-M's PVC pipe between at least 1996 and the present.
20 Exhibit 2, incorporated herein, sets forth examples of federal projects for which the United States
21 of America purchased, was deeded, or acquired J-M PVC pipe during that same period. Exhibits
22 3(a) through 3(l), incorporated herein, set forth examples of the purchase, deeding, or acquiring of
23 J-M PVC pipe by Real Parties other than the United States of America.

24 17. Defendant Formosa Plastics Corporation, U.S.A. ("Formosa"), was formed in 1978
25 as a Delaware corporation, having its headquarters at 9 Peach Tree Hill Road, Livingston, New
26 Jersey. At all times relevant to this Complaint, Formosa was a privately held foreign for-profit
27 corporation and a subsidiary of the Taiwan-based Formosa Plastics Group ("FPG").

28 18. Formosa is largely controlled by the Wang family of Taiwan. Yung-ching Wang,

1 known as "Y.C. Wang," was FPG's Founder and former Chairman of the Board. He passed
2 away on October 15, 2008. Each of Y.C. Wang's ten children has served as an executive at
3 either FPG or one of its subsidiaries. Walter Wang, Y.C. Wang's youngest son, is the President
4 and current CEO of defendant J-M and has been since 1990.

5 19. One of Formosa's core business functions is to produce plastic resins. Formosa
6 required J-M to use its resin in J-M's production of PVC pipe, including most of the PVC pipe at
7 issue in this case. During the relevant period, Formosa had annual revenues exceeding \$4 billion.

8 20. In 1982, Formosa formed J-M. Until at least November 1, 2005, J-M was a wholly
9 owned subsidiary of Formosa, although some industry publications referred to J-M as a unit or
10 operating division of Formosa. At all times relevant to this Complaint, J-M was a Delaware
11 corporation headquartered at 9 Peach Tree Hill Road in Livingston, New Jersey, where Formosa
12 was also headquartered.

13 21. During the relevant period, J-M manufactured its PVC pipe in at least 11 plants,
14 including the following locations: Fontana and Stockton, California; Pueblo, Colorado; Adel,
15 Georgia; Wilton, Iowa; Batchelor, Louisiana; Winnebago, Minnesota; Butner, North Carolina;
16 McNary, Oregon; Meadville, Pennsylvania; and Wharton, Texas.

17 22. In or about November 2005, Walter Wang purchased J-M from Formosa for
18 approximately \$100 million. Thereafter, as of June 22, 2007, J-M completed the acquisition of
19 PW Eagle Inc., North America's second largest producer of PVC pipe, for approximately \$400
20 million. The new company has operated under the trade name JM Eagle™ since the merger.
21 (References to J-M herein after June 2007 are intended to and should be deemed to refer to JM
22 Eagle as appropriate.) With at least \$1 billion in annual sales, J-M was the largest manufacturer of
23 PVC pipe in the United States and the world at all times relevant hereto.

24 III. JURISDICTION AND VENUE

25 23. This Court has jurisdiction over the subject matter of the Federal False Claims Act
26 action pursuant to 28 U.S.C. § 1331 and 31 U.S.C. § 3732(a), which specifically confers
27 jurisdiction on this Court for actions brought pursuant to 31 U.S.C. §§ 3729 and 3730. This Court
28 has jurisdiction over the subject matter of the State False Claims actions pursuant to 28 U.S.C. §

1 1367 and 31 U.S.C. § 3732(b), because the State False Claims actions arise from the same
2 transactions or occurrences as the Federal False Claims Act action.

3 24. This Court has personal jurisdiction over Defendants J-M and Formosa pursuant to
4 31 U.S.C. §3732(a), which provides that “[a]ny action under section 3730 may be brought in any
5 judicial district in which the defendant, or in the case of multiple defendants, any one defendant
6 can be found, resides, transacts business or in which any act proscribed by section 3729 occurred.”
7 Section 3732(a) also authorizes nationwide service of process. During the relevant period, J-M
8 operated a foundry in Fontana, California, at which many of the fraudulent practices occurred, and
9 thereby transacted business in the Central District of California.

10 25. Venue is proper in this district pursuant to 31 U.S.C. §3732(a), because J-M can be
11 found in, resides in, and/or transacts business in the Central District of California and because
12 many of the violations of 31 U.S.C. §3729 described herein occurred within this judicial district.

13 IV. FRAUD AGAINST REAL PARTIES

14 A. Turnover in J-M’s Upper Management

15 26. J-M was founded in 1982 when Formosa acquired the Pipe Division of Johns-
16 Manville Corporation and created J-M. For its first 10 years, J-M’s management consisted largely
17 of former Johns-Manville employees. However, by the mid 1990s, most of the old Johns-
18 Manville employees had either retired or left. In 1990, J-M’s parent company, Formosa, installed
19 Walter Wang, the son of Formosa’s Founder and Chairman of the Board, Y.C. Wang, as J-M’s
20 President. At the time he assumed this post, Walter Wang was only 25 years old. Having just
21 graduated from college, he had little to no practical experience in managing a company, let alone
22 the world’s largest manufacturer of PVC pipe. Shortly after naming Walter Wang as president, J-
23 M moved its corporate headquarters from Stockton, California to Livingston, New Jersey, where
24 until approximately October 2008 it occupied the same office building in which Formosa and
25 several other Formosa subsidiaries also have corporate offices.

26 27. Under Walter Wang’s leadership, J-M implemented a series of cost-cutting
27 measures that undermined the quality of J-M’s PVC pipe products. At Walter Wang’s direction,
28 the outgoing former Johns-Manville managers were replaced by individuals with significantly less

1 experience and fewer credentials. For instance, the Director of Production, who formerly had
2 been a senior engineer, was replaced by Barry Lin ("Lin"), an accountant from Formosa's
3 management center in Taiwan with no engineering background. The new Director of Engineering,
4 Kaider Liao, did not have an engineering degree. The new Quality Control Manager, Jack Hwang
5 ("Hwang"), was an electrical engineer with no experience or formal training in failure analysis.
6 After Hwang left the Quality Control Manager post in 2004, the position was later filled in 2005
7 by a recent college graduate.

8 28. In filling these and other supervisory positions, J-M drew almost exclusively from
9 two sources of recruits – Taiwanese nationals and recent college graduates (like Relator) – both of
10 whom garnered smaller salaries. Until approximately 2003, Formosa owned and operated a
11 boarding house near its Livingston, New Jersey headquarters to accommodate the large number of
12 Taiwanese employees at J-M and its other subsidiaries who could not otherwise afford to live in
13 the greater New York Metropolitan area on their modest J-M salaries.

14 29. Backed by this new crop of inexperienced managers, Walter Wang shifted J-M's
15 focus away from product quality to a single-minded mission of gaining market share and
16 improving the bottom line without regard to quality.

17 30. Consistent with this cost-cutting governing principle, Walter Wang micro-managed
18 J-M. For example, all claims valued over \$15,000 had to be cleared by him personally, and
19 certain employees' hotel upgrades had to be reviewed by him as well.

20 31. Under the direction of Walter Wang and his new managers, J-M implemented three
21 cost-cutting measures that have seriously compromised the tensile strength of the majority of its
22 PVC pipe.

23 **B. Formosa and J-M Substituted Inferior Ingredients in their PVC Compound**

24 32. As a cost-saving measure, J-M and Formosa began to substitute cheaper and lower-
25 quality ingredients in its PVC compound. While most PVC pipe manufacturers used a pre-
26 prepared stock formula, published by the Plastic Pipe Institute, for their PVC compounds,
27 Formosa and J-M created a proprietary, less expensive compound called "J-M 90." Developing
28 their own compound allowed Formosa and J-M to control the type and quality, and therefore the

1 cost, of ingredients that make up the compound.

2 33. J-M and Formosa replaced two primary classes of ingredients in J-M 90 – resin and
3 additives (such as wax and stabilizers) – with cheaper, inferior-grade brands. Specifically, they
4 replaced the more expensive, higher viscosity resin (which had a viscosity rating of 0.92), with a
5 lower-grade resin (which had a viscosity rating of 0.88). Formosa required J-M to use Formosa as
6 its primary supplier of resin, and most of the resin at issue was produced by Formosa. In addition
7 to supplying the resin, which is a vital ingredient in J-M 90, Formosa was responsible for mixing
8 and preparing the J-M 90 compound, as well as shipping it, to numerous J-M plants where it could
9 be formed into pipe.

10 34. In addition to being cheaper to make and purchase, the use of a lower-viscosity
11 resin allowed pipe to be manufactured more quickly and with less processing, thereby allowing J-
12 M to increase its production rates and output.

13 35. Switching the other additives, such as waxes and stabilizers, to lower-grade brands
14 similarly decreased tensile strength in pipe made with J-M 90.

15 36. The poor quality of the ingredients used in the J-M 90 compound, including the
16 resin produced by Formosa, has resulted in the J-M 90 compound having a decreased overall
17 tensile strength. This is exemplified by testing conducted by NSF International (“NSF”)
18 (formerly known as the National Sanitation Foundation) in 2003 at the McNary, Oregon Plant. As
19 set forth in more detail below, see section VI, on or about September 25, 2003, NSF required that
20 J-M pipe be subjected to hydrostatic design basis (“HDB”) testing for the pipe to maintain its NSF
21 certification. NSF observed that the Product Sample Form for the one-inch pipe being tested
22 showed that it contained Formosa resin. This pipe failed HDB testing with an long-term
23 hydrostatic strength (“LTHS”) of 3608, meaning that it had less than a 20% useful life when
24 compared to pipe that passed HDB testing.

25 37. The corresponding increase in production rates resulting from the switch to a
26 lower-viscosity resin further contributed to pipe made with the J-M 90 compound having a
27 decreased overall tensile strength. Because the lower-viscosity resin was a more ductile material,
28 it required more processing to achieve the required tensile strength. Instead of slowing its

1 production rates to account for the lower-viscosity resin, J-M increased its production rates to
2 increase its output of PVC pipe.

3 38. Both Formosa and J-M were aware that the switch in ingredients in the J-M 90
4 formula would result in an inferior quality pipe. On May 23, 2002, an internal memorandum sent
5 from William Fassler ("Fassler"), a former employee and senior engineer in the Research and
6 Development Department in J-M's Stockton, California plant, to David Chen ("Chen") (Stockton
7 Plant Manager), K.C. Yang ("Yang") (J-M's Corporate Quality Control Supervisor), Lenor Jang,
8 Angela Yen, and Steven Rios detailed a conversation Fassler had with representatives of Formosa.
9 Fassler's memo explained that he told Formosa of problems with the pipe created with this new
10 formulation. Specifically, the memo noted that because the new resin had a lower inherent
11 viscosity, it might result in pipe having decreased strength. The memorandum further noted
12 concerns of burning and problematic pipe as a result of the introduction of Formosa F622 resin in
13 the production process. As the memo explained, the subsequent modification of particle size
14 distribution, as a result of the resin, also equates with extrusion problems.

15 39. With regard to the inferior pipe quality that resulted from the switch in ingredients:

16 a) Brian Wang, former manager of three plants, has acknowledged that in order to
17 increase profits, J-M management began using cheaper compound ingredients, including
18 wax lubricants, stabilizers, and resin.

19 b) Yang has acknowledged that in order to increase profits, defendants' management
20 ordered the use of compound ingredients from a company called Luxco. These ingredients
21 were inferior, and shortly after the changeover to Luxco, pipe manufactured by J-M could
22 no longer meet the UL Standard 1285 ("UL 1285") requirement of 7000 psi. Yang has
23 further acknowledged that defendants' management refused to allow him to pursue the
24 Luxco quality issue.

25 c) John Negode ("Negode"), former Quality Control Supervisor at the McNary, Oregon
26 Plant, has acknowledged that changes in the quality of the compound being used by J-M
27 caused test failures on a regular basis. Negode has acknowledged that the compound
28 ingredients were changed because J-M management did everything on the cheap.

d) Fassler has acknowledged that in order to reduce the cost of material it used, J-M switched from paraffin wax to multi-wax. The multi-wax had extreme variations and inconsistencies. Eventually the company had to switch back because of the serious quality problems with these ingredients.

e) Fassler has further acknowledged that, in the year 2000, J-M switched to a lower viscosity resin and that this decision was made by J-M senior management in order to save money. Fassler strongly opposed the change-over because the reduced viscosity reduced tensile strength, but the change was made nonetheless.

f) In a memorandum to Chen created on May 23, 2002, Fassler stated: "Lower IV means lower physical strength (lower tensile strength, lower hoop stress, lower impact resistance). For JM90 the safety factor for tensile strength and hoop stress is already small. For electrical conduit, well casing, and foam core DWV the impact resistance test is already critical. Lower IV resin would decrease the safety factor for these products." Exhibit 53, incorporated herein.

C. Accelerating Production Rates

40. In addition to degrading the ingredients that make up its J-M 90 compound, J-M began to make changes to its manufacturing process that further eroded the tensile strength and caused the finished PVC pipe to be out-of-specification.

41. PVC pipe is manufactured by extrusion. Broadly described, extrusion involves the following steps. The ingredients that make up the PVC compound (*e.g.*, base resin and additives like paraffin wax and calcium stearate) are weight-measured out of silos and poured into a hopper where they are mixed. The mixed PVC compound is then poured into the extruder, where it is melted and formed by being forced (by a barrel and screw acting as an auger) through an orifice known as the die that creates the shape and dimensions of a pipe. Once out of the extruder and die, the hot PVC pipe is then cooled in a series of water cooling tanks.

42. To meet an ever-increasing demand for PVC pipe, J-M began to increase production rates in each of its 11 plants that produced PVC pipe. Instead of investing in more extruders, replacing outdated extruders, or building more plants, J-M started running its existing

1 extruders (many of which were over 30 years old) at speeds that exceed the extruders' rated
2 capacity. Each extruder has a recommended maximum output measured typically in pounds per
3 hour, and J-M began running its extruders at 20 percent above the rated capacity.

4 43. As a result of the increased speed of J-M's production line, more torque and higher
5 temperatures were needed to melt the J-M 90 compound and, once melted, the PVC material
6 received less processing time in the extruder and die as it was being formed into pipe. The
7 temperature of the water being sprayed on the pipe in the cooling baths had to be lowered to
8 counteract both the increased temperature of the pipe emerging from the extruder and the fact that
9 the pipe was spending less time in the cooling baths. To adjust the temperature of the cooling
10 baths, the number of sprayers was increased or decreased. (Since the cooling baths occupy a fixed
11 distance on the production line, the increased production rates had the pipe moving more quickly
12 over this and all other parts of the production line.)

13 44. Not surprisingly, the effect of this accelerated manufacturing process (in addition to
14 increased output) was to further decrease the tensile strength of J-M's PVC pipe. Like a cake
15 baked for eight minutes at 800 degrees and then quickly cooled in a freezer, the PVC pipe being
16 produced at the accelerated production rate was not as strong as pipe that was afforded proper
17 processing time and conditions. Having been subjected to a quick burst of cooling, the surface of
18 the outside of the pipe was hard, whereas the portion of pipe below the surface, not having had
19 adequate time to cool and form, was soft. The accelerated manufacturing process also created
20 huge variations in the temperatures of the inside and outside diameter of the pipe and the rate at
21 which each cooled. The effect of these differential temperatures and cooling rates was to further
22 weaken the pipe and create locked-in stresses in the pipe that increase the likelihood the pipe will
23 catastrophically rupture when it is tapped.

24 45. With regard to the accelerated production process described above:

25 a) Brian Wang has acknowledged that Barry Lin and Walter Wang repeatedly increased
26 production quotas in order to maximize profits. The increase forced plant managers to
27 speed up the extruders, which put stress on them.

28 b) Yang has acknowledged that J-M management constantly increased production

1 quotas, causing plants to ramp up the speed at which the extruders were run.

2 c) Negode has acknowledged that extruders at J-M's plants were always run at faster
3 than rated capacity, resulting in non-conforming pipe, including non-conforming tensile
4 strength.

5 d) Fassler has acknowledged that, over time, extrusion goals were increased significantly.
6 This caused plant managers to increase the speed at which the extruders were run. This in
7 turn made it more difficult to keep the manufactured pipe within specification.

8 **D. Improper Tooling and Maintenance of Extruders**

9 46. During the relevant time period, with the exception of its newer plants in Adel,
10 Georgia, and Meadville, Pennsylvania, in each of its remaining PVC plants, J-M had many
11 extruders that were over 30 years old. Rather than invest in new extruders, J-M placed a new,
12 high-output die on the end of the older extruders to keep up with the accelerated production
13 schedule set by Walter Wang. However, because J-M's lower-quality PVC compound required
14 more processing time and the older extruders were not able to work the PVC compound enough
15 for the high-output die, the tensile strength of the pipe produced by the combination of older
16 extruder and high-output die was further diminished.

17 47. In late 2004, J-M began receiving complaints from customers regarding a certain
18 type of PVC pipe (IPS white pipe) produced at its plant in Stockton, California. The combination
19 of increased production rates, higher temperatures, and high-output dies on older extruders had
20 caused the pipe to burn, turning it yellow in color, instead of the white color characteristic of this
21 particular type of pipe. To remedy the problem, Yang instructed the Stockton plant to use a
22 regular die for this product. In an email dated January 4, 2005, Yang instructed Stockton's
23 Superintendent of Production, Jim Reichert, that: "PST [Plant Stockton] should use regular die for
24 IPS white products when high-output die cause burning. If necessary, PST should request new
25 IPS die." See Exhibit 4, incorporated herein.

26 48. By increasing its production rates to speeds exceeding the extruders' rated capacity,
27 J-M accelerated the wear on its extruders. Moving parts like the extruders' screw and barrel were
28 most affected by the added wear. However, rather than increase the amount of maintenance to

1 account for more wear, J-M abandoned its former practice of regularly monitoring and replacing
2 the screw and barrel unit when it fell below a certain tolerance and decided instead to amortize the
3 unit over a given time period (such as one year) and replace it only at the end of that time period.

4 49. J-M managers like Fassler began to observe that, under the increased production
5 rates, the screw and barrel unit was exceeding the old tolerances and needing replacement after
6 only six months. Nevertheless, under its new amortization policy, J-M continued to use the screw
7 and barrel unit for another six months before it was replaced. Experienced J-M engineers like
8 Fassler were well aware that the PVC material extruded in the second half of the unit's amortized
9 life with the underperforming screw and barrel unit had reduced tensile strength. See Exhibit 5
10 (Relator's notes dated 11/3/05), incorporated herein.

11 50. In a discussion with Relator on November 3, 2005, Fassler explained that the
12 reason for the decrease in tensile strength stems from the proximity of the screw and barrel to each
13 other. For instance, a new screw and barrel unit, which fits closely together, will generate more
14 shear and yield better mechanical properties in the finished pipe. See Exhibit 5. However, as the
15 unit wears, the fit loosens and the shear decreases, which compromises the processing and
16 decreases the tensile strength of the PVC material. Id. Despite this knowledge, J-M failed to
17 replace its underperforming screw and barrel units after the first six months of use and allowed
18 them to be used for an additional six months in spite of the detrimental effect on the pipe's tensile
19 strength.

20 51. The combined effect of J-M's substitution of inferior ingredients, increased
21 production rates, and improper tooling and maintenance of its extruders caused J-M to produce
22 PVC pipe that failed to meet the tensile strength requirements set forth by UL, the American
23 Water Works Association ("AWWA"), ASTM International ("ASTM") (originally known as the
24 American Society for Testing and Materials), and FM Approvals, a division of FM Global
25 (formerly Factory Mutual) ("FM").

26 52. With regard to the improper tooling and extruder issue:

27 a) Brian Wang has acknowledged that the increased speed of the extruders caused the
28 screw and barrel units to wear out faster, but maintenance and replacement schedules were

1 not modified to take increased wear and tear into account.

2 b) Yang has acknowledged that J-M's screw and barrel units were constantly wearing out
3 because of the high extruder speeds, and J-M did not replace them often enough. This
4 contributed significantly to producing non-conforming pipe. Yang further acknowledged
5 that J-M far exceeded the screw and barrel life expectancy, and J-M management would
6 not allow replacement often enough.

7 c) Fassler has acknowledged that the screw and barrel units were replaced according to
8 an amortization schedule. This was an improper approach and led to the use of worn screw
9 and barrel units. In fact, J-M far exceeded the life expectancy of the units; J-M
10 management overruled plant managers who tried to replace the units.

11 **V. J-M SELLS SUBSTANDARD PVC PIPE BEARING UL MARK DESPITE**
12 **KNOWLEDGE THAT THE PIPE DOES NOT QUALIFY FOR UL LISTING**

13 **A. J-M PVC Pipe Does Not Meet UL's Longitudinal Tensile-Strength Requirement**

14 53. UL is a not-for-profit corporation that tests and certifies a wide range of products
15 for public safety. Once a product is tested and found to conform to UL's safety requirements, that
16 product becomes UL certified and is eligible to bear the UL Mark. A product bearing a UL Mark
17 is universally accepted as being safe.

18 54. UL has promulgated a safety standard governing PVC pipe for use in underground,
19 fire service systems. UL 1285 lists a variety of requirements that must be met for PVC pipe to be
20 UL certified and bear the UL Mark. Specifically, UL 1285 requires that "[r]epresentative samples
21 of each class, pressure rating and size of PVC pipe . . . shall be subjected to the tests described in
22 Sections 11 – 20." Exhibit 6, incorporated herein. One of those tests, Section 17, is the
23 Longitudinal Tensile-Strength ("LTS") Test, which provides that "[m]achined specimens from the
24 pipe shall have a minimum tensile strength of 7,000 psi." Id.

25 55. J-M has undergone only two rounds of LTS Tests for UL on its PVC pipe products.
26 The first round was on its founding in 1982 when J-M had to initially qualify its PVC pipe
27 products for UL listing. The second round was in the mid-1990s when J-M sought to change its
28 PVC pipe compound and begin making pipe out of its newly created J-M 90 compound. J-M

1 passed both of these tests and received UL listing for its PVC pipe products.

2 56. Once it has certified a product, UL does not require that the product undergo the
3 Performance Tests listed in Sections 11 through 20 of UL 1285, including the LTS Test, unless
4 and until there has been a material change in the product's materials, design, or processing. While
5 UL requires manufacturers to "conduct the necessary production control, inspection, and tests" as
6 they produce the pipe, these routine Manufacturing Tests are much less stringent than the
7 Performance Tests UL 1285 requires to initially qualify the PVC pipe. Exhibit 6.

8 57. UL operates on an honor system. Once a product is UL listed, UL relies on
9 manufacturers to notify it of any material changes to the product's materials, design, or
10 processing. By requiring "*representative* samples of each type of PVC pipe" for qualification
11 testing, UL conditions its ongoing certification of the product on the understanding that all future
12 pipe will be made in a manner that is not materially different from the samples submitted to UL to
13 qualify the pipe. Exhibit 6 (emphasis added). In the Foreword, UL 1285 specifically states that
14 "[t]he observance of the requirements of this Standard by a manufacturer is one of the conditions
15 of the continued coverage of the manufacturer's product." *Id.*

16 58. By at least 1997, J-M's cost-cutting practices of substituting inferior ingredients in
17 its compound, accelerating production rates, and improperly tooling its extruders were well-
18 established and had seriously degraded the tensile strength of J-M's PVC pipe. By this time, J-M
19 had begun to receive LTS Test results (from J-M's internal testing and testing performed by
20 customers in connection with claims for failing pipe) showing that more than 50 percent of the
21 time J-M's PVC pipe failed to meet the minimum LTS requirements set forth in UL 1285.

22 **1. Results of Internal LTS Testing Trouble Relator**

23 59. Fassler ordered all of the LTS Tests that J-M requested from 1996 through 2005.
24 Based on his review of these test results, Fassler estimated that J-M's PVC pipe failed LTS
25 requirements 70 percent of the time.

26 60. In 2002, while working on two large claims against J-M for failed PVC pipe,
27 Relator was asked to review the results of all internal LTS Tests J-M had performed on PVC pipe
28 manufactured between 1998 and 1999, the time period when the failed pipe was produced. In so

1 doing, Relator was able to review the results from six LTS Tests that had been performed on J-
2 M's PVC pipe. Of the six tests, Relator observed that four failed the LTS requirements and only
3 two passed.

4 61. At various times, together and separately, Fassler, Yang, and Relator each have
5 expressed concern to Lin about the large percentage of failing LTS Test results on J-M's PVC
6 pipe. Lin has responded by saying that the failures were "an acceptable risk to meet company
7 goals," failures were normal, and not every piece of pipe would always meet specification.
8 Exhibit 7 (Relator's notes dated 9/12/05), incorporated herein.

9 62. After seeing a subset of the results of J-M's LTS testing in which 60 percent of the
10 samples failed and after learning from Fassler that the collective results of the past nine years
11 showed an overall failure rate of 70 percent, Relator was no longer comfortable signing his name
12 to customer certifications and letters to claimants representing that J-M's pipe complied with the
13 UL Standard. On August 23, 2005, Relator told Lin about his concerns and said he would not sign
14 any more letters without first seeing copies of all of the results of J-M's LTS testing.

15 63. Lin refused to provide Relator with the LTS Test results. Instead, he simply
16 assured Relator that J-M's UL-listed products met all the requirements of UL and directed him to
17 continue to certify this to J-M's customers. Exhibit 8, incorporated herein, is a copy of Relator's
18 August 25, 2005, email to Lin asking him to acknowledge in writing his statements regarding J-
19 M's compliance with the UL tensile-strength requirement despite internal test results to the
20 contrary. After having similar conversations with Yang, Kai Cheng ("Cheng"), J-M's Director of
21 Product Assurance, and Mai Huynh, J-M's Product Assurance Manager, Relator sent similar
22 emails to each of them. See id. None of the recipients provided a written acknowledgment to
23 Relator.

24 **2. Results of Testing Performed in Conjunction with Claims Against J-M**

25 64. By at least 1997, J-M had received test results showing failing longitudinal tensile
26 strength from its Product Assurance Department. J-M's Product Assurance Department handles
27 all claims and complaints brought by J-M customers for failing pipe. Because LTS testing can be
28 performed only by a certified independent laboratory and is expensive (\$2,500 per specimen for

the series of tests with which this test is packaged), it is typically requested only in the case of larger claims involving significant damages.

65. During Relator's three years in J-M's Product Assurance Department, LTS testing was performed in connection with only 14 of the claims. Of those 14 claims, Relator saw 12 instances in which the longitudinal tensile strength of J-M's PVC pipe was below the 7,000 psi minimum requirement and only two instances in which the PVC pipe met LTS requirements. By contrast, LTS testing of pipe manufactured by J-M's predecessor, Johns-Manville, ranged from 7,560 – 8,765 psi and always exceeded the desired level of 7,150 psi. Exhibit 9, incorporated herein, contains copies of some of the test results documenting the following failing longitudinal tensile strengths measured in pipe from four of the 14 claims:

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<u>Number & Name of Claim</u>	<u>Longitudinal Tensile Strength Required by UL 1285</u>	<u>Longitudinal Tensile Strength Measured in Sample of J-M PVC Pipe</u>	<u>Independent Laboratory That Performed the Test</u>	<u>Test Date</u>
Q00-H-41 Ferguson Cities Supply Brigman Construction	7,000 psi	Hobbs B: 6,600 psi	Law Engineering and Environmental Services, Inc.	09/28/00
Q00-H-14 Tec Utilities	7,000 psi	Sample 2: 6,680 psi Sample 3: 6,750 psi Sample 4: 6,940 psi	Modern Industries, Inc.	10/31/00
Q02-J-40 Westgate Resorts	7,000 psi	6,833 psi	Bodycote Broutman, Inc.	10/01/02
Q05-C-08 Sheldon	7,000 psi	Sample 1: 6,777 psi Sample 2: 6,775 psi	CRT Laboratories	6/9/05

66. In his Internal Recommendation and/or Authorization ("IRA") advising J-M on how it should handle the Sheldon claim referenced in the chart above, Relator noted that: "CRT conducted testing on the pipe and found that the tensile strength of the pipe was below that

1 required by the UL Listing Mark on the pipe on all samples tested.” Exhibit 10, incorporated
2 herein. Because of the pipe’s substandard longitudinal tensile strength, Relator recommended that
3 J-M offer the customer a settlement of \$30,000. Id.

4 67. Cheng disagreed with Relator’s recommendation and instructed Relator to “find a
5 way to deny the claim and follow his thoughts, that J-M is not responsible even if we fail the test,
6 and offer alternative theories as to the cause of failure for this case.” Exhibit 11 (Relator’s notes
7 dated 11/1/05), incorporated herein. In his conversation with Relator, Cheng also stated that he
8 “knew that probably half of our pipe did not meet this requirement of UL [UL 1285 longitudinal
9 tensile strength] and for all of our pipe to meet the standard we would have to be perfect in
10 production and we could not always do that.” Id.

11 **3. Results of Internal LTS Testing of J-M’s 30- and 36-Inch Big Blue Pipe**

12 68. Beginning in approximately 1999 with the opening of its new plant in Adel,
13 Georgia, J-M added two new products to its Big Blue PVC pipe product line. J-M began
14 manufacturing Big Blue PVC pipe with a pressure rating of 165 psi in both the thirty- and thirty-
15 six-inch sizes in its Adel, Georgia and Fontana, California plants. Shortly after starting to
16 manufacture these two products, J-M sent specimens from both pipes to an outside laboratory for
17 LTS testing to see if they could qualify for UL listing. However, all of the specimens failed to
18 meet the minimum longitudinal tensile strength of 7,000 psi required by UL 1285.

19 69. Once it established a customer base for these two products, J-M introduced a
20 second pressure class – one with a pressure rating of 125 psi – in both its thirty- and thirty-six-inch
21 Big Blue PVC pipe. Again, J-M subjected samples from these two new products to LTS testing at
22 an outside laboratory, and all of the samples had tensile strengths below 7,000 psi. Thereafter, J-
23 M continued to test the LTS of its thirty- and thirty-six-inch Big Blue PVC pipe and received
24 failing results. Without a passing result, J-M was unable to approach UL about qualifying these
25 products, and they did not have a UL Mark until after the acquisition of PW Eagle.

26 70. Since J-M’s thirty- and thirty-six-inch Big Blue PVC pipe is made using the same
27 materials, equipment, and processing as all of J-M’s UL-listed Big Blue and Blue Brute pipe, the
28 substandard longitudinal tensile strengths reported on the thirty- and thirty-six-inch Big Blue pipes

1 are representative of the longitudinal tensile strengths of all J-M UL-listed pipe. Like the results
2 of other J-M internal LTS testing and its claims testing, the failing results for its thirty- and thirty-
3 six-inch Big Blue pipe are further proof that J-M's cost-cutting measures of substituting inferior
4 ingredients in its J-M 90 compound, accelerating its production rates, and improperly tooling its
5 extruders have reduced the longitudinal tensile strength of its PVC pipe.

6 **B. J-M PVC Pipe Does Not Meet UL's Radial Tensile Strength Requirement, as**
7 **Demonstrated by the "No Thickened Section" Project**

8 71. In August 2003, Relator proposed a change to the bell design of J-M's Blue Brute
9 and Big Blue PVC pipe. The two ends on a length of PVC pipe are called alternately the barrel
10 end and the bell end. Under J-M's existing design, the bell end had a greater wall thickness than
11 the remainder of the pipe. To make the bell walls, the extruder had to be slowed down and
12 additional material added to increase the wall thickness. Under Relator's proposal, dubbed the
13 "No Thickened Section" Project, the bell wall would not be thickened and would have the same
14 dimensions as the remainder of the pipe, thereby allowing the extruder to run at a nearly
15 continuous speed, increasing output and reducing the amount of material needed per length of
16 pipe.

17 72. Relator found support for his proposed design change in the AWWA standards
18 governing PVC Pipe for Water Transmission and Distribution, AWWA C900 and C905. Under
19 Section 4.3.2.2 of both AWWA C900 and C905, the pipe's bell end must meet one of two
20 requirements. It must have the same wall thickness ratio as the barrel of the pipe, or it must be
21 tested to ensure that the joint assembly qualifies for a HDB category of 4,000 psi. See Exhibit 12,
22 incorporated herein. Whereas longitudinal tensile-strength testing measures the tensile strength of
23 the lengthwise portion of the pipe from end to end, HDB testing is one of several ways of
24 measuring the tensile strength of the radial, circular, or hoop section of the pipe. Based on this
25 Section, Relator concluded that the thickened bell could be omitted from the pipe design so long
26 as a joint manufactured from the thinner bell could meet the required HDB category of 4,000 psi.

27 73. In his Project Initiation Form dated October 28, 2003, Relator estimated that by
28 omitting the thickened bell section of its two most popular products, Blue Brute and Big Blue, J-M

1 would save \$3,000,000 a year in materials costs alone, not to mention the additional efficiencies to
2 be gained from not having to slow down its extruders and running them at a continuous speed.
3 See Exhibit 13, incorporated herein. Other managers, including Fassler, extolled the potential
4 benefits of a "No Thickened Section" pipe. In an email to Hwang dated September 3, 2003,
5 Fassler wrote: "The potential benefits are large: significantly reduced material usage; greatly
6 reduced bell-end forming scrap; easier bell-end forming; better bell-end appearance." Exhibit 14,
7 incorporated herein. On December 8, 2003, Walter Wang approved the "No Thickened Section"
8 Project with a budget of \$65,000 to cover the costs of designing and developing the new bell end
9 and performing the various tests needed to gain UL listing. See Exhibit 13.

10 74. Since the thinner bell wall involved only a change in the pipe's design, as opposed
11 to its materials or processing, J-M did not have to undergo many of the Performance Tests in UL
12 1285, including the LTS Test, to qualify the newly designed pipe for UL listing. Instead, to
13 qualify the new design, UL required J-M to pass the following three strength tests, each of which
14 measures the radial tensile strength of the newly designed bell end of the pipe: (1) a shortened
15 HDB Test (2,000 hour test); (2) Sustained Pressure Test (1,000 hour test); and (3) Quick Burst
16 Test (60 second test).

17 75. Since the newly designed, no-thickened-section pipe was made from the same
18 materials and process as the existing thickened-section pipe, J-M experienced many of the same
19 problems with the new pipe as it had with the existing pipe. For instance, J-M's three cost-cutting
20 practices (substitution of inferior materials, accelerated production rates, and improper
21 maintenance and tooling of its extruders), which caused J-M's existing pipe to fail the LTS Tests a
22 majority of the time, also caused J-M to fail many of the above-referenced radial strength tests on
23 the newly designed, no-thickened-section pipe.

24 76. In January 2006, after beginning production on no-thickened-section pipe, J-M
25 tested at least one sample of current production pipe (four-inch Dimension Ratio ["DR"] 18 and
26 four-inch DR 25 pipe) from all of its plants. The results ranged from 6,670 – 7,060 psi for the DR
27 18 pipe and 6,660 – 6,680 psi for the DR 25 pipe. Fassler concluded that: "The apparent
28 longitudinal tensile strength of four-inch DR 18 & DR 25 pipe at all facilities is below the desired

1 level of 7,150 psi.” Exhibit 54, incorporated herein. In July 2006, J-M tested three runs of its 4”
2 DR 25 pipe from Fontana. Each of the three runs failed LTS, with results ranging between 6,550
3 psi and 6,680 psi.

4 77. These failures, arising from the degrading of the manufacturing materials process,
5 have resulted in a vastly different product than that manufactured by J-M’s predecessor company,
6 Johns-Manville. In 1974, LTS testing of Johns-Manville’s pipe ranged from 7,560 – 8,765 psi,
7 and always exceeded the desired level of 7,150 psi. By contrast, tests by J-M show results ranging
8 from 6,349 – 7,060, nearly always below the desired level.

9 78. To gain UL listing for the new pipe design in the face of such failures, J-M resorted
10 to a number of fraudulent practices, including without limitation:

11 (1) specially producing the UL specimens using higher quality ingredients and reduced
12 production rates that are not representative of J-M’s actual materials and process,
13 including:

14 (a) changes to the extrusion process, such as: (i) increasing the shear/torque on the
15 extruder to work the compound more thoroughly, (ii) slowing down the extruder speeds,
16 and (iii) replacing used screw and barrel with new ones;

17 (b) changes to specimen preparation, including: (i) changing the directional cut from
18 tangential to radial, and (ii) changing the dimensions to equal the thickness of the pipe
19 wall; and

20 (c) changes to compound, including: (i) using JM-90R compound instead of JM-90,
21 (ii) eliminating the use of Luxco brand multi-wax, and (iii) using single-batch
22 compounding instead of double-batch;

23 (2) concealing failing test results from UL;

24 (3) where early results indicated a specimen ultimately would fail, stopping long-term tests
25 before they were completed and substituting new specimens; and

26 (4) making multiple specimens from one lot, and testing a subset of the specimens in
27 advance to ensure that when the remaining specimens were tested for UL, they would pass
28 the tests.

1 **1. HDB Testing**

2 79. As discussed above, the two AWWA standards governing PVC pressure pipe –
3 AWWA C900 and AWWA C905 – both state at Section 4.3.2.2(b) that the joint assemblies of the
4 pipe's bell must "qualify for a hydrostatic design basis (HDB) category of 4,000 psi (2,758 MPa)
5 when tested in accordance with ASTM D2837 as modified in ASTM D3139." Exhibit 12. ASTM
6 D2837, in turn, provides the test method for obtaining the pipe's HDB. See Exhibit 15,
7 incorporated herein.

8 80. The purpose of HDB testing is to determine the long-term radial strength
9 characteristics of PVC pipe. Broadly described, HDB testing is performed by placing 10
10 specimens under varying degrees of pressure and recording the point in time, up to a maximum of
11 2,000 hours, when the joint fails. In a November 14, 2003, email to Hwang, Fassler described the
12 HDB test as "the most stringent test of PVC pressure pipe quality." Exhibit 16, incorporated
13 herein. Because HDB testing lasts 83.3 days and requires special equipment, it must be performed
14 at an independent, certified testing laboratory. Given the length of the test, UL does not require
15 that a UL representative be present to observe the testing.

16 81. Once the testing is complete, Section 5.4 of ASTM D2837 requires that the
17 following three calculations be performed to determine a pipe's HDB: (1) the hydrostatic strength
18 at 100,000 hours; (2) the hydrostatic strength at 50 years; and (3) the percent of circumferential
19 expansion. Each of these calculations measures the pipe's long-term hydrostatic strength. To
20 obtain an HDB category of 4,000 psi, the smallest of these three values must have a long-term
21 hydrostatic strength between 3,830 and 4,800 psi. Exhibit 15 (at Table 1). However, in Note 7,
22 ASTM D2837 notes that the expansion measurement is not required in North America because
23 expansion strengths taken from North American stress-rated PVC materials have not been found
24 to be "the limiting factor," *i.e.*, the lowest of the three values described above.

25 82. From the beginning of the "No Thickened Section" Project, many of J-M's Quality
26 Control managers expressed concern about the ability of J-M's pipe, thickened or not, to pass the
27 required HDB category of 4,000 psi. In a November 14, 2003 email to Hwang, among the
28 challenges J-M needed to overcome for the Project to succeed, Fassler listed first J-M's

1 “[i]ncreasing failure rates in long-term pressure tests.” Exhibit 16, incorporated herein. Fassler
2 also cited three other obstacles: (1) the recent failure of J-M’s pipe to pass sustained pressure tests
3 at NSF, which provides product testing and certification services for products in contact with
4 potable water, (2) failing HDB testing, and (3) numerous joint specimen failures “where the pipe
5 burst before the joint leaked.” Id.

6 83. Given its history of problems with the tensile strength of its PVC pipe, J-M was
7 dubious that no-thickened-section pipe produced at random on the same machinery using the same
8 materials and process as its existing pipe would pass the HDB testing. To increase its odds of
9 passing, J-M directed the Plant Managers preparing the no-thickened-section specimens to
10 monitor the results of the daily Quick Burst Tests being performed on its existing pipe and only
11 produce the specimens when those results were favorable.

12 84. In a December 9, 2003 email, Fassler, who was heading up specimen preparation
13 for the Project, informed Stephen Yang, the Plant Manager at J-M’s Fontana, California plant, that
14 the Quick Burst Test data “is very useful in identifying pipe that has an elevated chance of failing
15 HDB.” Exhibit 17, incorporated herein. Fassler instructed Stephen Yang to consult that data in
16 choosing when to produce the specimens. Id. (“We need to test the pipe before testing the joint
17 because the pipe will limit the strength of the joint.”) Similarly, in another email of the same date,
18 Hwang notified Stephen Yang that: “We have to have a good test result within J-M before we send
19 out for HDB test.” Id.

20 85. Once the initial specimens were produced (using the Quick Burst data to increase
21 its odds of passing HDB), J-M sent specimens of its no-thickened-section Blue Brute pipe (in size
22 four-inch DR 18) to Charles Stanley, the Director of UL in Garland, Texas, for preliminary
23 testing. Before incurring the cost of 2,000 hours of testing as required by full-scale HDB testing,
24 J-M instructed Mr. Stanley to first subject 10 specimens to a shortened HDB test of only 100
25 hours to give J-M a preview of how the pipe would likely perform.

26 86. The results of this testing, which J-M managers dubbed “Accelerated HDB
27 Testing,” were mixed. Approximately half of the 10 specimens had hydrostatic strengths that
28 were well below the confidence limit and caused the entire lot to fail the HDB test. Exhibit 18,

1 incorporated herein, is a copy of the notes Relator took as Mr. Stanley reported on the results of
2 the HDB testing. Under item number three, Relator notes that the Blue Brute specimen in size
3 four-inch DR 18 failed the confidence limit under the Accelerated HDB testing. Id.

4 87. Notwithstanding these results, J-M instructed Mr. Stanley to begin the full-scale
5 HDB testing. Early in the testing, J-M began to receive reports from Mr. Stanley that many of the
6 specimens were exhibiting excessive swelling. While ASTM D2837 allows specimens to expand
7 a maximum of five percent during HDB testing, several of J-M's specimens had swelled by as
8 much as 33 percent. Having never seen such swelling before, Mr. Stanley sent several of the
9 swollen specimens to Fassler and Relator for their review. (At the time Relator left J-M in
10 November 2005, one of the swollen pipe specimens – a Blue Brute pipe in size four-inch DR 18 –
11 was still in J-M's literature room.)

12 88. Despite the fact that these specimens clearly showed a serious problem with
13 excessive swelling, J-M continued to rely on Note 7 of ASTM D2837 (which provides that the
14 expansion measurement is not required where the five percent expansion strengths are not the
15 limiting factor) and refused to consider the expansion measurement in determining HDB. From
16 the degree of swelling, J-M was aware that if UL had calculated it, the expansion measurement
17 would have been the lowest value of the three calculations for determining long-term hydrostatic
18 strength and would have caused the pipe to fail HDB. Instead, J-M continued to take only the
19 lower of the first two calculations (hydrostatic strength at 100,000 hours and hydrostatic strength
20 at 50 years) when calculating HDB.

21 89. Even with the advantage gained by omitting the expansion measurement, J-M
22 repeatedly failed the HDB test when using the lower of the hydrostatic strength at 100,000 hours
23 and at 50 years. Relator recalls four instances in which Blue Brute specimens failed HDB testing.
24 Of the four sets of failing specimens, two were in size eight-inch DR 18, one was four-inch DR
25 18, and one was eight-inch DR 14. See Exhibit 18. J-M had no reports documenting the failing
26 results because it had instructed Mr. Stanley to prepare reports only for the passing results and to
27 report the failing results orally. Relator recorded many of these failing results on a piece of paper
28 as Mr. Stanley reported them to him. Id.

1 90. As discussed above, per ASTM D2837 (as modified by ASTM D3139), HDB
2 testing is performed using 10 specimens that are subjected to varying pressures for varying lengths
3 of time up to 2,000 hours. During its HDB testing at UL, J-M asked Mr. Stanley to notify it when
4 early indications revealed that one or more of the 10 specimens, if tested to completion, would
5 cause the overall HDB test to fail. In such instances, J-M instructed Mr. Stanley to stop the testing
6 of those particular specimens (in order to avoid getting any bad data points) and substitute in a
7 new specimen for the continuation of the HDB testing.

8 91. If the substitutions were unable to produce a passing result and the 10 specimens
9 produced a failing HDB, J-M instructed its managers at the plants preparing the specimens to
10 destroy all other specimens made from the failing lot. As was the case with the initial set of
11 specimens, J-M had its Quality Control staff, including Fassler and Armondo Martinez
12 ("Martinez"), Quality Control Supervisor at the Fontana, California Plant, oversee the production
13 of additional specimens. To increase the odds of getting a passing result, J-M slowed its regular
14 production rates and adjusted its typical temperatures and torque to allow for optimum processing
15 of the specimens. To reduce the excessive swelling, J-M replaced the lower grade multiwax
16 ordinarily used in its J-M 90 compound with a high-quality calcium stearate.

17 92. On July 5, 2004, after seven months of testing, J-M got its first passing result for
18 HDB with tests performed on Blue Brute specimens in size eight-inch DR 18. However, one
19 month later on August 31, Fassler wrote an email to Relator stating that: "The HDB testing so far
20 has revealed material issues (excessive swelling) and workmanship issues (mid-wall void). The
21 chances of two consecutive samplings passing HDB appear to be less than 50%." Exhibit 19,
22 incorporated herein. As of August 2004, seven of eight samplings of no-thickened pipe had failed
23 HDB testing. There were at least two more failures between December 2004 and December 2005.
24 According to Fassler, the pipe failed testing seven times in a row and passed on the eighth try only
25 due to luck of the draw. Eight months later, in an IRA recommending that J-M proceed with the
26 production of no-thickened-section pipe, Fassler summarized the HDB testing as follows: "J-M
27 submitted DR 14 & DR 18 joint samplings to Universal Laboratory for HDB tests per ASTM
28 D3139-98. Some early samplings failed. Later submittals passed – confirming that with suitable

1 materials and workmanship the design meets the requirements.” Exhibit 20, incorporated herein.

2 93. By January 2005, after many intermittent failures, J-M had achieved passing HDB
3 results in all three pipe sizes that UL required for its qualification of the new pipe design. J-M
4 provided the passing results to UL. In so doing, however, J-M concealed from UL the following
5 material facts: (1) J-M had conducted other HDB tests on each of these pipe sizes, all of which
6 had failed; and (2) to achieve the passing results, J-M had consulted Quick Burst Test results in
7 deciding when to produce the specimens, altered its regular materials and process, and
8 prematurely stopped testing of specimens that would have produced failing results and substituted
9 new specimens in their place.

10 **2. Sustained Pressure Test**

11 94. Another test that measures the long-term radial tensile strength of PVC pipe is the
12 “Sustained Pressure Test” or “1,000 Hour Test.” Unlike HDB testing which measures 10
13 specimens at varying pressures for varying lengths of time up to 2,000 hours, the Sustained
14 Pressure Test measures five specimens at the same test pressure for 1,000 hours. To pass, the
15 specimens must not “rupture, permanently distort, or weep” when subjected to the specified
16 pressure for 1,000 hours. Exhibit 6. This test is far less onerous than the HDB test and provides
17 little to no information about the radial tensile strength of the product being tested.

18 95. As described above, Sustained Pressure Testing is one of the three strength tests
19 UL required J-M to perform to qualify its no-thickened-section pipe for UL listing. The
20 requirements for Sustained Pressure Testing appear in Section 18 of UL 1285. Like LTS Testing,
21 Sustained Pressure Testing is one of UL’s Performance Tests and UL requires that the specimens
22 tested must be representative of the manufacturer’s materials, design, and processing. Like HDB
23 Testing, Sustained Pressure Testing requires special equipment and is typically performed by an
24 independent, certified laboratory.

25 96. In outlining its requirements for qualifying the no-thickened-section pipe, UL
26 informed J-M that it would observe J-M’s Sustained Pressure Testing. Because of the length of
27 the test, which lasts 1,000 hours/41.6 days, UL only required a UL observer to be present at the
28 beginning, middle, and end of the testing.

1 97. Because UL would be observing portions of the Sustained Pressure Tests, J-M
2 wanted to ensure that the specimens it sent Charles Stanley at UL for testing would actually pass
3 the test. To accomplish this, J-M made multiple specimens from each 20-foot section of no-
4 thickened-section pipe it specially produced. J-M subjected the first 10 specimens from each lot to
5 the HDB testing described above. If the specimens produced a passing HDB result, J-M would
6 then send other specimens from that same lot to UL for the Sustained Pressure Testing. Since the
7 specimens had passed HDB testing, which is the most demanding test of pipe quality, J-M could
8 be confident that other specimens from that lot would also pass the less onerous Sustained
9 Pressure Testing.

10 98. Once it had passed HDB Testing for a particular size of non-thickened-section pipe,
11 J-M sent to UL for Sustained Pressure Testing additional specimens from the same lot as the
12 passing HDB specimens. In that way, J-M was able to pass all of the Sustained Pressure Tests
13 witnessed by UL observers for the two pipe sizes UL required -- Blue Brute four-inch DR 14 and
14 four-inch DR 18.

15 99. At no time during the course of these Sustained Pressure Tests did J-M disclose to
16 the UL observer that J-M had specially produced each of the test specimens using materials and
17 processing that were not representative of J-M's actual manufacturing process. J-M also
18 concealed from UL the fact that the test specimens had not been chosen at random but instead
19 were selected from lots that had produced passing HDB test results.

20 **3. Quick Burst Test**

21 100. The third and final strength test that UL required for J-M to qualify its no-
22 thickened-section pipe was the Quick Burst Test. The Quick Burst Test is designed to measure the
23 short-term radial strength characteristics of the pipe. The requirements for the Quick Burst Test
24 are contained in Section 4.3.3.2 of the AWWA C900 Standard. Broadly described, Section 4.3.3.2
25 provides that a pipe specimen must be able to attain a hydrostatic stress of 6,400 psi within 60 to
26 70 seconds of being pressurized. See Exhibit 12.

27 101. The Quick Burst Test is a routine quality control test that J-M is required to
28 perform daily at each of its plants at the start-up of the extruder, every eight hours, and following

1 any change in operating conditions. Given the frequency with which this test is required to be
2 performed, J-M has test equipment in each of its plants and performs the tests itself.

3 102. In outlining the requirements needed to qualify J-M's no-thickened-section pipe,
4 UL informed J-M that it would come to J-M's plant to observe each of the Quick Burst Tests on
5 the various sizes of its Blue Brute DR 14 and DR 18 no-thickened-section pipe. Because a UL
6 representative would be observing the tests, J-M again took steps to try and ensure that the
7 specimens would pass while UL was watching.

8 103. Because the Quick Burst Tests were the last of the three strength tests required for
9 UL listing, at the time it performed the Quick Burst Tests, J-M had already received passing
10 results in both the HDB and Sustained Pressure Testing. In choosing specimens for the Quick
11 Burst Testing, J-M selected specimens from the same lots as the specimens that had produced the
12 passing results on the HDB and Sustained Pressure Tests.

13 104. For added insurance, J-M also ran some internal Quick Burst Tests on a few of the
14 specimens from the selected lots to be doubly certain that the specimens would pass while UL
15 watched. J-M admitted pre-screening for 7,200+ psi Quick Burst results, despite having lowered
16 its internal requirement to 6,400 psi for normal production pipe. There was extensive R&D
17 involvement in preparing the sample pipe for these preliminary tests. Moreover, J-M manipulated
18 the testing by replacing test specimens, terminating failing tests early, and stockpiling pre-
19 screened lots. Using this approach, J-M eventually passed the Quick Burst Tests for all but one of
20 the sizes of its Blue Brute DR 14 and DR 18 no-thickened-section pipe. In the case of the Blue
21 Brute specimens in size twelve-inch DR 14, however, J-M failed four consecutive Quick Burst
22 Tests while UL observed before ultimately getting a passing result. On October 26, 2005, Fassler
23 told Relator that J-M had obtained the passing result only by using a thickened-, instead of a no-
24 thickened-, section pipe. See Exhibit 21, incorporated herein. According to Fassler, the pipe was
25 measured "while UL wasn't really paying attention and the test pressure calc[ulation] wasn't
26 properly computed on the accurate measurements." Id.

27 105. In short, J-M gained UL listing for the new design in size twelve-inch DR 14 using
28 a specimen from the old design. For the HDB testing of no-thickened-section pipe (18 total tests),

1 the passing rate of the test samples was no greater than 64% and more accurately 50% at best. UL
2 did not see results for all sizes, but only three JM-selected passing results. J-M did not conduct
3 quality testing or investigation in light of the high number of failures. It took six months for J-M
4 to obtain passing Quick Burst results on all of its no-thickened-section pipe. Of 19 total tests
5 witnessed by UL, J-M failed nine (at the 6,400 psi AWWA requirement). Against J-M R&D
6 personnel recommendations, Walter Wang ordered all plants to produce no-thickened-section pipe
7 in all sizes of DR 18 at a time when the HDB pass rate was 46% and the Quick Burst pass rate was
8 60%. J-M did not maintain any improved processes utilized to make no-thickened-section pipe
9 that passed HDB.

10 106. To prevent UL from investigating the real source of these four failures (*i.e.*, the
11 various cost-cutting measures and their negative effect on tensile strength), J-M blamed the four
12 failures on illusory problems with the test equipment. Specifically, J-M attributed the failures to
13 the end caps that are inserted into either end of the specimen to create a seal so it can be
14 pressurized. J-M told Jerry Kirkpatrick, UL's representative observing the tests, that the end caps
15 had not sealed properly, were too old, and were not good for the new pipe design. All of these
16 statements were false.

17 107. At no time during the Quick Burst testing did J-M inform UL's Jerry Kirkpatrick
18 that it had prepared the specimens using materials and production rates that are not representative
19 of J-M's manufacturing process or that it had not chosen the specimens at random but had instead
20 selected them based on the fact that they came from lots that had already passed the HDB Test and
21 Sustained Pressure Testing. Nor did J-M inform UL that it passed the fifth test only by using the
22 original thickened-section pipe design (and an improperly calculated test pressure) as opposed to
23 the new design. J-M also concealed from UL the real reason for the four tensile-strength failures,
24 *i.e.*, that J-M's cost-cutting measures had decreased the tensile strength of its pipe.

25 **4. J-M Authorizes Production of No-Thickened-Section Pipe**

26 108. In early 2005, shortly after he began raising concerns with J-M management about
27 the excessive swelling and failing HDB test results of the no-thickened-section pipe and expressed
28 doubts about the tensile strength of J-M's existing PVC pipe (which was made with the same

1 process and compound), Relator was removed from the No-Thickened-Section Project. Over the
2 intervening year before the Project was completed, Fassler and Yang continued to keep Relator
3 apprised of the status of the Project, including the results of all of the testing performed after
4 Relator was removed.

5 109. In the Spring of 2005, upon learning that J-M managers were about to recommend
6 that J-M start to produce the no-thickened-section pipe in spite of all the failing results, Relator
7 raised a series of objections to J-M management. Among other things, Relator cautioned several
8 J-M managers that, at a minimum, the newly designed pipe should be produced only at the two
9 plants that produced the passing results for UL and those two plants should use the same slow
10 production rates and higher quality materials that they had used to specially produce the passing
11 samples. Relator also insisted that, once it was produced and before it shipped, the new pipe must
12 be subjected to a series of quality control tests to ensure its conformance to the tensile strength
13 requirements. Given the force and strength of Relator's objections, some of Relator's managers
14 ultimately were persuaded to include Relator's precautions in their recommendations for the
15 production of the new no-thickened-section pipe.

16 110. On April 29, 2005, Fassler prepared an IRA recommending that J-M begin
17 preparations to produce the no-thickened-section pipe starting on May 16. See Exhibit 20. By
18 April 29, UL had given J-M oral approval to start producing on May 16 the no-thickened-section
19 pipe in all sizes of Blue Brute DR 14 and DR 18, except for twelve-inch DR 14. Because J-M had
20 received so many failing test results in the process of obtaining the UL listing, Fassler was careful
21 to point out that the no-thickened-section pipe passed the tests only because of "suitable materials
22 and workmanship" and implied that those same materials and level of workmanship should be
23 used as J-M began to produce the newly designed pipe.

24 111. Lin and Kaushal Rao ("Rao"), J-M's Director and Assistant Director of Production,
25 were equally cautious in their approvals of the new pipe. Both men gave their approval on the
26 condition that J-M take certain precautions to protect against the tensile strength failures that the
27 UL qualification testing had revealed. In the block provided on the IRA for his authorization and
28 signature, Lin wrote: "In consideration of several test failures to non-thick-section project do

1 propose to have PWI [J-M's Wilton, Iowa plant] & PFO [J-M's Fontana, California plant] to
 2 produce non-thick-section product first. After both plants successfully produce C-900 product,
 3 then do will apply to all plants." Exhibit 20. Similarly, in his signature/authorization block, Rao
 4 wrote: "R&D should also concentrate on one plant & test the pipe produced under different
 5 conditions such as regrind material used in prod.; various speeds & production rates for production
 6 & test the pipe on a continuous basis." Id.

7 112. On May 16, 2005, ignoring the reservations expressed by the three managers, J-M's
 8 President Walter Wang authorized production of no-thickened-section pipe for J-M's Blue Brute
 9 PVC pipe in size DR 18 at all of J-M's 11 PVC-producing plants starting June 1, 2005. See
 10 Exhibit 20. Despite explicit advice from Fassler, Lin, and Rao, Walter Wang did not limit the
 11 production to the two plants that had successfully produced the passing specimens. Nor did he
 12 seek to ensure that the pipe would be produced using the same materials and processing that J-M
 13 had used in producing the qualifying specimens or make any provision for testing the new pipe to
 14 monitor quality as it was being produced. Despite the fact that its new pipe had failed many of the
 15 qualifying tensile strength tests, J-M began manufacturing the new pipe without implementing a
 16 single safeguard. No-thickened-section pipe manufactured and tested after Luxco-multiwax was
 17 phased out failed nine of 19 UL-witnessed Quick Burst Tests. Post-Luxco multiwax experienced
 18 at least two HDB failures in seven tests. J-M did not discontinue Luxco multiwax in IPS/ASTM
 19 D2241 pipe despite J-M's concerns with its use in the identically produced AWWA pipe.

20 **5. UL's Qualification of J-M's No-Thickened-Section Pipe**

21 113. On May 19, 2005, UL issued J-M its formal written "Notice of Authorization to
 22 Apply the UL Mark." Exhibit 22, incorporated herein. In this authorization, UL expressly states
 23 that its authorization to apply the UL Listing Mark extends only to those products that are
 24 constructed in a manner "identical to the subject models, which were submitted to UL for this
 25 investigation." Id. The letter goes on to say: "Products that bear the UL Mark shall be identical to
 26 those that were evaluated by UL and found to comply with UL's requirements. If changes in
 27 construction are discovered, appropriate action will be taken for products not in conformance with
 28 UL's requirements and continued use of the UL Mark may be withdrawn." Id.

114. J-M began producing its Blue Brute DR 18 pipe on June 1, 2005. Although UL also had authorized J-M to apply the UL Mark to its Blue Brute PVC pipe in all sizes of DR 14 except for twelve-inch, J-M decided to wait until it received UL authorization for the remaining size before it commenced production of any DR 14 pipe. In October 2005, UL provided J-M with its authorization for twelve-inch DR 14 pipe and J-M began producing all sizes of no-thickened-section DR 14 pipe immediately thereafter.

115. Having refused to adopt any of the precautions recommended by its managers, J-M began producing the new pipe using the same cost-cutting measures it had employed with its existing pipe. As the various test results revealed, pipe created using inferior ingredients, accelerated production rates, and improper tooling fails tensile strength testing a substantial percentage of the time. Had it been aware of the failing test results and J-M's tampering with the testing, UL would not have given the pipe UL listing in the first place. Similarly, UL would have withdrawn any UL listing had it known that the precautions that had been taken to produce the passing results (slowing production rates and substituting higher quality ingredients) were not being taken with the daily production of the pipe.

C. J-M's False Representations Regarding UL Listing and UL Compliance

116. Despite its knowledge (beginning at least in 1997) that a substantial percentage of its PVC pipe failed to meet the LTS requirements of UL 1285 and its knowledge (as of at least June 1, 2005) that its new no-thickened-section pipe had a similar failure rate, J-M continued to represent to its distributors and customers, including Real Parties, that its PVC pipe met the requirements of UL 1285. In its catalogs, J-M stated for both its Blue Brute and Big Blue PVC Pipe that it "is Underwriters Laboratories Listed" and has a tensile strength of 7,000 psi. Exhibit 23, incorporated herein. In one version of its website (dated 9/8/05), J-M stated that all classes of both its Blue Brute and Big Blue pressure pipe "are UL listed for water mains." Exhibit 24, incorporated herein. Except for those pipes painted purple for Reclaimed Water or green for Sewer, J-M continued to mark the outside surface of each length of its Blue Brute and Big Blue pipe with the UL Mark. See Exhibit 25, incorporated herein.

117. J-M also continued to provide certifications to its individual customers that its Blue

1 Brute and Big Blue PVC pipe had been manufactured in accordance with the requirements of UL
2 1285. Exhibit 26, incorporated herein, contains examples of certification letters J-M provided its
3 customers regarding Blue Brute's and Big Blue's compliance with the UL Standard and listing.
4 At all times relevant to this Complaint, Real Parties, like other governmental entities and water
5 distribution systems, have required that all pipes for use in underground fire service systems be
6 UL 1285 listed. Exhibit 27, incorporated herein, contains examples of specifications from various
7 government entities in which UL listing is required for pipe used in fire services. In addition to
8 requiring UL listing for PVC pipe used in fire services, many of the Real Parties, like other
9 governmental entities and water distribution systems, also require that all PVC pipe for use in their
10 water distribution mains or water transmission lines shall be approved by UL and marked with the
11 UL logo. Exhibit 28, incorporated herein, contains examples of specifications from governmental
12 entities, including some Real Parties, for UL listing of PVC pipe used in water mains and
13 transmission lines. Governmental entities, including Real Parties, often require UL listing of J-M
14 PVC pipe by requiring projects to comply with National Fire Protection Association ("NFPA")
15 Standard 24, excerpts of which are attached hereto and incorporated herein as Exhibit 43. For
16 example, the federal Department of Defense global specifications for Fire Protection Engineering
17 for Facilities require that water distribution systems be designed in accordance with "NFPA 24,
18 Installation of Private Fire Service Mains and Their Appurtenances." Exhibit 44 (Unified
19 Facilities Criteria (UFC): Fire Protection Engineering For Facilities, Sept. 26, 2006, Section 3-7,
20 "Water Distribution Systems," paragraph 3-7.1, "Distribution Mains"). NFPA 24 applies to
21 "combined service mains used to carry water for fire service and other uses." Exhibit 43 (NFPA
22 24 at § 1.1.2.). NFPA 24 requires that PVC pipe be "listed" for fire protection service and comply
23 with certain standards, such as AWWA C900. See Exhibit 43, NFPA 24 at § 3.2.4, § 10.1.1 &
24 Annex A § A.10.1.1. The requirement to be "listed" in this context means that the pipe must be
25 inspected and tested by UL and FM for fire protection. See Exhibit 43, NFPA 24 at § 3.2.4 &
26 Annex A § A.3.2.4; Exhibit 6, UL 1285 § 10.1 & § 21.1; Exhibit 49, FM 1612 §§ 1.1.1 & 1.1.2.
27 Many cities and governmental localities, including Real Parties, require NFPA 24 compliance for
28 fire protection service. See, e.g., Exhibits 27 & 52. The only means by which J-M can claim

1 compliance with NFPA 24's "fire listing" requirement are through its claims of UL listing and/or
2 FM approval (discussed *infra* ¶ 288).

3 **VI. J-M SELLS SUBSTANDARD PVC PIPE THAT IT IMPROPERLY CERTIFIES**
4 **AS MEETING CERTAIN NSF STANDARDS**

5 118. NSF is a not-for-profit, non-governmental organization engaged in standards
6 development, product certification, education, and risk-management for public health and safety.

7 119. To obtain certification under an NSF standard, the applicant must manufacture the
8 pipe to be tested according to a defined formulation. The pipe is then tested according to the
9 particular standard at issue. If the results are satisfactory, NSF authorizes use of that defined
10 formulation to manufacture pipe that can be certified as complying with the particular standard.
11 NSF also maintains a list of entities that have been authorized to designate their products as
12 meeting NSF standards and uses that list to respond to inquiries regarding whether a manufacturer
13 is NSF-compliant.

14 120. NSF Standard 14 is a performance standard that applies to both pressurized and
15 non-pressurized pipe. NSF Standard 61 is a toxicology standard that applies to potable water pipe.
16 NSF-PW is a designation J-M applied to its pipe that purported to satisfy both NSF Standard 61
17 for toxicology and NSF Standard 14 for performance.

18 121. Pursuant to NSF Standard 14, the pipes, couplings, and gaskets are all subject to
19 testing. Specifically, in addition to other strength tests, tested pipe must pass an HDB Test
20 component by achieving the HDB category of 4,000 psi. To achieve the HDB category of 4,000
21 psi, tested pipe must produce an LTHS of at least 3,830 psi.

22 122. Once NSF authorizes a manufacturer to designate a product as complying with a
23 particular NSF standard, the manufacturer may designate a commercial product as complying with
24 that standard only if the commercial product is manufactured using the same formulation and the
25 same process that was used to produce the tested samples.

26 123. Among other types of pipe, J-M manufactured PVC pipe of two different types:
27 C900 and ASTM D2241.

28 124. J-M certified that its C900 pipe complied with NSF Standard 61.

1 125. J-M certified that its ASTM D2241 pipe complied with both NSF Standard 61 and
2 NSF Standard 14.

3 126. Following successful testing of the J-M 90 compound pipe pursuant to NSF
4 Standard 61, NSF authorized J-M to designate that product, formulated with or without the use of
5 A28 paraffin wax ("A28"), as complying with NSF Standard 61.

6 127. Following successful testing of the J-M 90 compound pipe pursuant to NSF
7 Standard 14, NSF authorized J-M to designate that product, which was not formulated with A28,
8 as complying with NSF Standard 14.

9 128. A28 was not a preapproved substitute ingredient for NSF 14 performance testing.
10 In order to use A28 in NSF 14 certified products, a manufacturer must undergo testing at NSF to
11 establish qualification. J-M never submitted ASTM D2241 pipe samples containing A28 to NSF
12 for testing pursuant to NSF Standard 14, so NSF never authorized J-M to certify its ASTM D2241
13 pipe formulated with A28 as compliant with NSF Standard 14.

14 129. J-M nevertheless certified its ASTM D2241 pipe as complying with NSF Standard
15 14 by stamping the pipe with either an "NSF 14" or an "NSF PW" designation.

16 130. On August 4, 2003, an inspection conducted by NSF auditors at J-M's McNary,
17 Oregon Plant ("McNary") uncovered J-M's unauthorized use of A28 in the formulation of certain
18 of its JM-90 PVC pipe that was certified to be "NSF 14" compliant.

19 131. As a result, NSF ordered J-M not to release approximately four million pounds of
20 production pipe, which had been manufactured using A28 and was being stored at J-M's McNary
21 warehouse (the "NSF Held Pipe").

22 **A. J-M's Responded to NSF Putting Four Million Pounds of Production Pipe on**
23 **Hold at McNary by Releasing Non-Compliant Pipe and Cherry-Picking**
24 **Samples to Secure NSF Certification by Fraudulent Means**

25 132. As J-M is aware, PVC pipe specimens provided to NSF for certification testing
26 must be "representative" of the production pipe to be manufactured. To be "representative," pipe
27 specimens must be: (1) made using the same materials as in the actual pipe production; (2)
28 produced in the same quantities as in the actual pipe production; and (3) formed using the same

1 process as the manufacture of the actual pipe production. Offering pipe to NSF for certification
2 testing that is not representative of the actual pipe production violates both the NSF guidelines
3 generally and NSF Standard 14 specifically.

4 133. The purpose of the “representative” requirement is to prevent companies that
5 manufacture PVC pipe, such as J-M, from manipulating the ingredients, formulae, or process
6 when they manufacture specimen pipes for certification testing. In addition, these companies,
7 including J-M, are also expressly prohibited from cherry-picking pipe specimens for testing by
8 NSF when the companies know such test specimens are not representative of the production pipe
9 they manufacture.

10 134. Only pipe that has the same ingredients, the same formula, and has been made
11 using the same manufacturing process as specimen pipe certified by NSF as meeting the NSF
12 Standard 14 requirements may be marked and sold as NSF Standard 14 pipe.

13 135. After NSF learned from its audit that A28 was being used as an ingredient in J-M
14 pipe, the NSF auditor selected a one-inch ASTM D2241 pipe specimen for testing from J-M’s
15 McNary plant. On information and belief, this one-inch pipe specimen was production pipe
16 manufactured at McNary in the normal course of its production operations.

17 136. On August 18, 2003, NSF representative Nasrin Kashefi (“Kashefi”) emailed
18 Hwang and Yang, noting the sample data for the one-inch pipe did “not look good at all.” Exhibit
19 55, incorporated herein.

20 137. On August 20, 2003, Kashefi emailed Hwang and Yang, noting the sample data for
21 the one-inch pipe “still [did] not look good.” Exhibit 56, incorporated herein.

22 138. On August 29, 2003, Kashefi emailed Hwang and Yang, noting the sample data
23 produced by the ongoing HDB test indicated that the one-inch pipe would not meet the
24 requirements to pass the HDB test.

25 139. An email sent on September 15, 2003 from Kashefi to Yang noted that the results
26 for the one-inch pipe were still not favorable.

27 140. As of September 15, 2003, data provided by NSF to J-M representatives indicated
28 that the one-inch pipe had an LTHS of 3,631 psi, and was thus unlikely to reach the requisite

1 LTHS rate of 3,830 psi upon completion of the HDB test.

2 141. On September 22, 2003, J-M attempted to stop NSF testing of the one-inch pipe by
3 advising NSF that there was "foreign material" in the pipe being tested. J-M requested that NSF
4 permit J-M to submit a different sample of one-inch pipe for testing. NSF apparently denied this
5 request.

6 142. On September 23, 2003, NSF issued a report on the one-inch representative sample
7 selected by the NSF auditor. The report concluded that the one-inch pipe sample had an LTHS of
8 3,608 psi, and therefore had failed to meet the requirements of NSF Standard 14.

9 143. As a result of the obvious financial implications of not being able to sell four
10 million pounds of pipe, J-M had a strong incentive to convince NSF that the NSF Held Pipe sitting
11 in its warehouse did in fact meet the NSF Standard 14 requirements, and J-M promptly undertook
12 steps to try to make this happen.

13 144. Upon learning of the hold implemented by NSF, J-M immediately dispatched
14 Fassler to McNary to conduct an investigation.

15 145. Fassler reported to senior management of J-M that, among other things, the C900
16 pipe made with A28, though not subject to NSF Standard 14, was not compliant with
17 manufacturing standards, but it had, nonetheless, been placed in the "shippable" inventory at
18 McNary.

19 146. Fassler went on to report that he was unable to locate all of the rejected units of
20 pipe made with A28.

21 147. On information and belief, the rejected pipe that Fassler was unable to locate in the
22 warehouse had been shipped to customers.

23 148. Fassler reported to senior management that all production pipe – both C900 and
24 ASTM D2241 varieties – at McNary was failing very basic sustained pressure tests and, further,
25 that production pipe showed defects in the form of pipe burning and non-conforming bell-ends.

26 149. Despite Fassler's report setting forth numerous, severe problems in the production
27 of pipe at McNary, on August 6, 2003, Hwang sent an email to Kashefi requesting the release of
28 all C900 production pipe sitting in the McNary warehouse – approximately 1-1.5 million pounds

1 of pipe. J-M told Kashefi that because C900 pipe was not governed by NSF Standard 14, NSF
2 had no basis to restrict its sale.

3 150. Though technically accurate, C900 pipe is still required to achieve the HDB
4 category of 4,000 psi by producing an LTHS of at least 3,830 psi in compliance with NSF
5 Standard 61. NSF Standard 61, in contrast to NSF Standard 14, does not require additional testing
6 to ensure the HDB category was satisfied despite the introduction of A28 to the pipe formulation.

7 151. As a result, on August 7, 2003, with NSF's approval, J-M released 1.5 million
8 pounds of the C900 pipe for sale, despite knowing from Fassler's investigation and J-M's own
9 Quick Burst testing that the C900 pipe did not conform to basic industry standards.

10 152. Even after the release of the C900 pipe, there still remained 2.5 million pounds of
11 ASTM D2441 pipe subject to NSF regulation (the "Remaining NSF Held Pipe").

12 153. On information and belief, to this day, not one entity that purchased C900 pipe
13 from J-M has been informed by J-M that: (1) Fassler's report found that production pipe produced
14 at McNary was of inferior quality; (2) test results from the one-inch pipe selected by NSF failed
15 HDB testing; or (3) J-M attempted to cherry-pick pipe in an attempt to get the Remaining NSF
16 Held Pipe released, as set forth in more detail below.

17 154. In addition to the reports J-M received from NSF and Fassler in the beginning of
18 August as set forth in paragraphs 145-148, *supra*, J-M received additional reports from Fassler in
19 late August that McNary's Quick Burst Test equipment was failing to properly identify pipe with
20 compromised integrity – a point that Hwang acknowledged, stating that test equipment at McNary
21 had needed to be upgraded "for a long time," and that the plant had lacked a meaningful quality
22 control test "for a long time." Exhibit 57, incorporated herein.

23 155. Despite receiving the aforementioned updates and reports from NSF about the
24 failing test specimen, and despite Fassler's reports and Hwang's acknowledgement of serious
25 problems with the production pipe at McNary, on September 2, 2003, Yang emailed NSF
26 representative Kashefi, copying Hwang, and sought the release of the Remaining NSF Held Pipe,
27 stating that J-M would take "full responsibility" for its release. Exhibit 58, incorporated herein.

28 156. NSF refused to authorize the release of the Remaining NSF Held Pipe and made

1 clear that J-M would need to pass certification tests on the pipe before NSF would lift its hold.

2 1. **Unable to Convince NSF to Release the Hold Absent Passing Test Results,**
3 **J-M Conspires to Supply NSF with Cherry-Picked Samples of the**
4 **Remaining ASTM D2241 Pipe**

5 157. Recognizing that NSF would not permit J-M to release the Remaining NSF Held
6 Pipe without passing test results, J-M focused its efforts on attempting to locate pipe that would
7 pass. In order to do this, J-M senior managers decided that they would pre-test pipe before
8 sending it to NSF for certification testing. J-M implemented a policy under which only those
9 samples that passed J-M's pre-tests would be sent to NSF for testing.

10 158. Internal correspondence at J-M dated September 26, 2003, explained that the "fix"
11 was to never send out a sample produced on a change-over day and, in the future, to cherry-pick
12 samples and pre-test them to ensure that they will pass NSF's HDB test.

13 159. J-M pre-tested the pipe by subjecting samples to the Quick Burst Test – a test that
14 can also be used to predict a pipe's ability to pass HDB testing. If a J-M pipe failed to reach a
15 Quick Burst result significantly higher than 6,400 psi, the likelihood that it would fail HDB testing
16 (which required 7,200 psi on Quick Burst for J-M pipe to pass HDB testing) increased
17 dramatically.

18 160. J-M engaged in this practice of cherry-picking pipe despite knowing that doing so
19 violated NSF Standard 14. At all times relevant to the Complaint, J-M knew that pipe undergoing
20 certification testing had to be "representative" of production pipe and that J-M was not permitted
21 to pre-test pipe.

22 161. In an effort to find pipe that might pass NSF certification testing, in late September,
23 2003, J-M sent Yang, at that time head of Research and Development at J-M, to McNary to
24 identify and test samples of pipe.

25 162. During his visit, Yang observed pipe of such poor quality that he could not, and did
26 not, recommend a single pipe specimen for pre-testing.

27 163. J-M senior management displayed no concern for the poor quality of the pipe being
28 manufactured at McNary. Instead, they demanded an immediate resolution to "this A28 issue," a
resolution that would permit J-M to sell the Remaining NSF Held Pipe and continue to

1 manufacture substandard pipe.

2 164. In late September 2003, Yang traveled to McNary to select and monitor Quick
3 Burst testing on J-M three-quarter-inch, one-inch, and one-and-one-half-inch PVC pipe samples
4 prior to sending them to NSF.

5 165. On September 25, 2003, internal J-M Quick Burst test results of Yang's hand-
6 selected pipe were produced. Based on these results, J-M sent samples of J-M's three-quarter-inch
7 and one-and-one-half-inch PVC pipe to NSF.

8 166. J-M did not send a sample of the one-inch PVC pipe to NSF because the Quick
9 Burst Test results indicated a strong likelihood that the sample would not pass NSF testing.

10 167. On October 14, 2003, preliminary NSF laboratory results of the HDB testing for
11 both the three-quarter-inch and one-and-one-half-inch PVC pipe samples selected by Yang were
12 produced. Both the three-quarter-inch and one-and-one-half-inch PVC pipe showed a likelihood
13 of failing the HDB test, with an initial LTHS of 3,621 psi and 3,784 psi, respectively.

14 168. Despite these initial October 14, 2003 test results, J-M continued to press NSF to
15 release the Remaining NSF Held Pipe in its warehouse.

16 169. NSF conveyed to J-M that all sizes of the Remaining NSF Held Pipe had to pass
17 HDB testing, as provided by NSF Standard 14, before the pipe could be released.

18 170. Ultimately, in an October 20, 2003 email, Kashefi confirmed to Hwang that both
19 the three-quarter-inch and one-and-one-half-inch PVC pipe samples selected by Yang produced
20 failing HDB testing results with an LTHS of 3,672 psi and 3,792 psi, respectively.

21 171. Following Kashefi's email confirming the final test results for the three-quarter-
22 inch and one-and-one-half-inch PVC pipe samples, Yang wrote an email to Hwang, dated October
23 21, 2003, questioning J-M's pipe quality in general. He wondered whether the source of the
24 failures was a quality control problem limited to McNary, a "general problem all over J-M," or "a
25 problem with A28 in [J-M's] formulation." Exhibit 59, incorporated herein.

26 172. Additionally, since the one-and-one-half-inch PVC pipe was close to meeting the
27 HDB threshold of an LTHS of 3,830 psi, J-M sent an additional pre-screened sample of this size
28 pipe to NSF, hoping that it would reach an LTHS of 3,830 psi.

1 173. While the one-and-one-half-inch pipe sample was being tested by NSF, J-M sent a
2 second sample of the same size pipe from the same lot to UL.

3 174. J-M pressed NSF to accept an alternative result from UL in the event that the one-
4 and-one-half-inch pipe sample failed at NSF but the sample at UL passed.

5 175. In an email dated December 21, 2003, Kashefi told Yang that the one-and-one-half-
6 inch pipe would likely pass the HDB Test, indicating that J-M's cherry-picking had finally paid
7 off.

8 176. Kashefi further stated that the release would apply only to the one-and-one-half-
9 inch pipe. She explained that the remainder must either be destroyed or J-M must submit a sample
10 "for each size" for the HDB test.

11 177. Meanwhile, the one-and-one-half-inch pipe sample sent to UL, despite being from
12 the same lot as the sample sent to NSF, was on track to fail the HDB testing as of January 16,
13 2004.

14 178. Once NSF said that the one-and-one-half-inch pipe sample tested was on track to
15 pass HDB testing, Lin confirmed that the anticipated release by NSF for that pipe size applied to
16 all classes of one-and-one-half-inch pipe – not just the class of the passing samples.

17 179. The ASTM D2241 pipe being subjected to NSF testing came in different classes
18 based on the relative strength of the pipe. Each class must meet the established HDB testing
19 requirement.

20 180. J-M's anticipated release of the one-and-one-half-inch pipe applied to all the
21 different classes of that size pipe, even though only one class had been subjected to NSF testing.

22 181. On March 5, 2004, NSF authorized the release of all one-and-one-half-inch pipe
23 and four-inch pipe being held at McNary.

24 182. Ten days later, on March 15, 2004, UL sent a letter to J-M, noting that the one-and-
25 one-half-inch pipe sample had failed, with a result of 3,436 psi. J-M did not inform NSF of this
26 failing result from the same lot that was being tested by NSF.

27 //

28 //

1 **2. Impatient for the Release of Pipe, J-M Management Continued to Cherry-**
2 **pick Samples for NSF Testing Throughout the Fall and Winter of 2003-**
3 **2004.**

4 183. By December 2003, J-M had sent pipe specimens of one-inch pipe, three-quarter-
5 inch pipe, and one-and-one-half-inch pipe from McNary to NSF, all of which had failed NSF
6 testing despite J-M's efforts to cherry-pick samples. Faced with approximately 2.5 million pounds
7 of pipe in McNary's warehouse, J-M was desperate to find a way to release that pipe for sale,
8 despite knowing from its own testing, and that of NSF, that much of the pipe was substandard and
9 of poor quality.

10 184. On December 13, 2003, Lin emailed Yang and Hwang, pushing them to get NSF to
11 release the Remaining NSF Held Pipe at McNary without regard to the integrity of the pipe
12 subject to the hold.

13 185. Between December 27 and December 31, 2003, Yang went to McNary specifically
14 to cherry-pick samples that could be pre-tested in private laboratories to determine whether they
15 would pass NSF certification tests.

16 186. J-M concentrated its cherry-picking and pre-testing of samples on those pipe sizes
17 affected most by NSF's hold, in order to gain the release of as much pipe as possible.

18 187. In trying to locate suitable samples that might eventually pass NSF testing, Yang
19 determined that most of the PVC pipe that was four inches and larger might not be worth saving
20 "since they [we]re out-of-spec" and/or had "low hoop stress."

21 188. As a result, Yang recommended that J-M McNary's six-inch, eight-inch, and ten-
22 inch pipe should be scrapped, as should the four-inch pipe if that size did not pass pre-testing.

23 189. Yang's observations regarding the questionable pipe quality were passed on to Eric
24 Dirks by Hwang. Hwang noted that J-M did not want to take the chance of having another pipe
25 sample that was sent to NSF fail the HDB test.

26 190. With J-M's management seeking the immediate release of the Remaining NSF
27 Held Pipe, Fassler again visited McNary from February 9 through February 11, 2004, to observe
28 pipe production and testing.

191. In his report to senior management, Fassler noted that with regard to the pipe

1 production process, a “few defects ran for several hours, without correction,” that “15% of pipe
2 inventory measured had thin walls,” and that there was a need to modify extrusion operating
3 conditions to address the wall thickness issue – a problem that applied to several lines of
4 production. Exhibit 60, incorporated herein.

5 192. Fassler further reported that Quick Burst testing machines had not been updated to
6 compliance with ASTM D1599-99, another regulatory standard governing JM-90 PVC pipe,
7 despite his express directive several months earlier that this be done.

8 193. Concerned only with the bottom-line, on February 12, 2004, J-M’s President,
9 Walter Wang, emailed Lin wanting to know why McNary had so much non-shippable pipe.

10 194. Lin forwarded Walter Wang’s email to Hwang and Yang, and directed them to
11 develop a timeline for resolving the pipe hold at McNary, expressing no concern for the integrity
12 of the pipe J-M sought to reintroduce to commerce.

13 195. Four days later, on February 16, 2004, J-M received pre-test results from the pipes
14 that it had selected for pre-testing at McNary. On this occasion, J-M had tested several size pipes,
15 including three-quarter-inch, one-inch, three-inch, four-inch, six-inch, eight-inch, and ten-inch
16 pipe. Of all these pipe samples pre-tested by J-M, only the four-inch sample was likely to be in
17 compliance with NSF Standard 14 for HDB strength.

18 196. That same day, in response to the pre-testing results and concerned about the
19 quality of the pipe at McNary, Hwang recommended that J-M senior management scrap all
20 McNary pipe, with the exception of the one-and-one-half-inch and four-inch sizes.

21 197. Given the internal results of J-M’s pre-testing, only the hand-picked sample of
22 four-inch PVC pipe was sent to NSF for testing.

23 198. The pre-tested four-inch PVC pipe was able to pass NSF’s HDB test. As a result,
24 NSF released the hold on that size pipe. As of this time, NSF had authorized the release of only
25 the one-and-one-half-inch and four-inch PVC pipe.

26 199. J-M persisted with cherry-picking and pre-screening other sizes of J-M PVC pipe
27 to try to obtain the release of additional pipe sizes from NSF.

28 200. For example, in early March 2004, J-M again pre-tested various sizes of J-M pipe

1 at McNary with the hope of identifying samples it could send to NSF for additional testing. Of all
2 the sizes tested, J-M found that only the one-half-inch, the one-and-one-quarter-inch, and the two-
3 and-one-half-inch pipes passed J-M's internal standard of 7200 psi for the Quick Burst test.

4 201. This Quick Bust testing resulted in multiple samples of three-inch, six-inch, and
5 eight-inch pipe failing to meet the internal standards, as well as one sample of size ten-inch pipe
6 that failed to meet internal standards.

7 202. Given the results of the pre-testing, in a last ditch effort to secure the release of the
8 pipe at McNary, in late March 2004, Yang directed plant personnel to send the "best" sizes of six-
9 inch and eight-inch pipe and to send one-half-inch, one-and-one-quarter-inch, two-and-one-half-
10 inch, and three-inch pipe to NSF for certification testing. Yang told also plant personnel to
11 resample the two-inch and ten-inch pipe.

12 203. In April 2004, NSF reported to J-M that the three-quarter-inch pipe passed the
13 HDB testing. However, this passing result was accomplished only by excluding certain data
14 points. Had NSF included all the data points, the pipe would have failed.

15 204. Also in April of 2004, Quick Burst Test results for various samples of two-inch
16 pipe from McNary were reported to Yang. Of those five samples, only one of the two-inch pipe
17 samples tested met J-M's Quick Burst Test standard of 7,200 psi.

18 205. Based on this data, Yang instructed McNary personnel that the one sample that had
19 met the J-M Quick Burst standard should be the one to be sent to NSF for testing.

20 206. Also in April of 2004, J-M performed internal testing on pre-selected ten-inch PVC
21 pipe.

22 207. Though the average result for this test was only 6,806 psi, a sample of this pipe
23 was also sent by J-M to NSF for testing.

24 208. Ultimately, in June 2004, NSF confirmed that the two-inch pipe failed to pass the
25 HDB testing requirement with an LTHS of 3,559 psi. This test result indicates that the pipe would
26 have less than 12% useful life as compared to a pipe that satisfied the NSF standard.

27 209. Also in June 2004, NSF confirmed that a three-inch pipe sample sent by J-M to
28 NSF in March failed with an LTHS of 3,753 psi.

1 210. On July 30, 2004, J-M's ten-inch pipe sample failed NSF testing with an LTHS
2 3,472 psi. This test result indicates that the pipe would have less than 7% useful life as compared
3 to a pipe that satisfied the NSF standard.

4 211. On May 27, 2004, NSF informed J-M that the eight-inch sample provided to NSF
5 by J-M in March of that year had passed the HDB testing. J-M subsequently released this pipe.

6 212. In June of 2004, NSF authorized the release of the six-inch pipe provided to NSF
7 by J-M in March of that year.

8 213. Also in June 2004, NSF confirmed the release of one-and-one-quarter-inch and
9 two-and-one-half-inch pipe, based on samples that J-M had pre-tested and sent to NSF for
10 subsequent testing in March 2004.

11 214. In July 2004, NSF testing results for the one-half-inch pipe that had been selected
12 and pre-tested by J-M in March 2004 showed an LTHS of an abysmal 422 psi.

13 215. J-M pre-screened another pipe sample of this size, and sent another sample in
14 September 2004. In October 2004, NSF indicated to J-M that this later-provided sample of one-
15 half-inch pipe passed NSF testing.

16 216. An IRA dated November 18, 2004 suggested scrapping all ten-inch pipe. There is
17 no indication that this was done. To the contrary, J-M continued to have a problem with
18 "missing" rejected pipe, suggesting J-M continued to sell pipe that failed to meet NSF standards.

19 **B. J-M's Problems at McNary were Well-Documented and Not Isolated**

20 217. J-M was on notice of significant pipe production problems at McNary since at least
21 2000.

22 218. Through reports sent to senior J-M management dating back to September 30,
23 2000, J-M was aware that: (a) there was little to no quality control testing being done at McNary
24 on the initial days of production; (b) there were unstable extrusion conditions in the pipe
25 production process; and (c) there was poor monitoring of the pipe production process overall.

26 219. J-M was also aware as early as September 2000 that pipe classified as "shippable"
27 inventory at McNary was not in fact suitable for sale.

28 220. J-M senior management were well aware of specific concerns raised by plant

1 management at McNary that the hiring of inexperienced staff there in order to reduce labor costs
2 was contributing to the poor pipe quality being manufactured at that plant.

3 221. J-M's reaction to McNary management's pleas for more experienced workers was
4 to instruct plant management to push the employees harder and/or "write them up."

5 **C. J-M's Conduct with Respect to the A28 Issue is Consistent with J-M's**
6 **Corporate Culture**

7 222. Yang has stated that J-M management tactics included attempts to block any
8 investigation of the cause of pipe non-conformity, including withholding test results from
9 company personnel.

10 223. Lin and Rao told J-M personnel to ignore all failing test results for pipe in the
11 quality assurance tests.

12 224. Yang was told by J-M management, Rao and Lin, to falsify his analysis of claims
13 by customers so as to make it look as though J-M was not at fault. Lin and Rao would then sign
14 off on his reports, aware that they were falsified.

15 225. Employees who brought issues of pipe quality to management's attention were
16 labeled as "trouble-makers."

17 226. Yang quit his position at J-M because management would not let him do his job
18 properly and cared only about profit and not whether the pipe that was shipped was NSF
19 compliant.

20 227. J-M had a practice of re-introducing rejected product into the shippable inventory.

21 **VII. J-M'S SALE OF SUBSTANDARD PVC PIPE THAT DOES NOT MEET**
22 **AWWA AND ASTM D2241 REQUIREMENTS**

23 228. AWWA, an organization of which J-M has always been a member, has
24 promulgated standards governing the physical and chemical properties, including required tensile
25 strength, of PVC pressure pipe for water (potable and reclaimed) and forced-sewer transport.
26 AWWA Standard C900 applies to four-inch through twelve-inch diameter PVC pressure pipe for
27 distribution, and AWWA C905 applies to fourteen-inch through forty-eight-inch diameter PVC
28 Pressure Pipe used for transmission and distribution. See Exhibit 12.

1 229. Before AWWA standards for modern urban projects came into prominence, the
2 prevailing industry standard governing PVC pressure pipe was ASTM D2241. See Exhibit 45,
3 incorporated herein. ASTM is one of the largest standards organizations in the world. ASTM's
4 mission statement includes the development of standards to "promote public health and safety"
5 and to "contribute to the reliability of materials, products, systems and services." ASTM
6 standards are widely used and incorporated into other industry standards as well as government
7 contracts and specifications. Many manufacturers, including J-M, represent that their products
8 have been manufactured and tested in conformance with ASTM standards by so indicating on the
9 product itself, or in marketing or other labeling materials. J-M markets and sells its ASTM D2241
10 pipe both as "IPS" pipe (IPS refers to Iron Pipe Size), and "PIP" pipe (referring to Plastic
11 Irrigation Pipe). This Complaint refers to IPS pipe (which includes potable water, reclaimed
12 water, and forced-sewer IPS pipe) and PIP pipe collectively as "ASTM D2241 pipe." Although
13 AWWA controls most new urban piping installations, ASTM D2241 pipe continues to be used in
14 substantial amounts, especially in rural applications.

15 230. Like AWWA C900, ASTM D2241 sets minimal requirements for the physical and
16 chemical properties of PVC pressure pipe for water transport (potable and reclaimed) and for
17 forced-sewer applications. For all purposes relevant to this Complaint, ASTM D2241 pipe is
18 made with the same ingredients and processed in the same manner and on the same equipment as
19 AWWA C900/C905 pipe. Moreover, the pertinent requirements of ASTM D2241 are
20 substantively the same as the requirements of AWWA C900/C905, as further shown below.
21 Therefore, the various J-M manufacturing practices that resulted in its failure to meet standards
22 requirements apply equally to both AWWA C900/C905 and ASTM D2241 pipe. Relator has
23 knowledge of J-M pipe manufacturing failures both in the field and in the laboratory for ASTM
24 D2241 pipe as well as AWWA pipe.

25 231. At all times relevant to this Complaint, Real Parties, like other governmental
26 entities with water and sewer systems, have required that PVC pressure pipe for use in their
27 systems comply with or exceed the standards described in AWWA Standards C900/C905 or
28 ASTM Standard D2241. See Exhibits 28, 29 & 51, incorporated herein. AWWA and ASTM

1 D2241 Standards are the universal standards applied in the PVC pressure pipe industry. The
2 standards organizations UL and FM (discussed *infra*) do not cover sewer and reclaimed-water
3 pipe. J-M, therefore, does not mark its forced-sewer or reclaimed water pipe with UL or FM
4 marks, but it does mark such pipe as compliant with AWWA C900, AWWA C905, or ASTM
5 D2241. Compliance with the requirements of AWWA or ASTM D2241 is so consistent and
6 widespread in this country that the requirement of compliance is understood by domestic
7 purchasers and sellers of water works products regardless of whether it is stated expressly.

8 232. Relator is unaware of any domestic PVC pipe manufacturer or distributor who
9 openly offers to sell PVC pressure pipe in the DRs (dimension ratios) and standard dimension
10 ratios ("SDRs") offered by J-M that does not claim to comply with AWWA Standards C900 or
11 C905 or ASTM Standard D2241. Nor is Relator aware of any domestic water or forced-sewer
12 system that knowingly permits the purchase of PVC pipe that does not comply with the tensile
13 strength requirements of AWWA C900/C905 or ASTM D2241. Real Parties would never have
14 knowingly purchased PVC pressure pipe for use in their water and sewer systems that did not
15 comply with AWWA or ASTM D2241 standards.

16 233. To be compliant with the standards, PVC pressure pipe must satisfy certain strength
17 and extrusion-quality tests set forth in AWWA C900/C905 and ASTM D2241, including without
18 limitation: (1) Cell Class Testing, (2) HDB Testing, (3) Sustained Pressure Testing, (4) Quick
19 Burst Testing, and (5) Acetone-Immersion Testing. For all purposes relevant to this Complaint,
20 the requirements of these tests are substantively identical for both AWWA C900/C905 and ASTM
21 D2241. Broadly described, the purpose of these tests is to ensure PVC pipe will withstand varying
22 pressures over both short and long periods without leaking. These tests are also meant to ensure
23 that J-M's production pipe is representative of the pipe that originally qualified for the standards,
24 as mandated within the requirements of AWWA C900/905 and ASTM D2241. However, because
25 of its cost-cutting and productivity measures described in section IV above, J-M repeatedly failed
26 each of these tensile strength tests beginning in at least 1997.

27 **A. Cell Class Testing**

28 234. PVC compounds are identified by a numerical classification system in which each

1 number corresponds to a cell in a Table that identifies the particular property and the minimum
2 required value for that property. AWWA C900/C905 and ASTM D2241 require that the
3 compound from which PVC pipe is made shall equal or exceed "cell class 12454" as defined in
4 ASTM D1784. Exhibits 12 & 45. In describing the classification system, ASTM D1784 states
5 that the third number in the designation corresponds to the compound's tensile strength
6 requirements. See Exhibit 30, incorporated herein. For cell class 12454, the third number of the
7 designation is 4, which translates to a required tensile strength of 7,000 psi. Id.

8 235. In addition to providing the physical properties that each cell class must have,
9 ASTM D1784 also prescribes the method by which the specimens for testing compliance with
10 these requirements shall be prepared. Until February 1997, ASTM D1784 only provided one way
11 of preparing the specimens and that was by compression molding. See Exhibit 31, incorporated
12 herein. To prepare a sample by compression molding, separate sheets of PVC compound or pipe
13 are pressed together between two metal drums to form a laminate.

14 236. However, beginning in February 1997, ASTM D1784 was revised to include two
15 additional specimen preparation methods. Instead of just compression-molded specimens, ASTM
16 D1784 provided that compliance with the cell classification requirements "shall be determined
17 with compression-molded, extruded, or injection-molded test specimens for . . . tensile strength."
18 Exhibit 32 at Section 10, incorporated herein.

19 237. In the Spring of 1997, Doug Boitz ("Boitz"), J-M's former Product Assurance
20 Manager, contacted members of ASTM D20.15, the Committee responsible for amending ASTM
21 D1784, for guidance regarding the proper interpretation of the amendments to Section 10, the
22 section on specimen preparation. Following his consultation with the Committee members, Boitz
23 wrote an internal memorandum to Lin, discussing what he had learned. See Exhibit 33,
24 incorporated herein.

25 238. In this memo, dated May 5, 1997, Boitz states that the Committee's intent for the
26 change is "to create the ability for manufacturers of extruded or injection molded products to have
27 samples of materials for testing that are representative of the products, which they are producing."
28 Exhibit 33. In other words, the Committee intended that manufacturers of extruded products use

1 an extruded sample for testing, while manufacturers of compression-molded products use a
2 compression-molded test sample. The Committee's reasoning, Boitz said, was "that the
3 processing can greatly affect the properties and quality of the material or compound." Id. Since J-
4 M produces its PVC pipe by extrusion, Boitz concluded that ASTM D1784 now required J-M to
5 prepare its specimens by extrusion as well "so that the results obtained from finished products are
6 not significantly different than the tested specimens." Id. At the end of the memo, Boitz
7 recommends to Lin that J-M's Research and Development Department be notified of this issue so
8 that it can amend J-M's sample preparation methods to include extruded samples. Id.

9 239. Despite this clear statement from the ASTM Committee Members that J-M, as a
10 manufacturer of extruded pipe, must use extruded specimens for purposes of cell class testing,
11 Relator has information and believes that J-M continued to use compression molding as one of the
12 primary means of sample preparation for its cell class testing from and after February 1997. The
13 reason for J-M's allegiance to the compression-molded specimens is that its J-M 90 compound
14 performs better and yields higher tensile strength results under the compression-molding process
15 than can be obtained via extrusion. With the use of compression-molded samples, J-M was able to
16 artificially boost its tensile strength results and thereby conceal the fact that its actual tensile
17 strengths were below the minimum 7,000 psi required by AWWA C900/C905 and by ASTM
18 D2241.

19 240. Two third-party certifiers, International Association of Plumbing and Mechanical
20 Officials ("IAPMO") and NSF, require J-M to submit to annual cell class testing, which includes
21 tests to confirm that J-M's PVC pipe meets a minimum tensile strength of 7,000 psi. By contrast,
22 AWWA and ASTM, which operate on an honor system, do not require manufacturers to submit to
23 testing or audits. Relying on the good faith of the manufacturers, AWWA and ASTM operate on
24 the assumption that a manufacturer that represents its parts as being compliant will have regularly
25 performed the necessary tests listed in the standards to ensure that its parts comply and will only
26 sell compliant products.

27 241. In preparing its samples for the annual IAPMO and NSF cell class testing, J-M
28 followed many of the same practices it had used in preparing samples for UL qualification of its

1 no-thickened-section pipe. That is, J-M followed a manufacturing process that was not
2 representative of the actual conditions under which its PVC pipe is ordinarily made. J-M had
3 Fassler specially prepare the samples using compression molding, as opposed to extrusion, with an
4 extraordinary degree of care and precision. As with its UL qualification testing of the no-
5 thickened-section pipe, J-M prepared multiple specimens from each lot and sent a subset of these
6 samples to outside laboratories to confirm that when IAPMO or NSF tested the other samples they
7 would meet the required minimum tensile strength of 7,000 psi.

8 242. Even with the advantages gained by special preparation and use of compression-
9 molded samples, J-M only barely met the minimum requirement of 7,000 psi in the 2005 annual
10 cell class test performed for IAMPO, and failed tensile strength in prior years' annual IAMPO and
11 NSF testing. Exhibit 34, incorporated herein, is a copy of a test report from CRT Laboratories,
12 Inc. describing cell class testing performed for IAPMO in June 2005 on J-M compression-molded
13 samples. While the samples were found to meet the minimum cell class requirements of cell class
14 12464, the tensile strength results of 7,081 psi were only slightly above the minimum requirement
15 of 7,000 psi. See Exhibit 34.

16 243. On multiple occasions, including on September 13, 2005, Yang told Relator that,
17 without the benefit of compression molding and special preparation, J-M's PVC pipe compound
18 actually has a maximum tensile strength of approximately 6,700 psi. Yang cited "extrusion
19 conditions" (*i.e.*, J-M's accelerated production rate and improper tooling and maintenance of its
20 extruders) as the reason for J-M's inability to satisfy the tensile strength requirements of cell class
21 12454. Exhibit 36 (Relator's notes dated 9/13/05), incorporated herein.

22 **B. HDB Testing**

23 244. As set forth in sections V.B. and V.B.1. (see ¶¶ 71-78), to qualify J-M's new, no-
24 thickened-section pipe for UL listing, UL required J-M to satisfy the HDB requirements specified
25 in Section 4.3.2.2(b) of AWWA C900 and C905. As described herein at section V.B.1. (¶¶ 71-93)
26 and section V.B.4 (¶¶ 108-112), J-M began producing no-thickened-section pipe on June 1, 2005
27 despite the fact that it had test results showing that the pipe failed the HDB testing required by
28 AWWA C900 and C905 more than 50 percent of the time. As a result, it is more likely than not

1 purchasers of J-M's no-thickened-section Blue Brute PVC pipe, including Real Parties, received
2 pipe that fails to comply with the HDB requirements of AWWA C900 and C905.

3 245. As applied to J-M's PVC pressure pipe, AWWA C900/C905 and ASTM D2241
4 contain the same HDB requirement: that the pipe be manufactured to meet an HDB category of
5 4,000 psi. See Exhibit 45. J-M's difficulties with satisfying the HDB requirements predate the
6 production of its no-thickened-section AWWA C900 pipe. J-M also had difficulty satisfying the
7 HDB requirements under J-M's original pipe design (*i.e.*, J-M's thickened-section Blue Brute and
8 Big Blue PVC pipe) and the HDB requirement of its ASTM D2241 pipe. For instance, as
9 discussed in paragraph 82, on November 14, 2003, Fassler cited as one of the impediments to the
10 success of the No-Thickened-Section Project the fact that J-M had been experiencing failures in
11 the HDB testing on its existing pipe. See Exhibit 16. Relator has information and believes that
12 despite these failing test results, J-M did not reject or scrap a PVC pipe for having failed HDB
13 testing.

14 246. In the 1980s, the Plastic Pipe Section of Johns-Manville, the predecessor company
15 to J-M, promulgated a series of product specifications, many of which were more stringent than
16 applicable industry standards and customer specifications. Johns-Manville included assurances of
17 adherence to these company specifications in its express warranty. When it was founded in 1982,
18 J-M continued to maintain the company specifications Johns-Manville had created and included
19 them in its warranty.

20 247. One of these product specifications, J-M Specification No. PL-25 for four-inch
21 through twelve-inch PVC Plastic Blue Brute pipe, required the pipe to meet a minimum quick
22 burst stress of 7,200 psi, which was significantly higher than AWWA C900's requirement of
23 6,400 psi. J-M had the same requirement -- a minimum quick burst stress of 7,200 psi -- for its
24 ASTM D2241 pipe. One of the primary reasons for the more stringent requirement was to ensure
25 that J-M's PVC pipe would meet the required HDB tensile strength category. In other words, if
26 the PVC pipe withstood a stress of 7,200 psi during the 60-second Quick Burst Test, it would be
27 more likely to pass the required HDB category of 4,000 psi during the subsequent HDB testing.
28 Conversely, if the PVC pipe failed below 7,200 psi during the Quick Burst Test, it would be at risk

1 of failing to meet the HDB category of 4,000 psi. If the pipe failed below 7,000 psi during the
2 Quick Burst Test, it probably would not meet the HDB category of 4,000 psi. As described in
3 paragraphs 83-84 above, because the Quick Burst testing always precedes the HDB testing, the
4 Quick Burst results can provide an early indication of whether the pipe will pass HDB.

5 248. In a December 11, 2001 email to Hwang, Fassler stated: "Historically, JM90 pipe
6 that fails ASTM D1599 at less than 7200 psi hoop stress is questionable. JM90 pipe that fails
7 ASTM D1599 at less than 7000 psi hoop stress is BAD PIPE." Exhibit 61, incorporated herein.

8 249. J-M normal production pipe typically ranges from 6,400 to 6,800 psi.

9 250. J-M considers anything below 7200 as a "fail." JM-90 pipe falling below a hoop
10 stress of less than 7200 psi is at higher risk of failing long-term pressure testing.

11 251. In an April 17, 2002 memorandum to Chen, Fassler stated: "The data on hand at
12 R&D shows that sustained pressure & HDB test failures become likely in pipe giving QB hoop
13 stresses below 7000 psi." Exhibit 62, incorporated herein.

14 252. Fassler's PowerPoint Presentation on HDB at the November 11, 2004 Quality
15 Assurance Meeting states: "When providing pipe samples to R&D and/or submitting the same to
16 any outside agencies for testing: (c) Prepare specimens from pipe with a short-term burst pressure
17 test result of 7200 psi or higher." Exhibit 63, incorporated herein.

18 253. In a memorandum to Hwang regarding the "Benefits of Quick-Burst Testing to
19 7200 psi Hoop Stress" dated January 25, 2002, Fassler stated: "Bad pipe will almost always
20 exceed 6400 psi hoop stress on the quick-burst test." Also, "PVC pipe that fails at less than 7200
21 psi hoop stress is poorly extruded. All the sustained pressure test failures and all the HDB
22 (Hydrostatic Design Basis) test failures in recent years involved pipe that gave quick-burst test
23 results of less than 7200 psi hoop stress. For the above reasons, I suggest that a quick-burst hoop
24 stress result of 7200 psi hoop stress be set as the minimum acceptable level for J-M PVC pressure
25 pipe. The outside agency standard minimums (typically based on 6400 psi hoop stress) can still be
26 used to defend the Company against customer complaints. Deviations can be granted for pipe
27 exceeding 6400 psi hoop stress." Exhibit 64, incorporated herein.

28 254. However, on November 19, 2004, J-M revised Specification No. PL-25 to lower

1 the short-term quick-burst pressure requirement to the 6,400 psi required by AWWA C900
2 because it could no longer meet the higher J-M pressure requirement of 7,200 psi. Exhibit 35,
3 incorporated herein, is a red-lined copy of Specification No. PL-25 reflecting the revision to the
4 lower 6,400 psi requirement. J-M also revised its quick-burst pressure requirement for ASTM
5 D2241 pipe. J-M made this revision knowing that, by lowering the quick burst pressure
6 requirement, it would no longer be able to meet the HDB test requirements of AWWA C900/C905
7 and ASTM D2241. Despite this knowledge, before making this revision, J-M did not perform any
8 testing to determine its effect on HDB.

9 **C. Sustained Pressure Testing**

10 255. As described herein at section V.B.2. (§§ 94-99), to qualify J-M's new, no-
11 thickened-section pipe for UL listing, UL required J-M to demonstrate the pipe could pass the
12 Sustained Pressure Test specified in Section 18 of UL 1285. As further described in section
13 V.B.2. (§§ 94-99), J-M was only able to pass this test by resorting to the following fraudulent
14 practices: (1) preparing its samples using materials and processing conditions that were vastly
15 superior to those J-M actually used in its day-to-day manufacturing of pipe; (2) cherry-picking
16 samples from lots that had produced passing HDB test results to increase the likelihood they
17 would pass in front of UL; and (3) concealing these facts from UL, other standards and certifying
18 organizations, and J-M's distributors and customers. Despite the fact it had improperly
19 manipulated the test materials and conditions of the Sustained Pressure Testing to mask the
20 underlying tensile strength problems with the pipe, J-M began producing no-thickened-section
21 pipe on June 1, 2005.

22 256. The Sustained Pressure Test contained in Section 18 of UL 1285 is substantively
23 identical to the Sustained Pressure Test required by sections 4.3.3.1 and 5.1.3 of AWWA C900.
24 See Exhibits 6 & 12. Accordingly, in addition to violating UL 1285, J-M also violated AWWA
25 C900 when it engaged in the three fraudulent practices described above while performing the
26 Sustained Pressure Test on its new, no-thickened-section pipe. As a result of these practices, since
27 June 1, 2005 (the date J-M began producing no-thickened-section pipe), it is more likely than not
28 purchasers of J-M's no-thickened-section Blue Brute PVC pipe, including Real Parties, received

1 pipe that (when tested properly with representative samples) fails to comply with the Sustained
2 Pressure Test requirements of AWWA C900.

3 257. Over a year before it performed the Sustained Pressure Tests described above on its
4 no-thickened-section pipe, J-M had received reports of its existing PVC pipe failing Sustained
5 Pressure Testing performed for NSF. NSF's and AWWA's C900/C905 Sustained Pressure Test
6 requirement is substantively identical to the Sustained Pressure Test required by sections 6.2 and
7 8.4 of ASTM D2241. As discussed in paragraph 82, on November 14, 2003, Fassler cited as one
8 of the impediments to the success of the No-Thickened-Section Project the fact that "[r]ecently,
9 pipe from some facilities has failed sustained pressure testing at NSF." Exhibit 16. Relator has
10 information and believes that despite these failing test results, J-M has never rejected or scrapped a
11 PVC pipe for having failed Sustained Pressure Testing.

12 **D. Quick Burst Testing**

13 258. As described herein at section V.B.3. (§§ 100-107), to qualify J-M's new, no-
14 thickened-section pipe for UL listing, UL required J-M to demonstrate the pipe could pass the
15 Quick Burst Test specified in Section 4.3.3.2 of AWWA C900, which is substantively the same as
16 Section 8.5 of ASTM D2241. As further described in section V.B.2. (§§ 94-99), J-M failed
17 several of the Quick Burst Tests and ultimately was only able to pass this test by resorting to the
18 following fraudulent practices: (1) preparing its samples using materials and processing
19 conditions that were vastly superior to those J-M actually used in its day-to-day manufacturing of
20 pipe; (2) cherry-picking samples from lots that had produced passing HDB and Sustained Pressure
21 Testing Test results to increase the likelihood they would pass in front of UL; and (3) concealing
22 these facts from UL, other standards and certifying organizations, and J-M's distributors and
23 customers. Despite the fact it had improperly manipulated the test materials and conditions of the
24 Quick Burst Test to mask the underlying tensile-strength problems with the pipe, J-M began
25 producing no-thickened-section pipe on June 1, 2005. As a result, it is more likely than not
26 purchasers of J-M's no-thickened-section Blue Brute PVC pipe, including Real Parties, have
27 received pipe that fails to comply with the Quick Burst requirements of AWWA C900.

28 259. Well over a year before it performed the Quick Burst Tests described above on its

1 no-thickened-section pipe, J-M had knowledge that its existing PVC pipe was failing the Quick
2 Burst Tests performed daily for purposes of AWWA C900 and ASTM D2241 at each of its 11
3 PVC pipe plants. By at least early 2004, Relator, Yang, and Fassler began to receive word from
4 the Quality Control Supervisors at J-M's 11 Plants producing PVC pipe that their respective Plant
5 Managers were overriding reject tags and sending out PVC pipe that the Quality Control
6 Supervisors had rejected for failing the daily Quick Burst Tests. Relator personally had received
7 three such complaints from Michael Henderson, the Quality Control Supervisor at the Butner,
8 North Carolina Plant, Armondo Martinez, the Quality Control Supervisor at the Fontana,
9 California Plant, and Joe Soliz, the Quality Control Supervisor at the Wharton, Texas Plant.

10 260. To try and address this and other burgeoning quality-control problems, Yang, at
11 that time J-M's newly appointed Corporate Quality Control Supervisor, called a meeting of all of
12 the Quality Control Supervisors from each of J-M's 11 PVC-pipe Plants. In addition to Yang and
13 the 11 Quality Control Supervisors, the other attendees were Relator, Rao, Fassler, and Beryl
14 Nadia and Lenor Chang, both of whom worked for Fassler. At this meeting, which was held at J-
15 M's Pueblo, Colorado Plant in the Spring of 2004, the Quality Control Supervisors told stories of
16 having rejected PVC pipe for failing daily Quick Burst Tests and then being instructed by their
17 respective Plant Managers to continue to test the pipe until they got a passing result. Since a
18 pipe's tensile strength and other properties gradually increase or stabilize as it is allowed to cool
19 and harden, it often took the Quality Control Supervisors several days and repeated testing to
20 achieve a passing result. However, such repeated testing of individual samples is expressly
21 prohibited by Section 5.1.3 of AWWA C900, which provides that specimens are to be tested "at
22 the beginning of production of each specific material and each size" and thereafter every 24 hours.
23 Exhibit 12. ASTM D2241 permits certain retesting only by agreement between the purchaser and
24 seller of the pipe. Exhibit 45 at Section 9.1.

25 261. Once a passing result was obtained, the Quality Control Supervisors said the Plant
26 Managers would instruct them to release and ship the pipe despite the fact that it may have failed
27 four out of five Quick Burst Tests. J-M Plant Managers, whose bonuses are based on the amount
28 of pipe the plant produces, were loath to reject pipe since rejected pipe cannot be included in the

1 plant's production figures and thereby had the effect of taking money out of their pockets.

2 262. At the Pueblo meeting, Yang and Frank Padilla ("Padilla"), Quality Control
3 Supervisor at the Pueblo, Colorado Plant, provided the Quality Control Supervisors with a review
4 of the proper test methods to be followed when performing the daily Quick Burst Test contained
5 in standards AWWA C900 and ASTM D2241. (The standards, in turn, state that the testing must
6 be performed in accordance with ASTM D1599.) This presentation focused on the method
7 prescribed in ASTM D1599 for determining the amount of test pressure to apply to the pipe
8 sample in order to achieve the required 6,400 psi of quick-burst stress in the pipe wall (hereafter
9 "Calculated Test Pressure"). To determine the Calculated Test Pressure, Yang emphasized that
10 ASTM D1599 required the Quality Control Supervisors to measure the minimum wall thickness of
11 the actual pipe sample. See Exhibit 37, incorporated herein.

12 263. After setting forth these requirements, Yang quickly learned that except for Padilla,
13 the Quality Control Supervisors at the remaining 10 Plants were all doing the calculation wrong.
14 Instead of measuring the wall thickness of the actual pipe sample, the Quality Control Supervisors
15 at the other 10 plants were simply relying on the minimum wall thicknesses listed in Table 1 of
16 AWWA C900 and Table 2 of ASTM D2241 (collectively, "the Tables") for a generic pipe of the
17 same size and pressure class as the sample. However, the wall of the pipe J-M produces
18 invariably is thicker than that of a generic pipe listed in the Tables. Therefore, by relying on the
19 measurement supplied in the Tables instead of actually measuring the wall thickness of the pipe
20 sample, the Quality Control Supervisors of the 10 plants were subjecting the samples to a smaller
21 Calculated Test Pressure than what is required by ASTM D1599.

22 264. When Yang informed the Quality Control Supervisors that they could no longer
23 rely on the minimum wall thicknesses supplied in the Tables and had to measure the actual pipe
24 samples being tested, they strenuously objected. The Quality Control Supervisors admitted they
25 had enough trouble achieving the required 6,400 psi of stress in the pipe wall even with the benefit
26 gained from the smaller Calculated Test Pressure. If they performed the tests correctly (*i.e.*,
27 measured the minimum wall thickness of the actual pipe samples), the Quality Control
28 Supervisors complained, they would stand little to no chance of achieving 6,400 psi and passing

1 the Quick Burst Tests. As the comments of the Quality Control Supervisors make clear, J-M
2 routinely caused PVC pipe to be shipped to its customers, including Real Parties, that failed to
3 meet the requirements of the Quick Burst testing specified in AWWA C900 and ASTM D2241.

4 265. Following this meeting, Yang sought to change the management structure to have
5 the Quality Control Supervisors report to the Corporate Quality Control Supervisor instead of their
6 respective Plant Managers. By so doing, Yang hoped to make it less likely that the Plant
7 Managers would be able to override decisions by the Quality Control Supervisors to reject non-
8 conforming pipe. Yang's request was denied. Despite the considerable problems raised by the
9 Quality Control Supervisors at the Pueblo meeting regarding the short-term tensile strength of its
10 PVC pipe, J-M did not take any steps to address the root cause of the problem and curb the cost-
11 cutting measures described herein at section IV. Yang left J-M in October 2005 out of frustration
12 for repeatedly being stymied in his efforts to improve the quality of J-M's products.

13 **E. Acetone-Immersion Testing**

14 266. AWWA C900/C905 and ASTM D2241 require manufacturers to subject their PVC
15 pipe to routine acetone-immersion testing as specified in ASTM D2152. Exhibits 12 & 45.
16 Broadly described, Acetone-Immersion Testing measures "extrusion quality," *i.e.*, how well the
17 extruder processed the PVC compound in forming the pipe. *Id.* Under ASTM D2152, the pipe
18 sample is required to be immersed in acetone that is at least 99.8 percent pure. *See* Exhibit 38,
19 incorporated herein. If the sample has been processed well, the acetone will not attack it.
20 However, if the sample has been processed poorly, the acetone will cause it to flake. A sample
21 that shows at least 50 percent attack of the inside, outside, or mid-wall surface of the sample or at
22 least 10 percent attack on more than one surface of the sample has failed the test. *Id.*

23 267. Because it rapidly absorbs moisture from the air, acetone can quickly become
24 diluted if it is left out in an unsealed container and exposed to air. As acetone is diluted, its ability
25 to attack pipe samples decreases. ASTM D2152 requires that the acetone used for testing contain
26 no more than 0.2 percent water by mass. Exhibit 38. If a particular container of acetone has more
27 than 0.2 percent water, the excess water can be removed with a drying agent.

28 268. J-M did not take adequate safeguards to ensure the integrity of the acetone used in

1 its routine Acetone-Immersion Tests. For instance, J-M regularly stored its acetone in drums with
2 the lids off. Instead of having no more than two percent water, the acetone J-M regularly used for
3 its testing contained an excessive percentage of water. Although J-M easily could have used a
4 drying agent to remove the excess water, the Plant Managers typically did not want to spend the
5 money for such reagents. Instead, by testing with diluted acetone, J-M was able to obtain passing
6 test results for specimens that would have failed had they been tested using undiluted acetone.

7 269. Even with the benefit gained by using diluted acetone, J-M routinely failed its
8 Acetone-Immersion Tests. At the Pueblo meeting described above, many of the Quality Control
9 Supervisors reported repeated instances of their Plant Managers overriding reject tags and sending
10 out PVC pipe that the Quality Control Supervisors had rejected for failing the routine Acetone-
11 Immersion Tests required by the standards. Relator has information and believes that despite
12 these failing test results, J-M did not reject or scrap a PVC pipe for having failed Acetone
13 Immersion Testing.

14 **F. J-M's False Representations Regarding AWWA and ASTM D2241 Compliance**

15 270. As the world's leading supplier of PVC pipe, J-M is acutely aware of the
16 importance of AWWA and ASTM D2241 compliance to its customers, including Real Parties. In
17 its product catalogs, sales literature, and on its website, J-M repeatedly describes its PVC pipe as
18 meeting AWWA and ASTM D2241 requirements and a LTS of 7,000 psi. For example, in the
19 section of its catalog dedicated to its Blue Brute PVC pipe, J-M references Blue Brute's
20 compliance with AWWA C900 four times. On the cover page for this section, beside the words
21 Blue Brute, J-M stated "Meets AWWA C900." Exhibit 23. The first line of the first page states
22 "J-M's Blue Brute Pipe conforms to the AWWA C900 specification . . ." *Id.* That same page has
23 a box that prominently states "MEETS AWWA C900." Finally, in a table entitled "Typical
24 Physical and Chemical Properties and Capacities," J-M cited AWWA C900 as the standard
25 governing its Blue Brute PVC Pipe and notes AWWA C900's tensile strength requirement of
26 7,000 psi. The section of J-M's catalog relating to its Big Blue PVC pipe follows an identical
27 format to Blue Brute's, except that it references Big Blue's conformance with AWWA C905 as
28 opposed to C900.

271. Similarly, in its catalogs for PVC IPS Pressure Rated Pipe, J-M references its claimed compliance with ASTM D2241 several times. On the cover page for this pipe, beside the words "I.P.S. Pressure," J-M states "MEETS ASTM D2241." Exhibit 46. The first line of the first page describing the pipe states "J-M Manufacturing's (J-MM) I.P.S. Pressure PVC Pipe conforms to ASTM D 2241." *Id.* In the catalog's Short Form Specification, J-M again states that the "pipe shall meet the requirements of ATSM D 2241." *Id.* In a table entitled "Typical Physical and Chemical Properties and Capacities," J-M cites ASTM D2241 as the government standard and notes the tensile strength requirement of 7,000 psi. *Id.* J-M's catalog for Irrigation PIP Pipe makes similar representations, including claimed compliance with ASTM D2241 and the 7,000 psi tensile strength requirement. Exhibit 47.

272. As alleged in detail above, the statements in J-M's catalogs, websites, and sales literature regarding compliance with AWWA and ASTM D2241 standards and the tensile strength requirement of 7,000 psi were patently false. At no time did J-M ever distribute a catalog or sales or advertising literature that revealed its substandard tensile strength results in over half of the tensile strength tests performed since 1997. Nor did J-M otherwise inform its customers, including Real Parties, of its substandard tensile strength.

VIII. J-M'S SALE OF SUBSTANDARD PVC PIPE BEARING FM MARK DESPITE KNOWLEDGE THAT PIPE DOES NOT QUALIFY FOR FM LISTING

273. FM certifies a range of products that meet its approval standards for, *inter alia*, fire protection and loss prevention. Once a product is tested and found to conform to FM's requirements, FM issues the "FM APPROVED" mark for the product, signifying that it meets certain performance requirements. Entities that use FM-approved goods rely on the representation that the products and manufacturing practices conform to the standards and specification-testing required.

274. FM has promulgated a standard governing PVC pipe for use in underground fire service water mains. Until 1999, the pertinent FM Standard was FM 1610. Exhibit 48. In 1999, FM updated the applicable standard, providing more detail and segregation of the various standards for underground plastic pipe; the updated standard was renumbered FM 1612. Exhibit

1 49. Because the pertinent requirements are substantially the same, FM 1610 and FM 1612 will be
2 referred to collectively as "FM 1612." FM Standard 1612 (effective date April 30, 2000 for full
3 compliance), "Approval Standard for Polyvinyl Chloride (PVC) Pipe and Fittings for
4 Underground Fire Protection Service," governs FM approval and listing of PVC pipe for fire
5 service.

6 275. FM 1612 lists a variety of requirements that must be met for PVC pipe to be FM
7 Approved, including initial qualification testing and ongoing manufacturing testing. Its
8 requirements are categorized as General Requirements, Performance Requirements, and
9 Operations Requirements. The standard requires that "[a]ll FM Approval testing is to be
10 conducted on production samples," and "[i]t is the manufacturer's responsibility to submit samples
11 representative of production." Exhibit 49 at Sections 1.2.3 & 2.3; see also Section 3.2.8 ("Testing
12 shall use production pipe and fittings assembled according to the manufacturer's published
13 instructions.").

14 276. One of FM's Performance Requirements is that the product meet the criteria of any
15 other standards the product purports to satisfy, whether in "design, manufacture, or performance."
16 Exhibit 49 at Section 4.2.1. A manufacturer must "submit to FM Approvals a copy of the relevant
17 standard(s), along with drawings, specifications, and other documents necessary to confirm
18 compliance [with the other standard(s)]. FM Approvals shall verify that all requirements of that
19 standard are met." Exhibit 49 at Section 4.2.2. FM explains that "[t]he intent of the requirement
20 is that PVC pipe and fittings conform to any recognized standard to which they are manufactured."
21 Id. at Section 4.2.1. In this way, FM incorporates the pertinent requirements of AWWA, UL, and
22 ASTM, and J-M's failures and deceptions with respect to those standards also constitute failures
23 and deceptions with respect to FM. In addition to failing to comply with FM requirements
24 through its other industry standard failures, J-M independently failed the substantive requirements
25 of FM, as discussed below. During time periods pertinent to this Complaint, J-M represented that
26 certain of its AWWA C900 and C905 pipe were legitimately FM Approved (as further detailed
27 below).

28 277. FM's Operations Requirements include a demonstrated Quality Control Program

1 and Manufacturing and Production Tests that must be run at manufacturing sites. Exhibit 49 at
2 Sections 5, 5.1, & 5.4. The manufacturer is also required to “notify FM Approvals of changes in
3 product construction, design, components, raw materials, physical characteristics, coatings,
4 component formulation or quality assurance procedures prior to implementation of such changes.”
5 Exhibit 49 at Section 5.3. Three of the quality-control manufacturing tests that FM requires are
6 Extrusion Quality, Quick Burst, and Sustained Pressure, which are substantively identical to the
7 tests described elsewhere in this Complaint. Id. at Sections 5.4.4, 5.4.5 & 5.4.6.

8 **A. Cell Class Testing**

9 278. Among the “General Requirements” for PVC pipe to be FM Approved is the
10 requirement that the pipe “be Class 12454 A or B as defined in ASTM D1784.” Exhibit 49 at
11 Section 3.2.4. Class 12454 as so defined imposes a tensile strength requirement of 7,000 psi, as
12 more fully described herein at paragraph 234. As fully described herein at Sections V.A. through
13 V.A.3. (see ¶¶ 53-70) and VII.A. (¶¶ 234-243), J-M’s manufacturing practices were such that its
14 actual tensile strengths were below the minimum 7,000 psi required to qualify as Class 12454 and
15 required to comply with UL 1285 (which requirements are incorporated into FM 1612), therefore
16 violating FM 1612. Despite its knowledge of these manufacturing failures, J-M continued to
17 produce its pipe under these conditions.

18 **B. HDB Testing**

19 279. Another FM 1612 General Requirement is that the pipe be assigned a certain HDB
20 value as derived from tests conducted per ASTM D1598, and evaluated per ASTM D2837.
21 Exhibit 49 at Section 3.2.3. FM’s HDB requirements incorporate the HDB requirements
22 contained in Section 4.3.2.2(b) of AWWA C900 and C905, described herein at Section V.B.1.
23 (¶¶79-81). Exhibit 49 at Sections 1.2.3 & 4.2. As described fully herein at Section VII.B (¶¶ 244-
24 254), J-M’s manufacturing practices resulted in numerous repeated failures of HDB testing.
25 Relator has information about the failed HDB testing, including knowledge of failures during the
26 time period in which J-M was attempting to obtain FM Approval, and believes that despite these
27 failing test results, J-M continued to release its pipe for sale and distribution.

28 //

1 **C. Sustained Pressure Testing**

2 280. FM requires the Sustained Pressure Test to be run on C900 products, per ASTM
 3 D1598, at pressures substantively identical to both UL's Sustained Pressure Test requirements
 4 (Section 18 of UL 1285) and AWWA's requirements (Sections 4.3.3.1 and 5.1.3 of AWWA
 5 C900). See Exhibits 6, 12 & 49 at Section 5.4.6. As explained more fully herein at Sections
 6 V.B.2 (§§ 94-99) and VII.C. (§§ 255-257), J-M was able to pass the Sustained Pressure Test to
 7 meet AWWA and UL requirements only by resorting to fraudulent practices such as using
 8 materials and processes vastly superior to their day-to-day manufacturing counterparts, cherry-
 9 picking samples from certain pre-tested production lots, and concealing these facts from standards
 10 organizations, distributors and other customers. See § 256, herein. Thus, in addition to violating
 11 UL 1285 and AWWA C900, J-M also violated FM 1612 when engaging in these fraudulent
 12 practices while performing the Sustained Pressure Test on its new, no-thickened-section pipe. See
 13 § 257, herein. J-M also failed the Sustained Pressure Test for its earlier, thickened-section pipe,
 14 but as described herein at paragraph 255, despite these failing test results, J-M did not reject or
 15 scrap a PVC pipe for having failed Sustained Pressure Testing.

16 **D. Quick Burst Testing**

17 281. FM 1612's Performance Requirements include the Quick-Burst Strength Test.
 18 FM's Quick Burst Strength Test (described in Section 4.3 of Exhibit 49) for AWWA C900
 19 product is substantively identical to the Quick Burst Test requirements contained in AWWA's
 20 C900 Standard, Section 4.3.3.2. J-M had knowledge at least since 1997 or 1998 that its pipe (both
 21 pre- and post-No Thickened Section Project) was regularly failing the daily Quick Burst Tests
 22 required by AWWA C900 and FM 1612.

23 282. As described herein at Section V.B.3 (§§ 100-107), well after it knew of the
 24 continuing failures to pass the daily Quick Burst Tests, J-M resorted to fraudulent acts to
 25 manipulate a passing Quick Burst Test under UL observation for its no-thickened-section pipe.
 26 Such acts included substituting thicker pipe for the test, manipulating test pressure, pre-testing
 27 pipe, and selecting pipe from lots that had already passed other strength tests. Those lots,
 28 however, had produced passing results on other tests only because J-M fashioned "special run"

1 conditions for optimal processing: slowing regular production rates and adjusting typical
2 temperatures and torque. See supra ¶¶ 91, 97, 103. J-M engaged in similar activity to “pass”
3 FM’s Quick Burst Tests from approximately 1997 through November 2000, when FM withdrew
4 approval of J-M products.

5 283. FM 1612 also has a stand-alone Quick Burst Test for C905 pipe, which is larger in
6 diameter than C900. The test for C905 pipe is very similar to the test for C900 pipe, but adjusts
7 the hydrostatic pressure values required during the 60 to 70 seconds of the test. Exhibit 49 at
8 Section 4.3.1 (Table 4.3.2b). J-M C905 pipe could not withstand the pressures required by the FM
9 Quick Burst Test. For example, during the time J-M employed Relator, AWWA standards
10 required J-M pipe to pass certain pressure tests on its C905 pipe joints per ASTM 3139, including
11 subjecting the joints to pressures at the “quick burst” levels reflected in Table 4.3.2b of the FM
12 requirements. Exhibit 49 at Section 4.3.1. The C905 joints shattered at these quick burst levels at
13 least two times before J-M was able to obtain a passing result, which it obtained only through
14 deviating production variables (extrusion conditions, materials), as fully explained above. The
15 manufacturing problems that pertain to J-M’s C900 product are even more pronounced in its
16 larger-diameter C905 products. The larger diameter products require thicker walls, and the thicker
17 the pipe, the more difficult it is to form the melted PVC compound and cool the pipe in the water
18 tanks. As more fully described herein at Section IV.C. (¶¶ 40-45), J-M’s accelerated production
19 rates resulted in less processing time in the extruder and die while the pipe was hot, and
20 inappropriate duration in the cooling baths to form and strengthen. The result, in combination
21 with J-M’s additional cost-cutting measures (see ¶¶ 32-39), was to further weaken the pipe and
22 create locked-in stresses. See ¶ 44 herein. Whereas these processing deficiencies resulted in
23 substandard C900 product, they resulted even more so in substandard C905 product.

24 284. Additionally, FM’s quality control testing requirements demand the Quick Burst
25 Test to be conducted per ASTM D1599 on AWWA C900 pipe, including the bell, at the beginning
26 of production of each size and class of pipe, and thereafter every 24 hours. Exhibit 49 at Section
27 5.4.5. As described more fully herein at Sections V.B.3 (¶¶ 100-107) and VII.D. (¶¶ 260-265),
28 rather than adjust manufacturing practices to meet the Quick Burst Test requirements, J-M

1 violated the standards by, *inter alia*, knowingly continuing to miscalculate the test pressure
2 required, repeatedly testing the same product over time, or overriding reject tags and releasing the
3 non-conforming pipe (§§ 260-265). J-M regularly failed to properly administer the routine Quick
4 Burst Tests, had knowledge of such failures, and nonetheless released such product for sale.

5 **E. Acetone-Immersion Testing**

6 285. FM 1612's Extrusion Quality test is the acetone-immersion test that must be
7 conducted as specified in ASTM D2152. FM requires this test to be run at the beginning of
8 production of each size and class of pipe, and thereafter every 8 hours. Exhibit 49 at Section
9 5.4.4. For the reasons stated fully herein at Section VI.E. (§§ 267-269), J-M inadequately
10 safeguarded the integrity of the acetone and regularly tested its C900 and C905 products with
11 diluted acetone. J-M was thus able to "pass" specimens that would have failed had they been
12 tested using undiluted acetone. See § 269 herein. Even with diluted acetone, J-M routinely failed
13 the acetone-immersion (Extrusion Quality) tests, overrode reject tags, and sent out the non-
14 conforming pipe. See § 270 herein.

15 286. For these reasons, J-M violated various FM 1612's manufacturing requirements for
16 both AWWA C900 and C905 products. Despite its knowledge of the repeated manufacturing
17 failures resulting in these violations, J-M continued to release such product for sale and
18 distribution.

19 **F. J-M's False Representations Regarding FM Listing and FM Compliance**

20 287. Despite its knowledge (beginning at least in 1997) that much of its PVC pipe
21 regularly failed to meet the various requirements of FM 1612, and its knowledge (as of at least
22 June 1, 2005) that its new no-thickened-section pipe had a similar failure rate, J-M represented to
23 its distributors and other customers, including Real Parties, that its PVC pipe met FM
24 requirements. J-M represented that its AWWA C900 pipe (DR 14 and DR 18) and C905 pipe
25 (fourteen- and sixteen-inch DR 18) met FM Approval standards from at least 1997 until
26 November 2000, when J-M withdrew from the FM Approval listing for all of its PVC products.
27 Further, in mid-2005, when its products were not listed as FM Approved, J-M represented on its
28 website that some of its products were FM Approved; even after this misrepresentation was

brought to J-M management's attention, J-M knowingly continued this false representation. When J-M obtained reinstatement of FM Approval for some of its products in or around December 2006, J-M began again to represent that its AWWA C900 (DR 14) PVC pipe was legitimately FM-compliant. See Exhibit 50. J-M used the "FM APPROVED" mark on the pipe that it claimed complied with the FM standards. J-M also provided certifications to its individual customers that its Blue Brute and Big Blue PVC pipe has been manufactured in accordance with the requirements of FM 1612.

288. At times relevant to this Complaint, Real Parties, like other governmental entities and water distribution systems, have required that pipes for use in underground fire protection service systems be FM Approved pursuant to the requirements of FM 1610 (prior to 1999) and/or FM 1612 (from 1999 to present). Such government requirements include, but are not limited to, incorporation of FM requirements through NFPA 24's requirement of fire protection listing. See ¶ 117, incorporated herein. Thus, accuracy in FM listing representations is important because FM 1612 is one of the few standards approving pipe for fire protection. Many cities and governmental entities, including Real Parties, require NFPA 24 and/or FM 1612 compliance for fire protection service. See, e.g., Exhibits 27, 28 & 52. The only means by which J-M can claim compliance with NFPA 24's "fire listing" requirement are through its claims of UL listing and/or FM approval.

IX. FORMOSA'S COMPLICITY IN THE FORMULATION, SALE, AND TESTING OF INFERIOR, NON-COMPLIANT PRODUCTS

A. Formosa Was Directly Involved in the Formulation, Sale, and Testing of Inferior, Non-Compliant Products

289. Formosa is directly involved in the supply of materials to J-M that affected pipe quality. Formosa supplies J-M with PVC resin and PVC compound (a combination of resins and additives). Formosa requires J-M to purchase Formosa resin and materials for most of its plants. Formosa's resin and materials, however, often do not meet J-M's quality specifications, and Formosa knows from meetings and communications with J-M that its materials contribute to the deficiencies in J-M's pipe.

1 290. For example, on or around May 23, 2002, J-M R&D and plant personnel, including
2 Fassler, met with Formosa to discuss problems with Formosa's F622 resin and its compliance with
3 J-M's specifications. Specifically, J-M expressed concerns about Formosa's request to lower the
4 resin's inherent viscosity range, permit more contamination, and modify the particle size
5 distribution requirement, all of which would further degrade J-M pipe quality. In his memo about
6 this meeting, Fassler wrote: "Lower IV [inherent viscosity] means lower physical strength (lower
7 tensile strength, lower hoop stress, lower impact resistance). For J-M90 the safety factor for
8 tensile strength and hoop stress is already small." Exhibit 53. Fassler also documented J-M's
9 other concerns about Formosa's F622 resin, which concerns were also relayed to Formosa.
10 Relator learned from J-M personnel, including Hwang and Fassler, that J-M acceded to Formosa's
11 requests regarding J-M's use of its F622 resin, lowering its purchasing specifications to
12 accommodate Formosa. As a result, J-M could no longer reject Formosa resin that previously J-M
13 would have turned away as substandard. Throughout Relator's employment at J-M, the use of
14 Formosa's F622 resin was a continuing problem for J-M pipe quality.

15 291. Further, Formosa purchases additives that were not produced to industry or J-M
16 specifications. Such nonconforming materials are marketed to J-M and Formosa (as part of
17 Formosa's PVC resin blends used by J-M) as "off-spec" or "wide-spec" products, available for a
18 reduced cost. J-M repeatedly utilizes such off-spec materials for the purpose of cutting costs.
19 Formosa is aware that the materials are not to specification because, among other things, they are
20 expressly described in communications with Formosa and J-M as "off-spec" or "wide spec." J-M
21 and Formosa know that use of such non-conforming materials violates industry standards and J-M
22 manufacturing specifications, resulting in poor-quality pipe.

23 292. Formosa was also directly involved in the testing of non-conforming J-M pipe. In
24 late 2004 or early 2005, J-M Quality Control and R&D personnel informed Relator that Formosa
25 had tested J-M pipe when Formosa was experiencing problems with its compounds that included
26 Luxco multi-wax. Formosa investigated several batches of multi-wax and found that they did not
27 contain the amount of calcium stearate required by J-M's approved formula. Moreover, the
28 proportion of calcium stearate was highly variable between batches. Formosa witnessed through

1 its direct testing that J-M pipe made with Luxco multi-wax had greatly varying physical
2 properties, resulting in non-compliant pipe. This inconsistency, in part, contributed to the HDB
3 failures prominent during the development of the no-thickened-section pipe. J-M used Luxco
4 multi-wax for many years.

5 **B. Formosa Exercised Control Over J-M and Had First-Hand Knowledge that J-**
6 **M Was Submitting False Claims to Real Parties**

7 293. In addition to being directly involved in the manufacturing and testing of non-
8 conforming J-M pipe, Formosa knows that J-M has submitted or caused the submission of false
9 claims to Real Parties. Because of the overlapping management and common executive personnel
10 in both Formosa and J-M, Formosa knew at all times what J-M was doing with regard to the
11 manufacture and sales of substandard pipe. Formosa and J-M's headquarters were located in the
12 same building in Livingston, New Jersey until approximately October 2008. Prior to this time,
13 senior J-M and Formosa Finance personnel met together at least two to three times per week.
14 During time periods relevant to this Complaint, persons holding executive or management
15 positions simultaneously in both Formosa (and/or Formosa's closely integrated state-affiliates)
16 and J-M include the following:

- 17 (1) Y.C. Wang (Walter Wang's father), both Chairman of Formosa and Chairman of
18 J-M. Y.C. Wang is sometimes listed in public filings as J-M's CEO.
- 19 (2) C.S. Wang, both Vice Chairman and a Director of Formosa, and a Director of
20 J-M.
- 21 (3) Y.T. Wang (Y.C. Wang's brother and Walter Wang's uncle), an Executive
22 Director/Director of Formosa, and Vice Chairman of J-M.
- 23 (4) C.T. Lee, an Executive Director/Director of Formosa, and a Director of J-M.
- 24 (5) Alice Hu Nightingale, Secretary of Formosa and Secretary of J-M.
- 25 (6) Walter Wang, reported to be on the executive board of the Formosa Plastics
26 Group at the same time he was the President (and now CEO) of J-M.

27 294. In addition, during the relevant period, Formosa's finance department monitored
28 and controlled risk and insurance matters for J-M. As an example, Formosa's knowledge and

1 control is evidenced in a March 21, 2006 email from Ken Nasto, J-M Director of Finance, to
2 multiple J-M and Formosa personnel, about a new customer claim. In the email, Nasto states:
3 "From what I can gather from the below emails, a section of our 10" DR18 pipe exploded
4 resulting in one injury and undisclosed (as of yet) property damage. I am notifying Norberto
5 Torres of this as well given the fact that at present our liabi[li]ty coverage is still under the control
6 of Formosa, at which point I am sure that a representative from our insurance carrier will be
7 dispatched to monitor our liability" Exhibit 65, incorporated herein.

8 295. At least every quarter, J-M reported to Formosa's Finance and Risk Management
9 department any open claims for failing pipe as to which J-M expected to pay over \$5,000 or to
10 litigate. Norberto Torres ("Torres") was the Director of Formosa's Finance and Risk Management
11 department. Relator spoke regularly with Torres about these customer complaints as part of
12 Relator's duties in J-M's Product Assurance Department. Relator repeatedly specifically informed
13 Formosa's Finance Director about J-M's manufacturing deficiencies that resulted in substandard
14 and non-conforming pipe. For example, in or around March 2003, Relator discussed with Torres
15 a claim involving J-M pipe that exploded and caused serious personal injury to a person named
16 Richard O'Barto. In the context of the O'Barto claim, Relator discussed with Torres the J-M-pipe
17 defects due to substandard materials, insufficient tensile strength, other non-conformities with
18 specifications, and excessive locked-in stresses. Formosa was further aware of J-M's common
19 practices of failing to acknowledge non-conformities to complaining customers and of falsely
20 denying claims that in fact involved defective product.

21 **C. Formosa Directly Benefitted from the Submission By J-M of False Claims to**
22 **Real Parties**

23 296. Formosa received the benefit of J-M's false claims to Real Parties. At the end of
24 every business day, J-M transferred its profits to Formosa. This daily transfer did not include
25 amounts retained for anticipated regular expenditures, but if J-M anticipated any extra
26 expenditures above the regular amounts, it was required to obtain Formosa's approval for them.
27 The daily funneling of J-M's profits to Formosa occurred until at least November 1, 2005, when
28 Formosa's head (Y.C. Wang) reportedly transferred J-M ownership to his son (Walter Wang).

1 Thus, as the parent company of J-M, Formosa received the profits from J-M's sales of non-
2 conforming pipe.

3 297. Having been a beneficiary of defendant J-M's false claims to Real Parties,
4 defendant Formosa failed to disclose what it knew about J-M's false claims within a reasonable
5 time after discovery of the false claims.

6 **X. EMPLOYMENT DISCRIMINATION FOR ACTS IN**
7 **FURTHERANCE OF FALSE CLAIMS ACT ACTION**

8 298. Relator began working for J-M on July 8, 2002 as an engineer in its Product
9 Assurance Department with an annual salary of \$45,000. From July 2002 until he started
10 complaining to his superiors about the impropriety of the fraudulent practices described above,
11 Relator was regularly commended by his superiors on his job performance and received regular
12 pay raises and good performance reviews.

13 299. For instance, in the Summer and Fall of 2003, Relator received considerable praise
14 and notice from his superiors, including J-M's President Walter Wang, for his work in proposing a
15 design change to J-M's two most popular products, Blue Brute and Big Blue, that would save J-M
16 \$3,000,000 a year in materials costs and allow J-M to increase its efficiency and output.
17 Throughout the early stages of his work on the design change, dubbed the "No Thickened Section
18 Project," Relator's currency within J-M as a rising star continued to grow.

19 300. However, by 2004, as J-M received results from the first round of full-blown HDB
20 testing on the no-thickened-section pipe, Relator began to raise concerns with his superiors about
21 the pipe's excessive swelling and inability to pass the HDB testing more than 50 percent of the
22 time. After questioning what these results meant for the tensile strength of J-M's thickened-
23 section pipe, which was made from the same materials and process, Relator was removed from the
24 Project in early 2005 and began to experience a dramatic change in his employment conditions.
25 Where previously he had been treated as part of the team, Relator suddenly was being shunned by
26 his co-workers. For instance, Relator's access to testing and other sensitive information was
27 severely restricted. Lin instructed staff in J-M's Research and Development and Corporate
28 Quality Control Departments not to provide Relator any documents without first getting approval

1 from Lin.

2 301. Over the intervening months, Relator became increasingly aware that J-M's tensile
3 strength problems were not the result of inadvertence, but rather were part of a larger scheme to
4 defraud its customers by implementing cost-cutting measures that decreased its pipe's tensile
5 strength and then manipulating test methods, specimens, and data to conceal these strength
6 problems from its customers and third-party certifiers and standards organizations like UL, NSF,
7 FM, IAPMO, AWWA, and ASTM. Throughout this time, Relator continued to raise concerns
8 with his superiors about the propriety of J-M's fraudulent practices. As the strength of his
9 objections grew, Relator was met by J-M with increasingly adverse employment action.

10 302. For instance, in December 2004, at the same time Relator was raising concerns
11 with his superiors about the tensile strength of J-M's UL-listed products, an opening became
12 available in Relator's Department for the position of Product Assurance Manager. This position,
13 which involved overseeing the handling of claims and lawsuits against J-M for non-conforming
14 PVC pipe, had greater pay and responsibilities than Relator's current position. With a masters
15 degree in structural engineering, associates and bachelors degrees in civil engineering, a bachelors
16 degree in management and two years of experience handling PVC pipe claims and lawsuits for J-
17 M, Relator was well-qualified for the job.

18 303. Relator was one of only two internal J-M candidates being considered for the job.
19 The other candidate, Mai Huynh, had no engineering degrees or other formal training relevant to
20 the job description and no experience with claims and lawsuits or PVC pipe. At the time he was
21 being considered for the position, Huynh had worked only one year at J-M on tooling issues
22 relating to J-M's high density polyethylene ("HDPE") pipe, the sales of which represent a small
23 fraction of J-M's business. Despite his short tenure at J-M and complete lack of experience, J-M
24 gave the position of Product Assurance Manager to Huynh.

25 304. In the summer of 2005, Relator objected strongly to his managers' instructions that
26 he deny a claim brought by customer Sheldon Site Utilities ("Sheldon") for defective Blue Brute
27 pipe that had pinhole leaks and failed when it was pressurized. After sending samples from the
28 two problem pipes to CRT Laboratories for testing, Sheldon presented J-M with test results

1 showing that both samples had tensile strengths below the minimum requirement of 7,000 psi.
2 See Exhibit 9. Despite Relator's recommendation that it should pay the Sheldon claim, Cheng and
3 Lin instructed Relator to deny the claim on the grounds that the test results did not show that the
4 pipe failed to comply with AWWA C900. Cheng and Lin argued that the CRT test results
5 showing substandard tensile strengths were not valid because, as they interpreted it, AWWA C900
6 required that tensile strength testing be performed on specimens prepared from PVC compound,
7 not finished PVC pipe, and the CRT testing had been performed on finished pipe. On July 19,
8 2005, Relator sent Sheldon a letter stating: "Since no manufacturing defect or non-conformance
9 with the AWWA C900 standard was found within the samples sent to us or to CRT Labs we are
10 regretfully denying your claim." Exhibit 39, incorporated herein.

11 305. Sheldon responded to J-M's denial by threatening to sue J-M for supplying
12 defective product if it did not reconsider and agree to pay Sheldon's claim for \$36,707.61. In
13 discussing how to handle Sheldon's renewed claim, Cheng and Lin again sought to minimize J-
14 M's responsibility by interpreting AWWA C900 as requiring that tensile strength testing be
15 performed on samples prepared from PVC compound and declaring the CRT tests invalid because
16 they were performed on finished PVC pipe. Stating that the CRT results were "not sufficient
17 enough to conclude the failure of pipe sample reason to be 100% fall on J-M," Cheng
18 recommended offering Sheldon a maximum of \$10,000. See Exhibit 10.

19 306. Relator, however, recommended that J-M settle the claim for \$30,000 based on
20 the findings of CRT. Relator argued that even if Cheng and Lin's interpretation of AWWA C900
21 were correct, J-M could not ignore the fact that UL 1285 expressly states that tensile strength
22 testing is to be performed on finished pipe. At a minimum, Relator concluded, the CRT test
23 results show that J-M's Blue Brute pipe failed to meet the tensile strength requirements of UL
24 1285. In his IRA discussing his recommendation for how to handle the Sheldon claim, dated
25 October 28, 2005, Relator listed as his basis for settling the claim for \$30,000 that "CRT
26 conducted testing on the pipe and found that the tensile strength of the pipe was below that
27 required by the UL Listing Mark on the pipe on all samples tested." Exhibit 10.

28 307. On November 1, 2005, two business days after Relator distributed his IRA, Cheng

1 called Relator into his office and reprimanded Relator for portraying J-M's liability for the
2 Sheldon claim in his IRA as being "black and white" instead of trying to find a way to deny the
3 claim or pass the blame to Sheldon. See Exhibit 11. Cheng faulted Relator for not supporting
4 Lin's argument that the CRT testing was invalid under AWWA C900 because it was performed on
5 samples prepared from finished PVC pipe as opposed to PVC compound. Id. When Relator tried
6 to defend his position, Cheng told Relator that if he "could not find a way to deny the claim and
7 follow his [Cheng's] thoughts that J-M is not responsible even if we fail the test, and offer
8 alternative theories as to the cause of failure for this case, then you need to find another position in
9 J-M where you will listen and follow instructions given and not disagree." Id.

10 308. The next day, Cheng again called Relator into his office to follow up on the
11 previous day's discussion. See Exhibit 40 (Relator's contemporaneous notes dated 11/2/05),
12 incorporated herein. Cheng advised Relator that he needed to be "more political" and to try harder
13 to make more friends at J-M "by avoiding sensitive issues where conflict may occur, such as [was]
14 the case yesterday." Id. Cheng warned Relator that taking a close-minded position on issues, as
15 he had done in the IRA on the Sheldon claim, was not appropriate and to be successful in J-M and
16 in life Relator needed to "open [his] mind to all the possibilities, listen to the others in the
17 company more, regardless if [he] think[s] they are right or wrong, and avoid conflicts by not
18 questioning their judgments and actions." Id.

19 309. Two days later, on November 4, when Relator refused to follow Cheng's advice
20 and change his recommendation on the Sheldon claim, Cheng informed Relator that J-M was
21 conducting an investigation into purported allegations that Relator had accepted kickbacks from
22 Billy Sheldon, the owner of Sheldon Site Utilities, in exchange for Relator's increasing the
23 amount he recommended J-M should pay Sheldon for his claim. Cheng sent Relator home and
24 instructed him not to report to work until the investigation was complete. That same day, in
25 response to these charges, Relator provided J-M with a four-page statement denying his
26 involvement in any such improprieties. See Exhibit 41, incorporated herein. However, three
27 business days later, on November 9, J-M terminated Relator for the stated reason that it had
28 concluded that the allegations against Relator were "credible, sustainable and substantiated."

1 Exhibit 42, incorporated herein.

2 310. As these circumstances clearly demonstrate, the reason J-M gave for terminating
 3 Relator – that Relator had increased the amount he recommended J-M pay to settle a claim as a
 4 result of having received a bribe from the claimant -- was a pretext. The real reason J-M fired
 5 Relator -- as is demonstrated by the close proximity between Relator's IRA stating that the J-M
 6 PVC pipe involved in the Sheldon claim had a tensile strength below that required by the UL
 7 Listing Mark on the pipe and J-M's charges of Relator accepting bribes from a claimant – was in
 8 retaliation for his investigating and raising concerns about J-M's fraudulent practices of
 9 knowingly selling PVC pipe with substandard tensile strength while falsely representing that it
 10 complied with industry standards.

11
 12 **COUNT I**
Substantive Violations of Federal False Claims Act
31 U.S.C. §§3729(a)(1), (a)(2) and 3732(b)
 13 **(Against Defendant J-M)**

14 311. Relator realleges and incorporates by reference the allegations made in Paragraphs
 15 1 through 310 of this Complaint.

16 312. This is a claim for treble damages and forfeitures under the Federal False Claims
 17 Act, 31 U.S.C. §§ 3729 *et seq.*, as amended.

18 313. Through the acts described above, defendant J-M, its agents, employees and co-
 19 conspirators, knowingly presented and caused to be presented to officers, employees, and/or
 20 members of the Armed Forces of the United States, including, without limitation, the federal
 21 military entities set forth in Exhibit 2 (collectively, the "United States"), false and fraudulent
 22 claims, and knowingly failed to disclose material facts, in order to obtain payment and approval
 23 from the United States and its contractors, grantees, and other recipients of its funds, including
 24 without limitation the payments made by the United States set forth in Exhibit 2.

25 314. Through the acts described above, defendant J-M, its agents, employees and co-
 26 conspirators, knowingly made, used and caused to be made and used false records and statements,
 27 which also omitted material facts, in order to induce the United States and its contractors and
 28 grantees to approve and pay false and fraudulent claims.

8 COUNT II
9 Substantive Violations of California False Claims Act
10 Cal. Gov't Code §§ 12651(a)(1) and (a)(2)
(Against Defendant J-M)

13 318. This is a claim for treble damages and forfeitures under the California False Claims
14 Act, Cal. Gov't Code §§ 12650 *et seq.*

320. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly made, used, and caused to be made and used false records and statements, which also omitted material facts, in order to induce the California Real Parties and their contractors and grantees to approve and pay false and fraudulent claims.

77

1 and claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and
2 as a result thereof, paid money that they otherwise would not have paid, and were deprived of
3 money, property or services, as a result of defendants' actions.

4 322. By reason of the payment made by the California Real Parties as a result of
5 defendant J-M's fraud, the California Real Parties have suffered damages, and continue to be
6 damaged, in an amount to be determined at trial.

7 323. The California Real Parties are entitled to the maximum penalty of \$10,000 for
8 each and every false or fraudulent claim made, used, presented or caused to be made used or
9 presented by defendant J-M.

10
11 **COUNT III**
Substantive Violations of California False Claims Act
Cal. Gov't Code § 12651(a)(8)
(Against Both Defendants)
12

13 324. Relator realleges and incorporates by reference the allegations made in Paragraphs
14 1 through 323 of this Complaint.

15 325. This is a claim for treble damages and forfeitures under the California False Claims
16 Act, Cal. Gov't Code §§ 12650 *et seq.*

17 326. Through the acts described above, defendants J-M and Formosa, their agents,
18 employees and co-conspirators became the beneficiaries of the inadvertent submission of false
19 claims to the California Real Parties and subsequently discovered the falsity of the claims.

20 327. Defendants J-M and Formosa failed to disclose the false claims to the California
21 Real Parties within a reasonable time after discovery that the claims were false.

22 328. By reason of defendants' failures to disclose the false claims to the California Real
23 Parties, those Real Parties have suffered damages, and continue to be damaged, in an amount to be
24 determined at trial.

25 329. The California Real Parties are entitled to the maximum penalty of \$10,000 for
26 each and every false or fraudulent claim made, used, presented or caused to be made used or
27 presented by defendants.

28 //

COUNT IV
Substantive Violations of Delaware False Claims And Reporting Act
6 Del. C. §§ 1201(a)(1) and (a)(2)
(Against Defendant J-M)

330. Relator realleges and incorporates by reference the allegations made in Paragraphs 1 through 329 of this Complaint.

331. This is a claim for treble damages and penalties under the Delaware False Claims And Reporting Act, 6 Del. C. §§ 1201 *et seq.*

332. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly presented and caused to be presented to officers and/or employees of the State of Delaware and any political subdivision thereof that purchased J-M PVC pipe between January 18, 2006 and the present, including, without limitation, the Delaware political subdivisions set forth in Exhibit 1 (together with the State of Delaware, the "Delaware Real Parties"), and including, without limitation, those purchases set forth in Exhibit 3(b), false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment and approval from the Delaware Real Parties and their contractors, grantees, and other recipients of their funds.

333. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly made, used, and caused to be made and used false records and statements, which also omitted material facts, in order to induce the Delaware Real Parties and their contractors and grantees to approve and pay false and fraudulent claims.

334. The Delaware Real Parties were unaware of the falsity of the records, statements, and claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and as a result thereof, paid money that they otherwise would not have paid, and were deprived of money or property, as a result of defendants' actions.

335. By reason of the payment made by the Delaware Real Parties as a result of defendant J-M's fraud, the Delaware Real Parties have suffered damages, and continue to be damaged, in an amount to be determined at trial.

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336. The Delaware Real Parties are entitled to the maximum penalty of \$11,000 for each and every violation of 6 Del. C. § 1201 alleged herein.

COUNT V
Substantive Violations of District of Columbia False Claims Act
D.C. Code § 2-308.14(a)(1) and (a)(2)
(Against Defendant J-M)

337. Relator realleges and incorporates by reference the allegations made in Paragraphs 1 through 336 of this Complaint.

338. This is a claim for treble damages and penalties under the District of Columbia False Claims Act, D.C. Code §§ 2-308.13 *et seq.*

339. Through the acts described above, defendant J-M, its agents, employees, and co-conspirators, knowingly presented and caused to be presented to officers and/or employees of the District of Columbia and the District of Columbia Water and Sewer Authority that purchased J-M PVC pipe between 2001 and the present (together with the District of Columbia, the "District of Columbia Real Parties"), including without limitation those purchases set forth in Exhibit 3(c), false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment and approval from the District of Columbia Real Parties and their contractors, grantees, and other recipients of their funds.

340. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly made, used, and caused to be made and used false records and statements, which also omitted material facts, in order to induce the District of Columbia Real Parties and their contractors and grantees to approve and pay false and fraudulent claims.

341. The District of Columbia Real Parties were unaware of the falsity of the records, statements, and claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and as a result thereof, paid money that they otherwise would not have paid, and were deprived of money, property or services, as a result of defendants' actions.

342. By reason of the payment made by the District of Columbia Real Parties as a result of J-M's fraud, the District of Columbia Real Parties have suffered damages, and continue to be

1 damaged, in an amount to be determined at trial.

2 343. The District of Columbia Real Parties are entitled to the maximum penalty of
3 \$10,000 for each and every false claim of D.C. Code § 2-308.14 alleged herein.

4
5 **COUNT VI**
6 **Substantive Violations of Florida False Claims Act**
7 **Fla. Stat. Ann. § 68.082(2)(a) and (2)(b)**
8 **(Against Defendant J-M)**

9 344. Relator realleges and incorporates by reference the allegations made in Paragraphs
10 1 through 343 of this Complaint.

11 345. This is a claim for treble damages and penalties under the Florida False Claims Act,
12 Fla. Stat. Ann. §§ 68.081 *et seq.*

13 346. Through the acts described above, defendant J-M, its agents, employees and co-
14 conspirators, knowingly presented and caused to be presented to officers, employees, and/or
15 agencies of the Florida State Government, including officials, officers, commissions, boards,
16 authorities, councils, committees, and/or departments of the executive branch of the Florida State
17 Government, that purchased J-M PVC pipe between January 18, 2006 and the present (together
18 with the State of Florida, the "Florida State Government"), and including, without limitation, the
19 purchases set forth in Exhibit 3(d), false and fraudulent claims, and knowingly failed to disclose
20 material facts, in order to obtain payment and approval from the Florida State Government and its
21 contractors, grantees, and other recipients of its funds.

22 347. Through the acts described above, defendant J-M, its agents, employees and co-
23 conspirators, knowingly made, used, and caused to be made and used false records and statements,
24 which also omitted material facts, in order to induce the Florida State Government and its
25 contractors and grantees to approve and pay false and fraudulent claims.

26 348. The Florida State Government was unaware of the falsity of the records,
27 statements, and claims made and submitted by defendant J-M, its agents, employees, and co-
28 conspirators, and as a result thereof, paid money that it otherwise would not have paid, and was
deprived of money, property or services, as a result of defendants' actions.

1 349. By reason of the payment made by the Florida State Government as a result of
2 defendant J-M's fraud, the Florida State Government has suffered damages, and continues to be
3 damaged, in an amount to be determined at trial.

4 350. The Florida State Government is entitled to the maximum penalty of \$11,000 for
5 each and every violation of Fla. Stat. Ann. § 68.082 alleged herein.

6
7 **COUNT VII**
8 **Substantive Violations of Illinois Whistleblower and Reward and Protection Act**
9 **740 Ill. Comp. Stat. Ann. §§ 175/3(a)(1) and (a)(2)**
10 **(Against Defendant J-M)**

11 351. Relator realleges and incorporates by reference the allegations made in Paragraphs
12 1 through 350 of this Complaint.

13 352. This is a claim for treble damages and penalties under the Illinois Whistleblower
14 Reward and Protection Act, 740 Ill. Comp. Stat. Ann. §§ 175/1 *et seq.*

15 353. Through the acts described above, defendant J-M, its agents, employees, and co-
16 conspirators, knowingly presented and caused to be presented to officers, employees, and/or
17 members of the guard of the State of Illinois and any political subdivision or public water
18 authority thereof that purchased J-M PVC pipe between January 18, 2006 and the present,
19 including, without limitation, the Illinois political subdivisions and public water agencies listed in
20 Exhibit 1 (together with the State of Illinois, the "Illinois Real Parties"), and including without
21 limitation those purchases set forth in Exhibit 3(e), false and fraudulent claims, and knowingly
22 failed to disclose material facts, in order to obtain payment and approval from the Illinois Real
23 Parties and their contractors, grantees, and other recipients of their funds.

24 354. Through the acts described above, defendant J-M, its agents, employees and co-
25 conspirators, knowingly made, used, and caused to be made and used false records and statements,
26 which also omitted material facts, in order to induce the Illinois Real Parties and their contractors
27 and grantees to approve and pay false and fraudulent claims.

28 355. The Illinois Real Parties were unaware of the falsity of the records, statements, and
claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and as a
result thereof, paid money that they otherwise would not have paid, and were deprived of money

1 or property, as a result of defendants' actions.

2 356. By reason of the payment made by the Illinois Real Parties as a result of defendant
3 J-M's fraud, the Illinois Real Parties have suffered damages, and continue to be damaged, in an
4 amount to be determined at trial.

5 357. The Illinois Real Parties are entitled to the maximum penalty of \$11,000 for each
6 and every violation of 740 Ill. Comp. Stat. Ann. § 175/3 alleged herein.

7
8 **COUNT VIII**
9 **Substantive Violations of Indiana False Claims and Whistleblower Protection Act**
10 **Ind. Code Ann. §§ 5-11-5.5-2(b)(1) and (b)(2)**
11 **(Against Defendant J-M)**

12 358. Relator realleges and incorporates by reference the allegations made in Paragraphs
13 1 through 357 of this Complaint.

14 359. This is a claim for treble damages and penalties under the Indiana False Claims and
15 Whistleblower Protection Act, Ind. Code Ann. §§ 5-11-5.5-1 *et seq.*

16 360. Through the acts described above, defendant J-M, its agents, employees, and co-
17 conspirators, knowingly presented or caused to be presented to officers, employees, and/or agents
18 of the State of Indiana and any agency of the state government that purchased J-M PVC pipe
19 between 2005 and the present (together with the State of Indiana, the "Indiana Real Parties"),
20 including, without limitation, the payments made by the Indiana Real Parties set forth in Exhibit
21 3(f), false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain
22 payment and approval from the Indiana Real Parties and their contractors, grantees, and other
23 recipients of their funds.

24 361. Through the acts described above, defendant J-M, its agents, employees and co-
25 conspirators, knowingly made, used, and caused to be made and used false records and statements,
26 which also omitted material facts, in order to induce the Indiana Real Parties and their contractors
27 and grantees to approve and pay false and fraudulent claims.

28 362. The Indiana Real Parties were unaware of the falsity of the records, statements, and
claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and as a

1 result thereof, paid money that they otherwise would not have paid, and were deprived of money
2 or property, as a result of defendants' actions.

3 363. By reason of the payment made by the Indiana Real Parties as a result of defendant
4 J-M's fraud, the Indiana Real Parties have suffered damages, and continue to be damaged, in an
5 amount to be determined at trial.

6 364. The Indiana Real Parties are entitled to a minimum penalty of \$5,000 for each and
7 every violation of Ind. Code Ann. § 5-11-5.5-2 alleged herein.

8
9 **COUNT IX**
10 **Substantive Violations of Massachusetts False Claims Act**
11 **Mass. Gen. Laws ch. 12 §§ 5B(1) and 5B(2)**
12 **(Against Defendant J-M)**

13 365. Relator realleges and incorporates by reference the allegations made in Paragraphs
14 1 through 364 of this Complaint.

15 366. This is a claim for treble damages and penalties under the Massachusetts False
16 Claims Law, Mass. Gen. Laws ch. 12 §§ 5A *et seq.*

17 367. Through the acts described above, defendant J-M, its agents, employees and co-
18 conspirators, knowingly presented and caused to be presented to the officers, employees, and/or
19 agents of the Commonwealth of Massachusetts and any political subdivision or public water
20 authority thereof that purchased J-M PVC pipe between January 18, 1996 and the present,
21 including, without limitation, the Massachusetts political subdivisions and public water agencies
22 set forth in Exhibit 1 (together with the Commonwealth of Massachusetts, the "Massachusetts
23 Real Parties"), and including, without limitation, those purchases set forth in Exhibit 3(g), false
24 and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment
25 and approval from the Massachusetts Real Parties and their contractors, grantees, and other
26 recipients of their funds.

27 368. Through the acts described above, defendant J-M, its agents, employees and co-
28 conspirators, knowingly made, used, and caused to be made and used false records and statements,
which also omitted material facts, in order to induce the Massachusetts Real Parties and their

1 contractors and grantees to approve and pay false and fraudulent claims.

2 369. The Massachusetts Real Parties were unaware of the falsity of the records,
3 statements, and claims made and submitted by defendant J-M, its agents, employees, and co-
4 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
5 were deprived of money or property, as a result of defendants' actions.

6 370. By reason of the payment made by the Massachusetts Real Parties as a result of
7 defendant J-M's fraud, the Massachusetts Real Parties have suffered damages, and continue to be
8 damaged, in an amount to be determined at trial.

9 371. The Massachusetts Real Parties are entitled to the maximum penalty of \$10,000 for
10 each and every violation of Mass. Gen. Laws ch. 12, § 5B alleged herein.

11
12 **COUNT X**
Substantive Violations of Massachusetts False Claims Act
Mass. Gen. Laws ch. 12 § 5B(9)
(Against Both Defendants)
13

14 372. Relator realleges and incorporates by reference the allegations made in Paragraphs
15 1 through 371 of this Complaint.

16 373. This is a claim for treble damages and penalties under the Massachusetts False
17 Claims Law, Mass. Gen. Laws ch. 12, §§ 5A *et seq.*

18 374. Through the acts described above, defendants J-M and Formosa, their agents,
19 employees and co-conspirators became the beneficiaries of the inadvertent submission of false
20 claims to the Massachusetts Real Parties and subsequently discovered the falsity of the claims.

21 375. Defendants J-M and Formosa failed to disclose the false claims to the
22 Massachusetts Real Parties within a reasonable time after discovery that the claims were false.

23 376. By reason of defendants' failures to disclose the false claims to the Massachusetts
24 Real Parties, the Massachusetts Real Parties have suffered damages, and continue to be damaged,
25 in an amount to be determined at trial.

26 377. The Massachusetts Real Parties are entitled to the maximum penalty of \$10,000 for
27 each and every violation of Mass. Gen. Laws ch. 12 § 5B alleged herein.

28

COUNT XI
Substantive Violations of Nevada False Claims Act
Nev. Rev. Stat. Ann. §§ 357.040(1)(a) and (1)(b)
(Against Defendant J-M)

378. Relator realleges and incorporates by reference the allegations made in Paragraphs 1 through 377 of this Complaint.

379. This is a claim for treble damages and penalties under the Nevada False Claims Act, Nev. Rev. Stat. Ann. §§ 357.010 *et seq.*

380. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly presented and caused to be presented to officers, employees, and/or agents of the State of Nevada and any political subdivision or public water authority thereof that purchased J-M PVC pipe between January 18, 1996 and the present, including without limitation the Nevada political subdivisions and public water agencies set forth in Exhibit 1 (together with the State of Nevada, the "Nevada Real Parties"), and including without limitation those purchases set forth in Exhibit 3(h), false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment and approval from the Nevada Real Parties and their contractors, grantees, and other recipients of their funds.

381. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly made, used, and caused to be made and used false records and statements, which also omitted material facts, in order to induce the Nevada Real Parties and their contractors and grantees to approve and pay false and fraudulent claims.

382. The Nevada Real Parties were unaware of the falsity of the records, statements, and claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and as a result thereof, paid money that they otherwise would not have paid, and were deprived of money, property or services, as a result of defendants' actions.

383. By reason of the payment made by the Nevada Real Parties as a result of defendant J-M's fraud, the Nevada Real Parties have suffered damages, and continue to be damaged, in an amount to be determined at trial.

384. The Nevada Real Parties are entitled to the maximum penalty of \$10,000 for each and every violation of Nev. Rev. Stat. Ann. § 357.040 alleged herein.

COUNT XII
Substantive Violations of Nevada False Claims Act
Nev. Rev. Stat. Ann. § 357.040(1)(h)
(Against All Defendants)

385. Relator realleges and incorporates by reference the allegations made in Paragraphs 1 through 384 of this Complaint.

386. This is a claim for treble damages and penalties under the Nevada False Claims Act, Nev. Rev. Stat. Ann. §§ 357.010 *et seq.*

387. Through the acts described above, defendants J-M and Formosa, their agents, employees and co-conspirators became the beneficiaries of the inadvertent submission of false claims to the Nevada Real Parties and subsequently discovered the falsity of the claims

388. Defendants J-M and Formosa failed to disclose the false claims to the Nevada Real Parties within a reasonable time after discovery that the claims were false.

389. By reason of defendants' failures to disclose the false claims to the Nevada Real Parties, the Nevada Real Parties have suffered damages, and continue to be damaged, in an amount to be determined at trial.

390. The Nevada Real Parties are entitled to the maximum penalty of \$10,000 for each and every violation of Nev. Rev. Stat. Ann. § 357.040 alleged herein.

COUNT XIII
Substantive Violations of New Mexico Fraud Against Taxpayers Act
§§ 44-9-3(A)(1) and (A)(2)
(Against Defendant J-M)

391. Relator realleges and incorporates by reference the allegations made in Paragraphs 1 through 390 of this Complaint.

392. This is a claim for treble damages and forfeitures under the New Mexico Fraud Against Taxpayers Act, N.M. Stat. Ann. §§ 44-9-1 *et seq.*

393. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly presented and caused to be presented to officers, employees, and/or agents of the State of New Mexico and any political subdivision thereof that purchased J-M PVC

1 pipe between January 18, 1996 and the present, including, without limitation, the New Mexico
2 political subdivisions set forth in Exhibit 1 (together with the State of New Mexico, the "New
3 Mexico Real Parties"), and including, without limitation, those purchases set forth in Exhibit 3(i),
4 false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain
5 payment and approval from the New Mexico Real Parties and their contractors, grantees, and other
6 recipients of their funds.

7 394. Through the acts described above, defendant J-M, its agents, employees and co-
8 conspirators, knowingly made, used, and caused to be made and used false records and statements,
9 which also omitted material facts, in order to induce the New Mexico Real Parties and their
10 contractors and grantees to approve and pay false and fraudulent claims.

11 395. The New Mexico Real Parties were unaware of the falsity of the records,
12 statements, and claims made and submitted by defendant J-M, its agents, employees, and co-
13 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
14 were deprived of money, property or services, as a result of defendants' actions.

15 396. By reason of the payment made by the New Mexico Real Parties as a result of
16 defendant J-M's fraud, the New Mexico Real Parties have suffered damages, and continue to be
17 damaged, in an amount to be determined at trial.

18 397. The New Mexico Real Parties are entitled to the maximum penalty of \$10,000 for
19 each and every violation of N.M. Stat. Ann. § 44-9-3 alleged herein.

20
21 **COUNT XIV**
Substantive Violations of New Mexico Fraud Against Taxpayers Act
N.M. Stat. Ann. § 44-9-3(A)(9)
22 **(Against Both Defendants)**

23 398. Relator realleges and incorporates by reference the allegations made in Paragraphs
24 1 through 397 of this Complaint.

25 399. This is a claim for treble damages and penalties under the New Mexico False
26 Claims Law, N.M. Stat. Ann. §§ 44-9-1 *et seq.*

27 400. Through the acts described above, defendants J-M and Formosa, their agents,
28 employees and co-conspirators became the beneficiaries of the inadvertent submission of false

1 claims to the New Mexico Real Parties and subsequently discovered the falsity of the claims.

2 401. Defendants J-M and Formosa failed to disclose the false claims to the New Mexico
3 Real Parties within a reasonable time after discovery that the claims were false.

4 402. By reason of the defendants' failures to disclose the false claims to the
5 Massachusetts Real Parties, the New Mexico Real Parties have suffered damages, and continue to
6 be damaged, in an amount to be determined at trial.

7 403. The New Mexico Real Parties are entitled to the maximum penalty of \$10,000 for
8 each and every violation of N.M. Stat. Ann. § 44-9-3 alleged herein.

9
10 **COUNT XV**
Substantive Violations of New York False Claims Act
N.Y. State Fin. §§ 189(1)(a) and (1)(b)
(Against Defendant J-M)
11
12

13 404. Relator realleges and incorporates by reference the allegations made in Paragraphs
14 1 through 403 of this Complaint.

15 405. This is a claim for treble damages and forfeitures under the New York False Claims
16 Act, N.Y. State Fin. §§ 187 *et seq.*

17 406. Through the acts described above, defendant J-M, its agents, employees and co-
18 conspirators, knowingly presented and caused to be presented to officers, employees, and/or
19 agents of the State of New York and any local government within the State of New York that
20 purchased J-M PVC pipe between January 18, 1996 and the present, including, without limitation,
21 the New York local governments set forth in Exhibit 1 (together with the State of New York, the
22 "New York Real Parties"), and including, without limitation, those purchases set forth in Exhibit
23 3(k), false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain
24 payment and approval from the New York Real Parties and their contractors, grantees, and other
25 recipients of their funds.

26 407. Through the acts described above, defendant J-M, its agents, employees and co-
27 conspirators, knowingly made, used, and caused to be made and used false records and statements,
28 which also omitted material facts, in order to induce the New York Real Parties and their

1 contractors and grantees to approve and pay false and fraudulent claims.

2 408. The New York Real Parties were unaware of the falsity of the records, statements,
3 and claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and
4 as a result thereof, paid money that they otherwise would not have paid, and were deprived of
5 money or property, as a result of defendants' actions.

6 409. By reason of the payment made by the New York Real Parties as a result of
7 defendant J-M's fraud, the New York Real Parties have suffered damages, and continue to be
8 damaged, in an amount to be determined at trial.

9 410. The New York Real Parties are entitled to the maximum penalty of \$12,000 for
10 each and every violation of N.Y. State Fin. § 189 alleged herein.

11 **COUNT XVI**
12 **Substantive Violations of Tennessee False Claims Act**
13 **Tenn. Code Ann. §§ 4-18-103(a)(1) and (a)(2)**
14 **(Against Defendant J-M)**

15 411. Relator realleges and incorporates by reference the allegations made in Paragraphs
16 1 through 410 of this Complaint.

17 412. This is a claim for treble damages and penalties under the Tennessee False Claim
18 Act, Tenn. Code Ann. §§ 4-18-101 *et seq.*

19 413. Through the acts described above, defendant J-M, its agents, employees and co-
20 conspirators, knowingly presented and caused to be presented to officers and/or employees of the
21 State of Tennessee and any political subdivision or public water authority thereof that purchased J-
22 M PVC pipe between January 18, 1996 and the present, including, without limitation, the
23 Tennessee political subdivisions and public water authorities set forth in Exhibit 1 (together with
24 the State of Tennessee, the "Tennessee Real Parties"), and including, without limitation, those
25 purchases set forth in Exhibit 3(k), false and fraudulent claims, and knowingly failed to disclose
26 material facts, in order to obtain payment and approval from the Tennessee Real Parties and their
27 contractors, grantees, and other recipients of their funds.

28 414. Through the acts described above, defendant J-M, its agents, employees and co-
conspirators, knowingly made, used, and caused to be made and used false records and statements,

1 which also omitted material facts, in order to induce the Tennessee Real Parties and their
2 contractors and grantees to approve and pay false and fraudulent claims.

3 415. The Tennessee Real Parties were unaware of the falsity of the records, statements,
4 and claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and
5 as a result thereof, paid money that they otherwise would not have paid, and were deprived of
6 money, property or services, as a result of defendants' actions.

7 416. By reason of the payment made by the Tennessee Real Parties as a result of
8 defendant J-M's fraud, the Tennessee Real Parties have suffered damages, and continue to be
9 damaged, in an amount to be determined at trial.

10 417. The Tennessee Real Parties are entitled to the maximum penalty of \$10,000 for
11 each and every violation of Tenn. Code. Ann. § 4-18-103 alleged herein.

12
13 **COUNT XVII**
Substantive Violations of Tennessee False Claims Act
Tenn. Code Ann. 4-18-103(a)(8)
(Against Both Defendants)
14

15 418. Relator realleges and incorporates by reference the allegations made in Paragraphs
16 1 through 417 of this Complaint.

17 419. This is a claim for treble damages and penalties under the Tennessee False Claim
18 Act, Tenn. Code Ann. §§ 4-18-101 *et seq.*

19 420. Through the acts described above, defendants J-M and Formosa, their agents,
20 employees and co-conspirators became the beneficiaries of the inadvertent submission of false
21 claims to the Tennessee Real Parties and subsequently discovered the falsity of the claims.

22 421. Defendants J-M and Formosa failed to disclose the false claims to the Tennessee
23 Real Parties within a reasonable time after discovery that the claims were false.

24 422. By reason of defendants' failures to disclose the false claims to the Tennessee Real
25 Parties, the Tennessee Real Parties have suffered damages, and continue to be damaged, in an
26 amount to be determined at trial.

27 423. The Tennessee Real Parties are entitled to the maximum penalty of \$10,000 for
28 each and every violation of Tenn. Code. Ann. § 4-18-103 alleged herein.

COUNT XVIII
Substantive Violations of Virginia Fraud Against Taxpayers Act
Va. Code Ann. §§ 8.01-216.3(a)(1) and (a)(2)
(Against Defendant J-M)

424. Relator realleges and incorporates by reference the allegations made in Paragraphs 1 through 423 of this Complaint.

425. This is a claim for treble damages and penalties under the Virginia Fraud Against Taxpayers Act, Va. Code Ann. §§ 8.01-216.1 *et seq.*

426. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly presented and caused to be presented to officers and/or employees of the Commonwealth of Virginia and any political subdivision or public water authority thereof that purchased J-M PVC pipe between January 18, 1996 and the present, including, without limitation, the Virginia political subdivisions and public water authorities set forth in Exhibit 1 (together with the Commonwealth of Virginia, the "Virginia Real Parties"), and including, without limitation, those purchases set forth in Exhibit 3(l), false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment and approval from the Virginia Real Parties and their contractors, grantees, and other recipients of their funds.

427. Through the acts described above, defendant J-M, its agents, employees and co-conspirators, knowingly made, used, and caused to be made and used false records and statements, which also omitted material facts, in order to induce the Virginia Real Parties and their contractors and grantees to approve and pay false and fraudulent claims.

428. The Virginia Real Parties were unaware of the falsity of the records, statements, and claims made and submitted by defendant J-M, its agents, employees, and co-conspirators, and as a result thereof, paid money that they otherwise would not have paid, and were deprived of money or property, as a result of defendants' actions.

429. By reason of the payment made by the Virginia Real Parties as a result of defendant J-M's fraud, the Virginia Real Parties have suffered damages, and continue to be damaged, in an amount to be determined at trial.

430. The Virginia Real Parties are entitled to the maximum penalty of \$10,000 for each

1 and every violation of Va. Code Ann § 8.01-216.3 alleged herein.

2
3 **COUNT XIX**
4 **Federal False Claims Act – Employment Discrimination**
5 **31 U.S.C. § 3730(h)**
6 **(Against Defendant J-M)**

7 431. Relator realleges and incorporates by reference the allegations made in Paragraphs
8 1 through 430 of this Complaint.

9 432. This is a claim for damages under the Federal False Claims Act, 31 U.S.C. §
10 3730(h). Through the acts described above and otherwise, defendant J-M discriminated against
11 Relator in the terms and conditions of his employment at J-M by, among other things, denying
12 him a promotion and terminating his employment. Defendant J-M's stated reasons for terminating
13 Relator regarding his accepting kickbacks from claimants were baseless and simply a pretext for
14 the real reason for his termination – to retaliate against Relator for his investigation of defendant J-
15 M's fraudulent practices in preparation for filing the above-captioned False Claims Act lawsuit.

16 433. By reason of defendant J-M's actions, Relator has been damaged in an amount to
17 be determined at trial.

18 **COUNT XX**
19 **Substantive Violations of Federal False Claims Act**
20 **31 U.S.C. §§ 3729(a)(1), (a)(2) and 3732(b)**
21 **(Against Defendant Formosa)**

22 434. Relator realleges and incorporates by reference the allegations made in Paragraphs
23 1 through 433 of this Complaint.

24 435. This is a claim for treble damages and forfeitures under the Federal False Claims
25 Act, 31 U.S.C. §§ 3729 *et seq.*, as amended.

26 436. Through the acts described above, defendant Formosa, its agents, employees and
27 co-conspirators, knowingly caused to be presented to officers, employees, and/or members of the
28 Armed Forces of the United States, including, without limitation, the federal military entities set
forth in Exhibit 2 (collectively, the "United States"), false and fraudulent claims, and knowingly
failed to disclose material facts, in order to obtain payment and approval from the United States
and its contractors, grantees, and other recipients of its funds, including without limitation the

1 payments made by the United States set forth in Exhibit 2.

2 437. Through the acts described above, defendant Formosa, its agents, employees and
3 co-conspirators, knowingly caused to be made and used false records and statements, which also
4 omitted material facts, in order to induce the United States and its contractors and grantees to
5 approve and pay false and fraudulent claims.

6 438. The United States was unaware of the falsity of the records, statements, and claims
7 caused to be submitted by defendant Formosa, its agents, employees, and co-conspirators, and as a
8 result thereof, paid money that it otherwise would not have paid, and was deprived of money or
9 property, as a result of defendants' actions.

10 439. By reason of the payment made by the United States, as a result of defendant
11 Formosa's fraud, the United States has suffered damages, and continues to be damaged, in an
12 amount to be determined at trial.

13
14 **COUNT XXI**
Substantive Violations of California False Claims Act
Cal. Gov't Code §§ 12651(a)(1) and (a)(2)
15 **(Against Defendant Formosa)**

16 440. Relator realleges and incorporates by reference the allegations made in Paragraphs
17 1 through 439 of this Complaint.

18 441. This is a claim for treble damages and forfeitures under the California False Claims
19 Act, Cal. Gov't Code §§ 12650 *et seq.*

20 442. Through the acts described above, defendant Formosa, its agents, employees and
21 co-conspirators, knowingly caused to be presented to officers and/or employees of the State of
22 California and any political subdivision or public water authority thereof that purchased J-M PVC
23 pipe between January 18, 1996 and the present, including, without limitation, the California
24 political subdivisions and public water authorities set forth in Exhibit 1 (together with the State of
25 California, the "California Real Parties"), and including, without limitation, those purchases set
26 forth in Exhibit 3(a), false and fraudulent claims, and knowingly failed to disclose material facts,
27 in order to obtain payment and approval from the California Real Parties and their contractors,
28 grantees, and other recipients of their funds.

1 443. Through the acts described above, defendant Formosa, its agents, employees and
2 co-conspirators, knowingly caused to be made and used false records and statements, which also
3 omitted material facts, in order to induce the California Real Parties and their contractors and
4 grantees to approve and pay false and fraudulent claims.

5 444. The California Real Parties were unaware of the falsity of the records, statements,
6 and claims caused to be submitted by defendant Formosa, its agents, employees, and co-
7 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
8 were deprived of money, property or services, as a result of defendants' actions.

9 445. By reason of the payment made by the California Real Parties as a result of
10 defendant Formosa's fraud, the California Real Parties have suffered in damages, and continue to
11 be damaged, in an amount to be determined at trial.

12 446. The California Real Parties are entitled to the maximum penalty of \$10,000 for
13 each and every false or fraudulent claim caused to be made used or presented by defendant
14 Formosa.

15 **COUNT XXII**
Substantive Violations of Delaware False Claims And Reporting Act
6 Del. C. §§ 1201(a)(1) and (a)(2)
(Against Defendant Formosa)

16
17 447. Relator realleges and incorporates by reference the allegations made in Paragraphs
18 1 through 446 of this Complaint.

19 448. This is a claim for treble damages and penalties under the Delaware False Claims
20 And Reporting Act, 6 Del. C. §§ 1201 *et seq.*

21 449. Through the acts described above, defendant Formosa, its agents, employees and
22 co-conspirators, knowingly caused to be presented to officers and/or employees of the State of
23 Delaware and any political subdivision thereof that purchased J-M PVC pipe between January 18,
24 2006 and the present, including, without limitation, the Delaware political subdivisions set forth in
25 Exhibit 1 (together with the State of Delaware, the "Delaware Real Parties"), and including,
26 without limitation, those purchases set forth in Exhibit 3(b), false and fraudulent claims, and
27 knowingly failed to disclose material facts, in order to obtain payment and approval from the
28 Delaware Real Parties and their contractors, grantees, and other recipients of their funds.

1 450. Through the acts described above, defendant Formosa, its agents, employees and
2 co-conspirators, knowingly caused to be made and used false records and statements, which also
3 omitted material facts, in order to induce the Delaware Real Parties and their contractors and
4 grantees to approve and pay false and fraudulent claims.

5 451. The Delaware Real Parties were unaware of the falsity of the records, statements,
6 and claims caused to be made and submitted by defendant Formosa, its agents, employees, and co-
7 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
8 were deprived of money or property, as a result of defendants' actions.

9 452. By reason of the payment made by the Delaware Real Parties as a result of
10 defendant Formosa's fraud, the Delaware Real Parties have suffered damages, and continue to be
11 damaged, in an amount to be determined at trial.

12 453. The Delaware Real Parties are entitled to the maximum penalty of \$11,000 for each
13 and every violation of 6 Del. C. § 1201 alleged herein.

14
15 **COUNT XXIII**
16 **Substantive Violations of District of Columbia False Claims Act**
D.C. Code § 2-308.14(a)(1) and (a)(2)
(Against Defendant Formosa)

17 454. Relator realleges and incorporates by reference the allegations made in Paragraphs
18 1 through 453 of this Complaint.

19 455. This is a claim for treble damages and penalties under the District of Columbia
20 False Claims Act, D.C. Code §§ 2-308.13 *et seq.*

21 456. Through the acts described above, defendant Formosa, its agents, employees, and
22 co-conspirators, knowingly caused to be presented to officers and/or employees of the District of
23 Columbia and the District of Columbia Water and Sewer Authority that purchased J-M PVC pipe
24 between 2001 and the present (together with the District of Columbia, the "District of Columbia
25 Real Parties"), including without limitation those purchases set forth in Exhibit 3(c), false and
26 fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment and
27 approval from the District of Columbia Real Parties and their contractors, grantees, and other
28 recipients of their funds.

9 459. By reason of the payment made by the District of Columbia Real Parties as a result
10 of Formosa's fraud, the District of Columbia Real Parties have suffered damages, and continue to
11 be damaged, in an amount to be determined at trial.

COUNT XXIV
Substantive Violations of Florida False Claims Act
Fla. Stat. Ann. § 68.082(2)(a) and (2)(b)
(Against Defendant Formosa)

19 462. This is a claim for treble damages and penalties under the Florida False Claims Act,
20 Fla. Stat. Ann. §§ 68.081 *et seq.*

21 463. Through the acts described above, defendant Formosa, its agents, employees and
22 co-conspirators, knowingly caused to be presented to officers, employees, and/or agencies of the
23 Florida State Government, including officials, officers, commissions, boards, authorities, councils,
24 committees, and/or departments of the executive branch of the Florida State Government, that
25 purchased J-M PVC pipe between January 18, 2006 and the present (together with the State of
26 Florida, the "Florida State Government"), and including, without limitation, the purchases set
27 forth in Exhibit 3(d), false and fraudulent claims, and knowingly failed to disclose material facts,
28 in order to obtain payment and approval from the Florida State Government and its contractors,

1 grantees, and other recipients of its funds.

2 464. Through the acts described above, defendant Formosa, its agents, employees and
3 co-conspirators, knowingly caused to be made and used false records and statements, which also
4 omitted material facts, in order to induce the Florida State Government and its contractors and
5 grantees to approve and pay false and fraudulent claims.

6 465. The Florida State Government was unaware of the falsity of the records,
7 statements, and claims caused to be made and submitted by defendant Formosa, its agents,
8 employees, and co-conspirators, and as a result thereof, paid money that it otherwise would not
9 have paid, and was deprived of money, property or services, as a result of defendants' actions.

10 466. By reason of the payment made by the Florida State Government as a result of
11 defendant Formosa's fraud, the Florida State Government has suffered damages, and continues to
12 be damaged, in an amount to be determined at trial.

13 467. The Florida State Government is entitled to the maximum penalty of \$11,000 for
14 each and every violation of Fla. Stat. Ann. § 68.082 alleged herein.

15
16 **COUNT XXV**
Substantive Violations of Illinois Whistleblower and Reward and Protection Act
740 Ill. Comp. Stat. Ann. §§ 175/3(a)(1) and (a)(2)
(Against Defendant Formosa)

17
18 468. Relator realleges and incorporates by reference the allegations made in Paragraphs
19 1 through 467 of this Complaint.

20 469. This is a claim for treble damages and penalties under the Illinois Whistleblower
21 Reward and Protection Act, 740 Ill. Comp. Stat. Ann. §§ 175/1 *et seq.*

22 470. Through the acts described above, defendant Formosa, its agents, employees, and
23 co-conspirators, knowingly caused to be presented to officers, employees, and/or members of the
24 guard of the State of Illinois and any political subdivision or public water authority thereof that
25 purchased J-M PVC pipe between January 18, 2006 and the present, including, without limitation,
26 the Illinois political subdivisions and public water agencies listed in Exhibit 1 (together with the
27 State of Illinois, the "Illinois Real Parties"), and including without limitation those purchases set
28 forth in Exhibit 3(e), false and fraudulent claims, and knowingly failed to disclose material facts,

1 in order to obtain payment and approval from the Illinois Real Parties and their contractors,
2 grantees, and other recipients of their funds.

3 471. Through the acts described above, defendant Formosa, its agents, employees and
4 co-conspirators, knowingly caused to be made and used false records and statements, which also
5 omitted material facts, in order to induce the Illinois Real Parties and their contractors and
6 grantees to approve and pay false and fraudulent claims.

7 472. The Illinois Real Parties were unaware of the falsity of the records, statements, and
8 claims caused to be made and submitted by defendant Formosa, its agents, employees, and co-
9 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
10 were deprived of money or property, as a result of defendants' actions.

11 473. By reason of the payment made by the Illinois Real Parties as a result of defendant
12 Formosa's fraud, the Illinois Real Parties have suffered damages, and continue to be damaged, in
13 an amount to be determined at trial.

14 474. The Illinois Real Parties are entitled to the maximum penalty of \$11,000 for each
15 and every violation of 740 Ill. Comp. Stat. Ann. § 175/3 alleged herein.

16
17 **COUNT XXVI**
Substantive Violations of Indiana False Claims and Whistleblower Protection Act
Ind. Code Ann. §§ 5-11-5.5-2(b)(1) and (b)(2)
18 **(Against Defendant Formosa)**

19 475. Relator realleges and incorporates by reference the allegations made in Paragraphs
20 1 through 474 of this Complaint.

21 476. This is a claim for treble damages and penalties under the Indiana False Claims and
22 Whistleblower Protection Act, Ind. Code Ann. §§ 5-11-5.5-1 *et seq.*

23 477. Through the acts described above, defendant Formosa, its agents, employees, and
24 co-conspirators, knowingly caused to be presented to officers, employees, and/or agents of the
25 State of Indiana and any agency of the state government that purchased J-M PVC pipe between
26 2005 and the present (together with the State of Indiana, the "Indiana Real Parties"), including,
27 without limitation, the payments made by the Indiana Real Parties set forth in Exhibit 3(f), false
28 and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment

1 and approval from the Indiana Real Parties and their contractors, grantees, and other recipients of
2 their funds.

3 478. Through the acts described above, defendant Formosa, its agents, employees and
4 co-conspirators, knowingly caused to be made and used false records and statements, which also
5 omitted material facts, in order to induce the Indiana Real Parties and their contractors and
6 grantees to approve and pay false and fraudulent claims.

7 479. The Indiana Real Parties were unaware of the falsity of the records, statements, and
8 claims caused to be made and submitted by defendant Formosa, its agents, employees, and co-
9 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
10 were deprived of money or property, as a result of defendants' actions.

11 480. By reason of the payment made by the Indiana Real Parties as a result of defendant
12 Formosa's fraud, the Indiana Real Parties, have suffered damages, and continue to be damaged, in
13 an amount to be determined at trial.

14 481. The Indiana Real Parties are entitled to a minimum penalty of \$5,000 for each and
15 every violation of Ind. Code Ann. § 5-11-5.5-2 alleged herein.

16
17 **COUNT XXVII**
Substantive Violations of Massachusetts False Claims Act
Mass. Gen. Laws ch. 12 §§ 5B(1) and 5B(2)
(Against Defendant Formosa)
18

19 482. Relator realleges and incorporates by reference the allegations made in Paragraphs
20 1 through 481 of this Complaint.

21 483. This is a claim for treble damages and penalties under the Massachusetts False
22 Claims Law, Mass. Gen. Laws ch. 12 §§ 5A *et seq.*

23 484. Through the acts described above, defendant Formosa, its agents, employees and
24 co-conspirators, knowingly caused to be presented to the officers, employees, and/or agents of the
25 Commonwealth of Massachusetts and any political subdivision or public water authority thereof
26 that purchased J-M PVC pipe between January 18, 1996 and the present, including, without
27 limitation, the Massachusetts political subdivisions and public water agencies set forth in Exhibit 1
28 (together with the Commonwealth of Massachusetts, the "Massachusetts Real Parties"), and

1 including, without limitation, those purchases set forth in Exhibit 3(g), false and fraudulent claims,
2 and knowingly failed to disclose material facts, in order to obtain payment and approval from the
3 Massachusetts Real Parties and their contractors, grantees, and other recipients of their funds.

4 485. Through the acts described above, defendant Formosa, its agents, employees and
5 co-conspirators, knowingly caused to be made and used false records and statements, which also
6 omitted material facts, in order to induce the Massachusetts Real Parties and their contractors and
7 grantees to approve and pay false and fraudulent claims.

8 486. The Massachusetts Real Parties were unaware of the falsity of the records,
9 statements, and claims caused to be made and submitted by defendant Formosa, its agents,
10 employees, and co-conspirators, and as a result thereof, paid money that they otherwise would not
11 have paid, and were deprived of money or property, as a result of defendants' actions.

12 487. By reason of the payment made by the Massachusetts Real Parties as a result of
13 defendant Formosa's fraud, the Massachusetts Real Parties have suffered damages, and continue
14 to be damaged, in an amount to be determined at trial.

15 488. The Massachusetts Real Parties are entitled to the maximum penalty of \$10,000 for
16 each and every violation of Mass. Gen. Laws ch. 12, § 5B alleged herein.

17
18 **COUNT XXVIII**
19 **Substantive Violations of Nevada False Claims Act**
20 **Nev. Rev. Stat. Ann. §§ 357.040(1)(a) and (1)(b)**
21 **(Against Defendant Formosa)**

22 489. Relator realleges and incorporates by reference the allegations made in Paragraphs
23 1 through 488 of this Complaint.

24 490. This is a claim for treble damages and penalties under the Nevada False Claims
25 Act, Nev. Rev. Stat. Ann. §§ 357.010 *et seq.*

26 491. Through the acts described above, defendant Formosa, its agents, employees and
27 co-conspirators, knowingly caused to be presented to officers, employees, and/or agents of the
28 State of Nevada and any political subdivision or public water authority thereof that purchased J-M
PVC pipe between January 18, 1996 and the present, including without limitation the Nevada
political subdivisions and public water agencies set forth in Exhibit 1 (together with the State of

1 Nevada, the "Nevada Real Parties"), and including without limitation those purchases set forth in
2 Exhibit 3(h), false and fraudulent claims, and knowingly failed to disclose material facts, in order
3 to obtain payment and approval from the Nevada Real Parties and their contractors, grantees, and
4 other recipients of their funds.

5 492. Through the acts described above, defendant Formosa, its agents, employees and
6 co-conspirators, knowingly caused to be made and used false records and statements, which also
7 omitted material facts, in order to induce the Nevada Real Parties and their contractors and
8 grantees to approve and pay false and fraudulent claims.

9 493. The Nevada Real Parties were unaware of the falsity of the records, statements, and
10 claims caused to be made and submitted by defendant Formosa, its agents, employees, and co-
11 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
12 were deprived of money, property or services, as a result of defendants' actions.

13 494. By reason of the payment made by the Nevada Real Parties as a result of defendant
14 Formosa's fraud, the Nevada Real Parties have suffered damages, and continue to be damaged, in
15 an amount to be determined at trial.

16 495. The Nevada Real Parties are entitled to the maximum penalty of \$10,000 for each
17 and every violation of Nev. Rev. Stat. Ann. § 357.040 alleged herein.

18
19 **COUNT XXIX**
Substantive Violations of New Mexico Fraud Against Taxpayers Act
§§ 44-9-3(A)(1) and (A)(2)
20 **(Against Defendant Formosa)**

21 496. Relator realleges and incorporates by reference the allegations made in Paragraphs
22 1 through 495 of this Complaint.

23 497. This is a claim for treble damages and forfeitures under the New Mexico Fraud
24 Against Taxpayers Act, N.M. Stat. Ann. §§ 44-9-1 *et seq.*

25 498. Through the acts described above, defendant Formosa, its agents, employees and
26 co-conspirators, knowingly caused to be presented to officers, employees, and/or agents of the
27 State of New Mexico and any political subdivision thereof that purchased J-M PVC pipe between
28 January 18, 1996 and the present, including, without limitation, the New Mexico political

1 subdivisions set forth in Exhibit 1 (together with the State of New Mexico, the “New Mexico Real
2 Parties”), and including, without limitation, those purchases set forth in Exhibit 3(i), false and
3 fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment and
4 approval from the New Mexico Real Parties and their contractors, grantees, and other recipients of
5 their funds.

6 499. Through the acts described above, defendant Formosa, its agents, employees and
7 co-conspirators, knowingly caused to be made and used false records and statements, which also
8 omitted material facts, in order to induce the New Mexico Real Parties and their contractors and
9 grantees to approve and pay false and fraudulent claims.

10 500. The New Mexico Real Parties were unaware of the falsity of the records,
11 statements, and claims caused to be made and submitted by defendant Formosa, its agents,
12 employees, and co-conspirators, and as a result thereof, paid money that they otherwise would not
13 have paid, and were deprived of money, property or services, as a result of defendants’ actions.

14 501. By reason of the payment made by the New Mexico Real Parties as a result of
15 defendant Formosa’s fraud, the New Mexico Real Parties have suffered damages, and continue to
16 be damaged, in an amount to be determined at trial.

17 502. The New Mexico Real Parties are entitled to the maximum penalty of \$10,000 for
18 each and every violation of N.M. Stat. Ann. § 44-9-3 alleged herein.

19
20 **COUNT XXX**
Substantive Violations of New York False Claims Act
N.Y. State Fin. §§ 189(1)(a) and (1)(b)
(Against Defendant Formosa)

21
22 503. Relator realleges and incorporates by reference the allegations made in Paragraphs
23 1 through 502 of this Complaint.

24 504. This is a claim for treble damages and forfeitures under the New York False Claims
25 Act, N.Y. State Fin. §§ 187 *et seq.*

26 505. Through the acts described above, defendant Formosa, its agents, employees and
27 co-conspirators, knowingly caused to be presented to officers, employees, and/or agents of the
28 State of New York and any local government within the State of New York that purchased J-M

1 PVC pipe between January 18, 1996 and the present, including, without limitation, the New York
2 local governments set forth in Exhibit 1 (together with the State of New York, the "New York
3 Real Parties"), and including, without limitation, those purchases set forth in Exhibit 3(j), false
4 and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment
5 and approval from the New York Real Parties and their contractors, grantees, and other recipients
6 of their funds.

7 506. Through the acts described above, defendant Formosa, its agents, employees and
8 co-conspirators, knowingly caused to be made and used false records and statements, which also
9 omitted material facts, in order to induce the New York Real Parties and their contractors and
10 grantees to approve and pay false and fraudulent claims.

11 507. The New York Real Parties were unaware of the falsity of the records, statements,
12 and claims caused to be made and submitted by defendant Formosa, its agents, employees, and co-
13 conspirators, and as a result thereof, paid money that they otherwise would not have paid, and
14 were deprived of money or property, as a result of defendants' actions.

15 508. By reason of the payment made by the New York Real Parties as a result of
16 defendant Formosa's fraud, the New York Real Parties have suffered damages, and continue to be
17 damaged, in an amount to be determined at trial.

18 509. The New York Real Parties are entitled to the maximum penalty of \$12,000 for
19 each and every violation of N.Y. State Fin. § 189 alleged herein.

20
21 **COUNT XXXI**
22 **Substantive Violations of Tennessee False Claims Act**
Tenn. Code Ann. §§ 4-18-103(a)(1) and (a)(2)
(Against Defendant Formosa)

23 510. Relator realleges and incorporates by reference the allegations made in Paragraphs
24 1 through 509 of this Complaint.

25 511. This is a claim for treble damages and penalties under the Tennessee False Claim
26 Act, Tenn. Code Ann. §§ 4-18-101 *et seq.*

27 512. Through the acts described above, defendant Formosa, its agents, employees and
28 co-conspirators, knowingly caused to be presented to officers and/or employees of the State of

1 Tennessee and any political subdivision or public water authority thereof that purchased J-M PVC
2 pipe between January 18, 1996 and the present, including, without limitation, the Tennessee
3 political subdivisions and public water authorities set forth in Exhibit 1 (together with the State of
4 Tennessee, the "Tennessee Real Parties"), and including, without limitation, those purchases set
5 forth in Exhibit 3(k), false and fraudulent claims, and knowingly failed to disclose material facts,
6 in order to obtain payment and approval from the Tennessee Real Parties and their contractors,
7 grantees, and other recipients of their funds.

8 513. Through the acts described above, defendant Formosa, its agents, employees and
9 co-conspirators, knowingly caused to be made and used false records and statements, which also
10 omitted material facts, in order to induce the Tennessee Real Parties and their contractors and
11 grantees to approve and pay false and fraudulent claims.

12 514. The Tennessee Real Parties were unaware of the falsity of the records, statements,
13 and claims made and submitted by defendant Formosa, its agents, employees, and co-conspirators,
14 and as a result thereof, paid money that they otherwise would not have paid, and were deprived of
15 money, property or services, as a result of defendants' actions.

16 515. By reason of the payment made by the Tennessee Real Parties as a result of
17 defendant Formosa's fraud, the Tennessee Real Parties have suffered damages, and continue to be
18 damaged, in an amount to be determined at trial.

19 516. The Tennessee Real Parties are entitled to the maximum penalty of \$10,000 for
20 each and every violation of Tenn. Code. Ann. § 4-18-103 alleged herein.

21
22 **COUNT XXXII**
23 **Substantive Violations of Virginia Fraud Against Taxpayers Act**
24 **Va. Code Ann. §§ 8.01-216.3(a)(1) and (a)(2)**
25 **(Against Defendant Formosa)**

26 517. Relator realleges and incorporates by reference the allegations made in Paragraphs
27 1 through 516 of this Complaint.

28 518. This is a claim for treble damages and penalties under the Virginia Fraud Against
Taxpayers Act, Va. Code Ann. §§ 8.01-216.1 *et seq.*

519. Through the acts described above, defendant Formosa, its agents, employees and co-conspirators, knowingly caused to be presented to officers and/or employees of the Commonwealth of Virginia and any political subdivision or public water authority thereof that purchased J-M PVC pipe between January 18, 1996 and the present, including, without limitation, the Virginia political subdivisions and public water authorities set forth in Exhibit 1 (together with the Commonwealth of Virginia, the "Virginia Real Parties"), and including, without limitation, those purchases set forth in Exhibit 3(I), false and fraudulent claims, and knowingly failed to disclose material facts, in order to obtain payment and approval from the Virginia Real Parties and their contractors, grantees, and other recipients of their funds.

520. Through the acts described above, defendant Formosa, its agents, employees and co-conspirators, knowingly caused to be made and used false records and statements, which also omitted material facts, in order to induce the Virginia Real Parties and their contractors and grantees to approve and pay false and fraudulent claims.

521. The Virginia Real Parties were unaware of the falsity of the records, statements, and claims caused to be made and submitted by defendant Formosa, its agents, employees, and co-conspirators, and as a result thereof, paid money that they otherwise would not have paid, and were deprived of money or property, as a result of defendants' actions.

522. By reason of the payment made by the Virginia Real Parties as a result of defendant Formosa's fraud, the Virginia Real Parties have suffered damages, and continue to be damaged, in an amount to be determined at trial.

523. The Virginia Real Parties are entitled to the maximum penalty of \$10,000 for each and every violation of Va. Code Ann § 8.01-216.3 alleged herein.

PRAYER

WHEREFORE, Qui Tam Plaintiff/Relator John Hendrix prays for judgment against the defendants J-M and/or Formosa as follows:

1. That defendant J-M cease and desist from violating 31 U.S.C. §§ 3729 *et seq.* and the counterpart provisions of the state statutes set forth above;
2. That the Court enter judgment against defendant J-M in an amount equal to three

1 times the amount of damages the United States has sustained as a result of defendant J-M's actions
2 in violation of the Federal False Claims Act, as well as a civil penalty of \$11,000 for each
3 violation of 31 U.S.C. § 3729;

4 3. That the Court enter judgment against defendant J-M in an amount equal to three
5 times the amount of damages sustained by the California Real Parties as a result of defendant J-
6 M's actions in violation of the California False Claims Act, as well as a civil penalty of \$10,000
7 for each violation of Cal. Gov't Code § 12651;

8 4. That the Court enter judgment against defendant J-M in an amount equal to three
9 times the amount of damages sustained by the Delaware Real Parties as a result of defendant J-
10 M's actions in violation of the Delaware False Claims And Reporting Act, as well as a civil
11 penalty of \$11,000 for each violation of 6 Del. C. § 1201(a);

12 5. That the Court enter judgment against defendant J-M in an amount equal to three
13 times the amount of damages sustained by the District of Columbia Real Parties as a result of
14 defendant J-M's actions in violation of the District of Columbia False Claims Act, as well as a
15 civil penalty of \$10,000 for each violation of D.C. Code § 2-308.14;

16 6. That the Court enter judgment against defendant J-M in an amount equal to three
17 times the amount of damages the Florida State Government has sustained because of defendant J-
18 M's actions in violation of the Florida False Claims Act, as well as a civil penalty of \$11,000 for
19 each violation of Fla. Stat. Ann. § 68.082(2);

20 7. That the Court enter judgment against defendant J-M in an amount equal to three
21 times the amount of damages sustained by the Illinois Real Parties as a result of defendant J-M's
22 actions in violation of the Illinois Whistleblower and Reward and Protection Act, as well as a civil
23 penalty of \$11,000 for each violation of 740 Ill. Comp. Stat. Ann. § 175/3;

24 8. That the Court enter judgment against defendant J-M in an amount equal to three
25 times the amount of damages sustained by the Indiana Real Parties as a result of defendant J-M's
26 actions in violation of the Indiana False Claims and Whistleblower Protection Act, as well as a
27 civil penalty of \$5,000 for each violation of Ind. Code. Ann. § 5-11-5.5-2;

28 9. That the Court enter judgment against defendant J-M in an amount equal to three

1 times the amount of damages sustained by the Massachusetts Real Parties as a result of defendant
2 J-M's actions in violation of the Massachusetts False Claims Law, as well as a civil penalty of
3 \$10,000 for each violation of Mass. Gen. L. Ch. 12 § 5B;

4 10. That the Court enter judgment against defendant J-M in an amount equal to three
5 times the amount of damages sustained by the Nevada Real Parties as a result of defendant J-M's
6 actions in violation of the Nevada False Claims Act, as well as a civil penalty of \$10,000 for each
7 violation of Nev. Rev. Stat. Ann. § 357.040(1);

8 11. That the Court enter judgment against defendant J-M in an amount equal to three
9 times the amount of damages sustained by the New Mexico Real Parties as a result of defendant J-
10 M's actions in violation of the New Mexico Fraud Against Taxpayers Act, as well as a civil
11 penalty of \$10,000 for each violation of N.M. Stat. Ann. § 44-9-3;

12 12. That the Court enter judgment against defendant J-M in an amount equal to three
13 times the amount of damages sustained by the New York Real Parties as a result of defendant J-
14 M's actions in violation of the New York False Claims Act, as well as a civil penalty of \$12,000
15 for each violation of N.Y. State Fin. § 189;

16 13. That the Court enter judgment against defendant J-M in an amount equal to three
17 times the amount of damages sustained by the Tennessee Real Parties as a result of defendant J-
18 M's actions in violation of the Tennessee False Claims Act, as well as a civil penalty of \$10,000
19 for each violation of Tenn. Code Ann. § 4-18-103(a);

20 14. That the Court enter judgment against defendant J-M in an amount equal to three
21 times the amount of damages sustained by the Virginia Real Parties as a result of defendant J-M's
22 actions in violation of the Virginia Fraud Against Taxpayers Act, as well as a civil penalty of
23 \$10,000 for each violation of Va. Code Ann. § 8.01-216.3(a);

24 15. That defendant Formosa cease and desist from violating 31 U.S.C. §§ 3729 *et seq.*
25 and the counterpart provisions of the state statutes set forth above;

26 16. That the Court enter judgment against defendant Formosa in an amount equal to
27 three times the amount of damages the United States has sustained as a result of defendant
28 Formosa's actions in violation of the Federal False Claims Act, as well as a civil penalty of

1 \$11,000 for each violation of 31 U.S.C. § 3729;

2 17. That the Court enter judgment against defendant Formosa in an amount equal to
3 three times the amount of damages sustained by the California Real Parties as a result of defendant
4 Formosa's actions in violation of the California False Claims Act, as well as a civil penalty of
5 \$10,000 for each violation of Cal. Gov't Code § 12651;

6 18. That the Court enter judgment against defendant Formosa in an amount equal to
7 three times the amount of damages sustained by the Delaware Real Parties as a result of defendant
8 Formosa's actions in violation of the Delaware False Claims And Reporting Act, as well as a civil
9 penalty of \$11,000 for each violation of 6 Del. C. § 1201(a);

10 19. That the Court enter judgment against defendant Formosa in an amount equal to
11 three times the amount of damages sustained by the District of Columbia Real Parties as a result of
12 defendant Formosa's actions in violation of the District of Columbia False Claims Act, as well as
13 a civil penalty of \$10,000 for each violation of D.C. Code § 2-308.14;

14 20. That the Court enter judgment against defendant Formosa in an amount equal to
15 three times the amount of damages the Florida State Government has sustained because of
16 defendant Formosa's actions in violation of the Florida False Claims Act, as well as a civil penalty
17 of \$11,000 for each violation of Fla. Stat. Ann. § 68.082(2);

18 21. That the Court enter judgment against defendant Formosa in an amount equal to
19 three times the amount of damages sustained by the Illinois Real Parties as a result of defendant
20 Formosa's actions in violation of the Illinois Whistleblower and Reward and Protection Act, as
21 well as a civil penalty of \$11,000 for each violation of 740 Ill. Comp. Stat. Ann. § 175/3;

22 22. That the Court enter judgment against defendant Formosa in an amount equal to
23 three times the amount of damages sustained by the Indiana Real Parties as a result of defendant
24 Formosa's actions in violation of the Indiana False Claims and Whistleblower Protection Act, as
25 well as a civil penalty of \$5,000 for each violation of Ind. Code. Ann. § 5-11-5.5-2;

26 23. That the Court enter judgment against defendant Formosa in an amount equal to
27 three times the amount of damages sustained by the Massachusetts Real Parties as a result of
28 defendant Formosa's actions in violation of the Massachusetts False Claims Law, as well as a civil

1 penalty of \$10,000 for each violation of Mass. Gen. L. Ch. 12, § 5B;

2 24. That the Court enter judgment against defendant Formosa in an amount equal to
3 three times the amount of damages sustained by the Nevada Real Parties as a result of defendant
4 Formosa's actions in violation of the Nevada False Claims Act, as well as a civil penalty of
5 \$10,000 for each violation of Nev. Rev. Stat. Ann. § 357.040(1);

6 25. That the Court enter judgment against defendant Formosa in an amount equal to
7 three times the amount of damages sustained by the New Mexico Real Parties as a result of
8 defendant Formosa's actions in violation of the New Mexico Fraud Against Taxpayers Act, as
9 well as a civil penalty of \$10,000 for each violation of N.M. Stat. Ann. § 44-9-3;

10 26. That the Court enter judgment against defendant Formosa in an amount equal to
11 three times the amount of damages sustained by the New York Real Parties as a result of
12 defendant Formosa's actions in violation of the New York False Claims Act, as well as a civil
13 penalty of \$12,000 for each violation of N.Y. State Fin. § 189;

14 27. That the Court enter judgment against defendant Formosa in an amount equal to
15 three times the amount of damages sustained by the Tennessee Real Parties as a result of
16 defendant Formosa's actions in violation of the Tennessee False Claims Act, as well as a civil
17 penalty of \$10,000 for each violation of Tenn. Code Ann. § 4-18-103(a);

18 28. That the Court enter judgment against defendant Formosa in an amount equal to
19 three times the amount of damages sustained by the Virginia Real Parties as a result of defendant
20 Formosa's actions in violation of the Virginia Fraud Against Taxpayers Act, as well as a civil
21 penalty of \$10,000 for each violation of Va. Code Ann. § 8.01-216.3(a);

22 29. That Relator be awarded the maximum amount allowed pursuant to 31 U.S.C. §
23 3730(d) of the Federal False Claims Act, and the equivalent provisions of the state statutes set
24 forth above;

25 30. That the Court enter judgment against defendant J-M as a result of its actions in
26 violation of 31 U.S.C. § 3730(h) as well as all relief necessary to make Relator whole, including
27 reinstatement with the same seniority status Relator would have had but for the discrimination, not
28 less than two times the amount of back pay, interest on back pay, and compensation for any

1 special damages sustained as a result of J-M's employment discrimination, including litigation
2 costs and reasonable attorney's fees;

3 31. That Relator plaintiff be awarded all costs of this action, including attorneys' fees
4 and expenses; and

5 32. That the Real Parties and Relator receive all such other relief as the Court deems
6 just and proper.

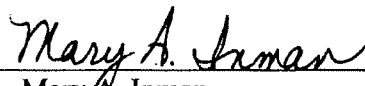
7 **JURY DEMAND**

8 Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Relator hereby
9 demands trial by jury.

10 Dated: February 3, 2010

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11
12 By:



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28 *Pro hac vice* applications to be filed

APPENDIX A**PERSONS IDENTIFIED IN THE SECOND AMENDED COMPLAINT**

PERSON (FULL NAME AND SHORT FORM IF USED)	TITLE	¶ WHERE FIRST NAMED
Boitz, Doug ("Boitz")	Product Assurance Manager, J-M Corporate	237
Chen, David ("Chen")	Plant Manager, Stockton CA Plant	38
Cheng, Kai ("Cheng")	Director of Product Assurance, J-M Corporate	63
Fassler, William ("Fassler")	Senior Engineer, Research & Development Division, J-M Corporate	38
Henderson, Michael	Quality Control Supervisor, Butner NC Plant	259
Hendrix, John ("Hendrix" or "Relator")	Engineer, Product Assurance Division, J-M Corporate	14
Huynh, Mai	Product Assurance Manager, J-M Corporate	63
Hwang, Jack ("Hwang")	Quality Control Manager, J-M Corporate	27
Kashefi, Nashri	Representative, NSF International	136
Liao, Kaider	Director of Engineering, J-M Corporate	27
Lin, Barry ("Lin")	Director of Production, J-M Corporate	27
Martinez, Armondo ("Martinez")	Quality Control Supervisor, Fontana CA Plant	91
Nasto, Ken	Director of Finance, J-M Corporate	295
Negode, John	Quality Control Supervisor, McNary OR Plant	39(c)
Padilla, Frank ("Padilla")	Quality Control Supervisor, Pueblo CO Plant	262
Rao, Kaushal ("Rao")	Assistant Director of Production, J-M Corporate	111
Soliz, Joe	Quality Control Supervisor, Wharton TX Plant	259
Torres, Norberto ("Torres")	Director of Finance & Risk Management, Formosa	295
Wang, Brian	Plant Manager (3 plants)	39(a)
Wang, Walter	President and CEO, J-M	18
Wang, Y.C.	Founder and Chairman, Formosa	26
Yang, K.C. ("Yang")	Quality Control Supervisor, J-M Corporate Head, Research & Development Division	38
Yang, Stephen ("S. Yang")	Plant Manager, Fontana, California	84