

Arrowhead, Puritas, and the Development of Five-Gallon Bottle Production in Los Angeles

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When we began the revision of the *Encyclopedia of Manufacturer's Marks on Glass Containers* in 2021, we quickly discovered that the one-page devoted to the Arrowhead Water Co. bottles in the Other A section was completely inadequate. Not only was the history of Arrowhead more complex (along with its sister firm that manufactured Puritas Distilled Water), the diversity of products and bottles was much broader and more diverse than our original discoveries. In addition, the new study exploded into a revelation about the century of development of large ware in the Los Angeles area between 1875 and 1979 – especially during an exceptionally turbulent period in the 1920s and 1930s. We divided the new information into three sections. Part 1 includes an overview of glass houses, major water firms, and their interactions as well as a look at the manufacturer's marks used by the glass factories. Part 2 looks at the two major water firms – Arrowhead and the Los Angeles Ice & Cold Storage Co. – along with their merger and the variations of five-gallon bottles that they used. The final section examines in detail the other types of bottles and labels used by the two firms – smaller water bottles, refrigerator bottles, and soda bottles.

The use of large bottles has a long history, dating to long before the “discovery” (or invasion from the Native American viewpoint) of the New World, but our focus centers around the industry that began in Los Angeles when Carlton Newman began turning his inventive talent toward large bottles, forming the San Francisco & Pacific Glass Co. in 1875, and expanded until plastic containers virtually entirely replaced glass for larger ware in 1979. But, the manufacture of large glass bottles – demijohns and carboys – was a sideline for the the glass house until the Los Angeles Ice & Cold Storage Co. developed and aggressively marketed Puritas Distilled Water in 1894 – advertising the brand to homes and businesses in five-gallon water bottles. A bit over a decade later, the Arrowhead Springs Co. entered the arena, sparking competition and strengthening the industry. Numerous smaller water firms also began in the early 20th century, creating a demand for five-gallon water bottles that peaked during the 1920s.

The remainder of the study revolves around the histories of the producers of Arrowhead and Puritas waters and the five-gallon glass bottles, other containers, and other products sold by those firms. Both Arrowhead and the Los Angeles Ice & Cold Storage Co. specialized in water, of course, but each also branched into sodas and other products, continuing to evolve after the firms merged in 1929. Our study, of course, centers on the glass bottles used from 1894 to 1979, the latter year when the plastics industry finally dominated the production of large water bottles.

An Overview of Five-Gallon Bottle Production

This section takes a look at the entire process, including the interaction between the glass houses and the water companies and how each succession led to the next one.

The Early Period – 1875-1920

In 1875, Carlton Newman, already the owner of the San Francisco Glass Works, purchased the Pacific Glass Works, uniting the two as the San Francisco & Pacific Glass Works. The year of the opening, Newman received a patent for a process to pad demijohns by “placing a layer of straw, rushes, cotton, paper, or other elastic yielding material around the bottle” prior to weaving a wicker jacket around it. Although applying wicker was an old process, the padding created a new layer. Two years later, Newman’s 1877 patent created a wooden crate for each bottle that had two improvements over the older system. First, the crate formed a flat top above the finish, allowing the larger bottles to be stacked. Second, it had a swivel joint so that the contents could be poured easily without removing the heavy bottle from the crate. Although both factories were located in San Francisco, they served the entire southern area of California and were the primary producers of large glass containers. See the section on the San Francisco Glass Houses for more information.

In 1893, Edward Abramson and Adam Heunisch created the partnership they called Abramson-Heunisch and joined with the Illinois Glass Co. in 1896, opening a bottlers’ supply store in San Francisco, buying Newman’s San Francisco & Pacific Glass Works in 1902 and restyling the firm as the Illinois-Pacific Glass Co. See the sections on the Great Holt Glass Myth and the Illinois-Pacific companies for more information on this phase of development.

Meanwhile, the Los Angeles Ice & Cold Storage Co., opened in 1889, introduced Puritas Sparkling Distilled Water in 1894, creating a new and expanding market for five-gallon bottles. This brought a new player onto the scene. The Los Angeles Glass Co. opened at Los Angeles in late 1902, hoping to grab its share of the five-gallon water bottle trade. This spurred Illinois-Pacific into action, opening its own plant in Las Angeles and cutting its prices until Los Angeles Glass ceased operation in 1906. Although occasional other water firms followed the LA Ice lead, it was not until 1909 that the Arrowhead Water Co. provided serious competition. Between these two major producers and the smaller water companies, the need for bottles increased, although the Illinois-Pacific Glass Co. and its predecessors remained the only serious manufacturer of the large bottles in Southern California.

Illinois-Pacific only had one competitor during the early 20th century, the Pacific Coast Glass Co. Ironically, the main forces behind Pacific Coast Glass were George H. Neuman and Carlton Neuman Davis, the ones who sold the San Francisco & Pacific Glass Co. to form Illinois-Pacific. These were the sons of the founders of the original San Francisco Glass Works, and they almost immediately went back into competition with Illinois-Pacific. However, their large ware production was only a sideline, so they were never a threat to the Illinois-Pacific virtual monopoly on water bottles, and Pacific Coast never made any bottles for Arrowhead or Los Angeles Ice & Cold Storage.

Opportunity, Jealousy, and Confusion – the 1920s

When a fire consumed the Los Angeles plant of the Illinois-Pacific Glass Co. in 1920, it created a gap in the market – one that was quickly filled by William McLaughlin. McLaughlin was one of a small group of partners who formed the Southern Glass Co. at Vernon, a Los Angeles suburb, in 1918. McLaughlin was apparently unhappy with his partners almost from the beginning (especially John McK. Marble), so the fire created all the incentive he needed to abandon Southern and build a Los Angeles factory at 52nd and Alameda to supply the five-gallon water trade. For more information about McLaughlin, see his section in the *Encyclopedia*.

Another entrepreneur, Henry E. Charrey, organized a corporation in 1922 to form the Midway Glass Co. at Compton (another Los Angeles suburb). Charrey also realized that the five-gallon water bottle market was ripe and hoped to create competition with McLaughlin. But,

the group may have overstepped its resources in building the factory; by the end of the year, the firm was in trouble. For more about Charrey and the successor firms, see the section on the Compton Glass Houses.

Meanwhile, William Latchford and his stepson, John McK. Marble, remained agitated over the desertion of McLaughlin from the Southern Glass Co. They convinced the other partners to form the Federal Glass Co. (not related to the much larger Federal Glass Co. at Ohio) in order to lease Charrey's in-trouble factory at Compton in December of 1922. Charrey – the owner of the land – came along with the lease, remaining as the plant manager, while Marble moved to Compton to oversee the project, and the combination managed to have the factory in production by February of the following year. Federal courted Arrowhead and picked up the account.

Meanwhile, Elmer Beavers moved into the picture. Beavers had invented a new seal for Mason jars and wanted a factory to produce the jars. Beavers was the vice president and director of the Beaver Seal Jar Cap Co. with locations at Akron and Norristown, Pennsylvania. He managed to convince enough financial backers to help him incorporate the Beaver Glass Mfg. Co. in 1924, negotiating to take over the Federal lease by July. Only one director of Southern Glass voted to block the transfer, almost certainly Latchford. Although Marble had a vested interest in the continued operation of the Compton plant, Latchford was the one with the money. Despite the lone objection, Beaver took over the lease, retaining the persistent Henry E. Charrey as plant manager.

While Beaver Glass advertised that it would make Beavers's Triple-Seal Mason jars, the factory only continued producing five-gallon water bottles during the corporation's tenure. Apparently, the jar seals never caught the public's attention, so the backers may have withdrawn, although we may never know for sure. In any event, the operation quietly folded by June of 1925.

The tenacious Henry E. Charrey found yet another partner, George B. Caldwell, and reclaimed the Compton plant after Beavers left in June of 1925 – with the two as sole owners. In October, the pair added new tempering ovens, still producing five-gallon water bottles. As with their predecessors, this final Charrey firm was short-lived, folding by early 1926. It was

Charrey's final glass venture. Although these early Compton firms produced five-gallon bottles, only Federal made any for Arrowhead; the others supplied smaller water companies.

Meanwhile, Latchford and Marble had been stewing over the withdrawal of the Southern Glass Co. from the Compton factory and the dissolution of the Federal Glass Co. in late 1923. Already in the area, John McK. Marble scouted around and found a suitable site for a new plant about four miles north of Compton in Huntington Park. Marble secured the land and had a new factory – the Monarch Glass Co. – in operation by early 1925, somehow managing to retain the contract with Arrowhead. For more information about these firms, see sections on Southern Glass Co. and the Latchford enterprises.

But, the drama at the Southern Glass Co. was not yet complete. The other partners were vexed at the new Latchford and Marble venture and made their irritation known, culminating in the withdrawal of both Latchford and Marble in 1925. Latchford reinvested his capital in Monarch Glass, renaming the plant the W.J. Latchford Co. – an operation that prospered until 1989.

To make his revenge complete, Latchford purchased the Compton factory – according to Toulouse (1972:16), from *Mrs.* Charrey. This was probably one of the notorious Toulouse typos. Generally, women were only the major land owners if a husband had died. Charrey, however, was very much alive and did not die until July of 1946. So, Latchford almost certainly bought the outfit from Henry Charrey – who was never again involved in the Compton glass business.

Stability and Succession – 1926-1979

Latchford and Marble (including John's brother – Latchford's other stepson, William) were quite successful, shifting all five-gallon bottle production to the Compton plant in 26 while making bottles and jars at the Huntington Park factory – retaining the contract for Arrowhead. When Latchford died in 1938, the Marble brothers rearranged the company, renaming it as the Latchford-Marble Glass Co. the following year. In 1940, the Marbles sold the Compton plant to Alex McDonald, and Latchford-Marble ceased the manufacture of the five-gallon water bottles.

Alex McDonald already had a distinguished career in the glass industry beginning in the 1920s, when he and his brother, John, opened a glass house at Inglewood – northeast of Compton. When the brothers closed their Inglewood operation ca. 1929, they moved north to Seattle, where they incorporated the Northwestern Glass Co. to purchase the factory of the bankrupt Seattle Western Glass Co. Although Northwestern remained successful, Alex separated from the firm in 1940, moving to Compton, purchasing the Compton glass house from Marble. As part of the deal, McDonald continued to make bottles for Arrowhead. See the section on Northwestern Glass for more about the McDonald brothers.

When McDonald died in 1943, his family operated the plant until Joe Davis, McDonald's brother-in-law, gained control in 1948, renaming the business the Davis Glass Co. Davis continued supplying Arrowhead until the business closed ca. 1954. The timing is interesting. McLaughlin had continued his connection with Arrowhead – at least sporadically – moving into a larger factory at Gardena in 1946. A decade later (1956), McLaughlin sold the Gardena plant to Arrowhead, allowing the water company to begin its Glass Products Division and produce its own water bottles. Once Arrowhead knew it would have McLaughlin's factory, the firm probably told Davis that it would cancel the contract in 1956 – causing Davis to retreat from the glass business.

McLaughlin claimed that the Illinois Glass Co. pioneered the use of Owens machines to make large ware, running him out of the water bottle business. Indeed, Arrowhead periodically purchased five-gallon bottles from Illinois Glass despite the long shipping from that state to California. Arrowhead continued to manufacture its own water bottles until ca. 1979. By that time, the plastic industry had completely dominated the larger ware, not surprising considering how heavy a thick-walled, five-gallon glass bottle was to tip into a free-standing cooler. For more information on the Illinois Glass Co., see that section.

Manufacturers of Five-Gallon Water Bottle

Only a few glass houses in Southern California – and farther away – produced the five-gallon water bottles, but Arrowhead contracted with most of those. Generally, Arrowhead purchased its bottles only from a single manufacturer at a time, occasionally making an order with an atypical glass house, but the firm began making its own bottles in 1956, ceasing to use

other producers (with only a few exceptions). The last date code we have found on an Arrowhead bottle was 1979, suggesting that Arrowhead ceased production of glass bottles at that time – a logical conclusion, since the plastic container industry dominated the large ware market by the late 1970s.

Both Arrowhead and Los Angeles Ice & Cold Storage almost certainly used five-gallon bottles that were unmarked except for paper labels, beginning in 1894 in the case of LA Ice. As far as we can tell, none of these bottles had manufacturer's marks, but they were probably made by the San Francisco & Pacific Glass Co., followed by Abramson-Heunisch, the successor to SF&P. As noted in the first section, the Illinois-Pacific Glass Co. followed Abramson-Heunisch, and it was the first of the Arrowhead and Puritas suppliers to emboss a logo on the base.

Illinois-Pacific Glass Co.

The Los Angeles Ice & Cold Storage Co. began bottling Puritas Distilled Water in five-gallon water bottles in 1894, almost certainly purchasing its first bottle embossed with a manufacturer's mark from the Los Angeles plant of the Illinois-Pacific Glass Co. When the Arrowhead Water Co. opened in 1909, it, too, used five-gallon water bottles produced by Illinois-Pacific. The glass house marked its bottles with "IPGCo" in a diamond on the bases (Figure 1) as well as the initials without the diamond. On Arrowhead bottles, the non-diamond logo was too indistinct for a photo. However, when the factory burned in 1920, Arrowhead shifted its loyalty to William McLaughlin. It is unclear whether Illinois-Pacific ever made the larger bottles after the firm rebuilt the factory, but the Owens-Illinois Glass Co., the eventual owner of Illinois-Pacific produced five-gallon bottles. See the section on Illinois-Pacific for more information.



Figure 1 – Diamond-IPGCo
(Peter Utas)

Illinois Glass Co.

Periodically (at least 1920, 1923, 1928, and 1929), Arrowhead in its various forms purchased five-gallon bottles from the Illinois Glass Co. – despite the long distance shipping involved. These defections may have been to take advantage of sales, a common straying of

bottlers to other suppliers. By at least the last two dates, Illinois Glass used machines to make its larger ware, giving the firm a distinct advantage in pricing (Figure 2).

McLaughlin claimed that Illinois Glass machines put him out of business, causing his sale to Arrowhead in 1956. See the section on the Illinois Glass Co. for more information.



Figure 2 – Diamond-I (Peter Utas)

William McLaughlin

In 1918, William McLaughlin, John McK. Marble, William J. Latchford, and others initiated the Southern Glass Co. at Vernon (a suburb of Los Angeles). In a disagreement with Marble, McLaughlin left the firm to begin his own glass house at Los Angeles in January of 1920. William McLaughlin picked up the Arrowhead contract after the 1920 Illinois-Pacific fire, and continued to make the bottles until ca. 1935, when, according to him, the Illinois Glass Co. machines lowered prices and raised quality to where he could not compete. He moved his operation back into his garage and continued to work on a smaller scale.



Figure 3 – McL (Peter Utas)

In 1946, McLaughlin purchased a factory at Gardena, California, and resumed general production, including larger bottles. When McLaughlin decided to retire in 1956, Arrowhead purchased his plant. Throughout his tenure in business, however, McLaughlin apparently could never produce a sufficient quantity of the bottles, so Arrowhead also contracted with the W.J. Latchford Co. and others (see below). McLaughlin used a logo with his initials – “McL” – although he apparently made many of the bottles without marks (Figure 3). See the section on McLaughlin for more information about his firm.

The Compton, California, Glass Houses

In 1922, the Midway Glass Co. opened in Compton, California (a suburb of Los Angeles), and a series of firms occupied the same factory at that location – all producing mouth-

blown, large water bottles until 1954. Most of those companies made bottles for Arrowhead, although three of the earliest ones only sold their production to small water firms. See the section on the Compton Glass Houses for a history of these smaller companies and their logos.

Federal Glass Co.

The Federal Glass Co., a subsidiary of the Southern Glass Co., took over the Midway factory (Compton’s earliest) in late 1922, going into production in February of 1923. However, in June of the following year, Federal sold the plant to the Beaver Glass Mfg. Co. All examples of Federal’s Shield-F logo that we have seen on five-gallon bottles had a “23” date code (Figure 4). For the full story of Federal’s involvement at Compton, see the section on the Compton Glass Factories.

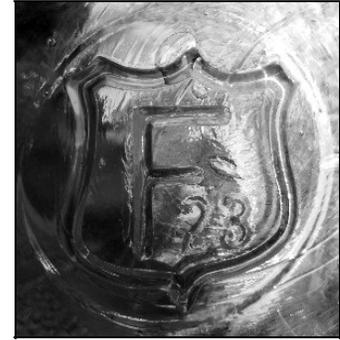


Figure 4 – Shield-F (eBay)



Figure 5 – Shield-F Ohio (eBay)

To add to the general confusion, there was a Federal Glass Co. that opened in 1900 at Columbus, Ohio. Even stranger, the Ohio Federal Glass *also* used a Shield-F mark (Figure 5). However, the Ohio firm registered the trademark in 1944, claiming a first use in 1932 – almost a decade after the closing of the Compton plant. With the exception of some fruit jars, the Ohio Federal Glass specialized in tableware – *not* bottles of any size. A brass paperweight was probably offered by the Ohio firm (Figure 6).



Figure 6 – Shield-F paperweight (eBay)

Monarch Glass Co.

As noted above, a new corporation – the Monarch Glass Co. – headed by William Latchford, W. Baird Marble, and John McK. Marble, built a new glass plant at Huntington Park in 1924 – about five miles north of Compton. The new factory made the larger water bottles in competition with McLaughlin and the Compton plants. Monarch managed to capture the contract to make bottles for Arrowhead, although we have not discovered whether McLaughlin

continued to supply them as well. The Monarch bottles used a Shield-M logo with a date code below the initial, continuing the shield motif from the Federal Glass Co. – not surprising since the principals were the same for both glass firms (Figure 7). At least one base had an X before the date code. Although most Arrowhead examples we have found were made in 1925, we discovered a single example from 1924 (24, 25, or X25 date codes).

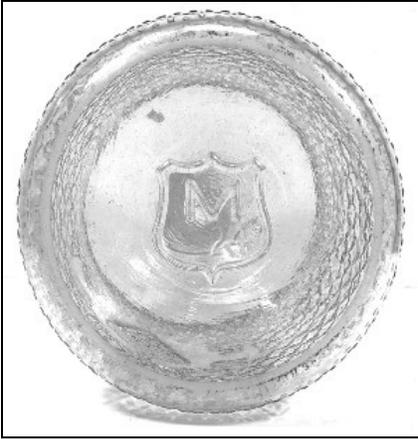


Figure 7 – Shield-M (eBay)

W.J. Latchford Co.

Because of a dispute about the Monarch Glass Co., Latchford and Marble (like McLaughlin a few years earlier) left the Southern Glass Co. in 1925. The group renamed Monarch as the W.J. Latchford Co., took over the Monarch factory, and purchased the Compton Glass Mfg. Co. plant, transferring large ware back to Compton – although the firm produced a variety of bottles at the former Monarch operation. Latchford manufactured marked and date-coded bottles – with a Shield-L logo – from 1925 until his death in 1938 (Figure 8). Latchford used three variations of his date code. The X series before the

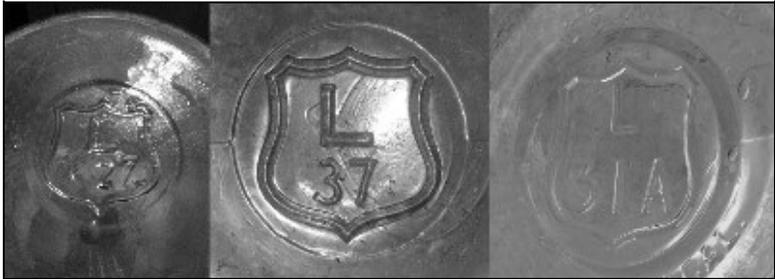


Figure 8 – Shield-L (eBay; Peter Utas)

date code (e.g. X29) represented bottles for Arrowhead or Puritas between 1926 and 1929, but the letter changed to an “A” for Arrowhead in front of the date code (e.g., 31A) after the firms merged (1931-1939) but no letter for Puritas bottles during that later period. Marble renamed the firm the Latchford-Marble Glass Co. then sold the Compton factory to Alex McDonald in 1940. Along with the Compton section, see the study on Latchford-Marble for more on the Latchford family plants.

McDonald Glass Co. and Davis Glass Co.

The McDonald Glass Co. continued to make the large water bottles from 1940 to 1948, leaving his mark of a shield surrounding a “D” enclosing “Mc” with a “40” (1940) date code below it on a single example of the container embossed with arrowhead rows on shoulder and heel (number 3 in the chronology of five-gallon bottles below). This was the final bottle of this type that we have discovered. An unusual second example had the same “40” date code but lacked the “Mc” with the “D” (Figure 9).

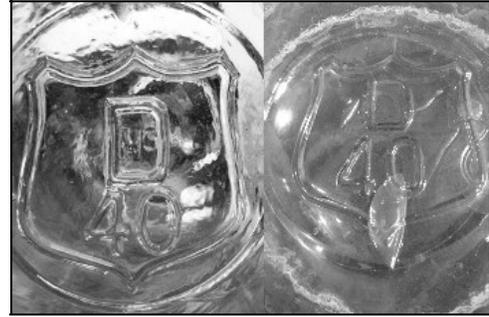


Figure 9 – Shield-McD (eBay; Doug Porter)

Soon, McDonald adopted a new design. On the bottles marked with both the Arrowhead and Puritas logos, the earliest dated base we have found was embossed “MD” (small “c” between the “legs” of the “M”) / “42” – all surrounded by a horseshoe – the second mark used by the McDonald Glass Co. Another example included a “45” date code (Figure 10). Although McDonald died in 1943, a relative continued to operate the firm under the McDonald name until 1948.



Figure 10 – Horseshoe-McD (Doug Porter)

Joe Davis (McDonald’s son-in-law) gained control of the business in 1948. Davis continued to make water bottles until he closed the business ca. 1954. The Davis Glass Co. Produced bottles for Arrowhead with the “lazy D” logo and date codes of “49” and “51” (Figure 11). Some examples had the flat side of the “D” in the down position – relative to the date code – while others were in the “up” position.

Since Arrowhead purchased McLaughlin’s operation in 1956 to make its own containers, the closure of the Davis business close to that time was probably no coincidence. If Davis produced Arrowhead bottles, it made sense that he would have lost his market when Arrowhead made its own. Conversely, Arrowhead may have decided to



Figure 11 – Lazy-D (Doug Porter; Peter Utas)

make its own bottles when Davis ceased operations. For more information on McDonald and Davis, see the section on the Compton glass houses.

Arrowhead Puritas Water Co., Glass Products Division

Padgett (2001:15), the biographer of William McLaughlin, noted that Arrowhead Puritas purchased McLaughlin’s factory at Gardena, California. The firm called its bottle plant the Glass Production Division (GPD) and embossed the initials on some bottle bases until the late 1970s, when the use of plastic containers became common. Plastic water bottles were significantly thinner walled and weighed *much* less – an important consideration when upending a full bottle into a cooler by hand. Although we have not discovered when Arrowhead closed the plant, the latest date code we have discovered on a bottle was 1979. After 85 years, five-gallon glass water bottles became only a memory. Although Arrowhead failed to use a logo on most bottles, it embossed the “GPD” initials on some of them in two styles, large and small letters.

GPD



Figure 13 – GPD small & no logo (eBay)

But the story of the base marks on the GPD-period of bottles is *much* more complex. When Arrowhead Puritas purchased the Gardena, California, factory from McLaughlin, it inherited McLaughlin’s old molds – which it wisely converted for its own use. Since McLaughlin used a large “McL” logo in the center of the base, the factory engraved

“GPD” over the McLaughlin mark, poorly in the only example we have found – not only converting the logo but also changing the date code to “57” (Figure 12). These formed the large-lettered variation because that was the size necessary to cover McLaughlin’s initials. On five-gallon water bottles, the plant only used the large-letter variation during 1956 and 1957, dropping its “GPD” logo by at least 1960 – although retaining the date codes (Figure 13).

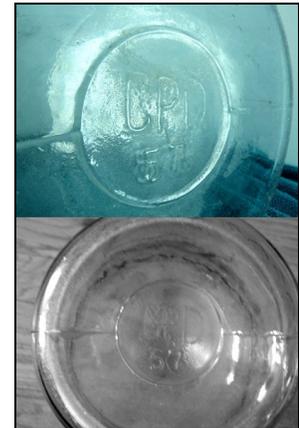


Figure 12 – GPD large letters (eBay)

Although the initials were only used for a few years on water bottles made for Arrowhead and Puritas containers, the large initials continued – especially on the huge, 13-gallon bottles made for chemical and acid storage – until at least 1966, the latest date code we have discovered in association with the large-letter variation (Figures 14). However, on its own products, the Glass Products Division dropped the initials entirely, probably by 1958.



Figure 14 – 13-gal Acid (eBay)

The early GPD large-letter variation on 13-gallon bottles included more information, almost certainly because the bottles were intended for use for acids and chemicals made by other companies. These were embossed “BOTTLE (arch) / MADE BY / GPD (very large letters) / 1956 (all three lines horizontal) / GARDENA, CALIF. (inverted arch)” (Figure 15).



Figure 15 – Acid base (eBay)

By at least 1971 (possibly earlier), the factory began embossing much smaller “GPD” initials on the bases (see Figure 13). While the smaller variation became common on bottles made for Arrowhead’s competitors, the logo was used sporadically on the firm’s own bottles, most still having only the date code plus the identification of the water company, itself. The final small-letter variation we have found was dated “78” and the last date code (without the logo) was on a 1979 bottle. As noted above, Arrowhead apparently discontinued glass bottle use during that year in favor of the much lighter plastic bottles.

Small date codes in our sample were as early as 1960. Drilled and re-stamped examples were fairly common, and some of the later bottles had date codes surrounded by dots – for example, “76” surrounded by 10 dots and “75” surrounded by 3 dots plus “GPD” (Figure 16). The dots probably indicated the month the bottle was made (3 dots = March; 10 dots = October).

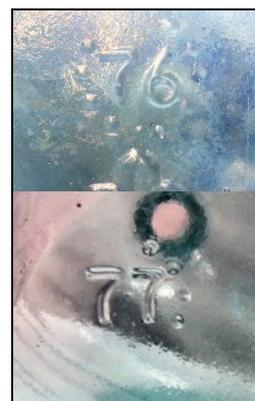


Figure 16 – Dots & dates (Peter Utas & eBay)

At some point the Glass Production Division installed machines to make the larger ware. Although we have never found a printed reference for machine adoption, both machine scars on the heel roll and horizontal seams just below the finish and side seams on the finish provide incontrovertible evidence for their use (Figure 17). The earliest date code we have found was for 1968, but we also discovered machine characteristics on some of the bottles embossed with alternating arrowheads and



Figure 17 – Machine characteristics (eBay)



Figure 18 – Machine characteristics (eBay)

Puritas symbols on the shoulders (Figures 18). Since these bottles were used between

1940 and 1966, this pushes machine use at least as early as 1966. Unfortunately, all of the machine-made alternating-symbol bottles lacked date codes.

The five-gallon water bottles shifted from one-part to two-part finishes –

although, as usual, the transition was neither simple nor absolute. The earliest one-part finishes were little more than a flared lip, although those were quickly replaced by a single large collar (Figure 19). In 1923, the Federal Glass Co. introduced a very slight bulge below a rounded one-part finish, turning it into a pseudo two-partner – followed by a similar finish from Federal’s successor, the Monarch Glass Co. When Monarch faded into the W.J. Latchford



Figure 19 – One-part finishes (Peter Utas)

Co., the new bottles in 1926 sported true two-part finishes – and those remained the norm throughout the rest of the glass era (Figure 20).

One question revolves around how the bottles were sealed. Almost certainly, the earlier one-part finishes were sealed by corks, and, since the water was not carbonated, the corks were probably not tied down. Although we have not discovered when, at some point,



Figure 21 – Crown cap (*Los Angeles Evening Express* 11/28/1921)

the the two-part finishes (and, certainly, the pseudo two-part finishes) sported crown caps. Unlike the rolled steel crowns used on soda and beer bottles, these were more likely pressed aluminum, similar to the ones used on milk bottles. A 1921 ad for Puritas water illustrated a water bottle clearly sealed with a crown cap, currently our earliest evidence (Figure 21).

The bottles in a photo of a 1926 truck had finishes covered with cloth and tied or banded to the necks, and these were likely also crown capped. A 1946 photo showed what were probably aluminum caps, apparently crowns, on the bottles in trucks. However, both closures (cork and crown) were almost certainly used during the ca. 1920-ca. 1930 transition period. At some point, a plastic extension was added to the two-part finishes to allow a screw cap to be used (Figure 22). The only example we have seen was on a bottle manufactured by the W.J. Latchford Co. in 1931, but that may have been added by a collector at some point.



Figure 20 – Two-part finishes (Peter Utas)



Figure 22 – Adapter for screw cap (eBay)

A particularly strange style was the twist bottle (Figure 23). On August 20, 1972, the *Long Beach Independent* included a photo with a brief description:

A new twist to an old, familiar five-gallon distilled water bottle has made Arrowhead, Puritas and Sparkletts among the most popular containers for terrariums. A spokesman for Arrowhead Puritas noted that while glass blowers for the company have been creating the uniquely shaped bottles for 15 years, it has only been for the past 7 or 8 months that there has been a popular demand for them.

These could only have been made by hand methods, and it is doubtful that the twist bottles were sold full of water.

Other Initials

About 1972, the Glass Products Division began adding a logo to some five-gallon bases. Along with “GPD” and two-digit date codes (*with* dot month codes encircling the date), these included “A / S {number in a circle} E / C” (Figure 24). The initials may indicate the Society for Civil Engineers. The Committee on Public Works of the U.S. Senate in its hearing on May 13 and 14, 1971, cited a report of the Society for Civil Engineers that “it is . . . appropriate to utilize contaminated waters for non-potable purposes and to reserve the limited quantities of naturally pure high-quality waters for drinking” (Government Printing Office 1972). The society was active in Southern California, and the basemark has the “look” of a seal of approval, but we have not discovered any actual historical evidence linking the society with Arrowhead.



Figure 23 – Twister bottle (eBay)

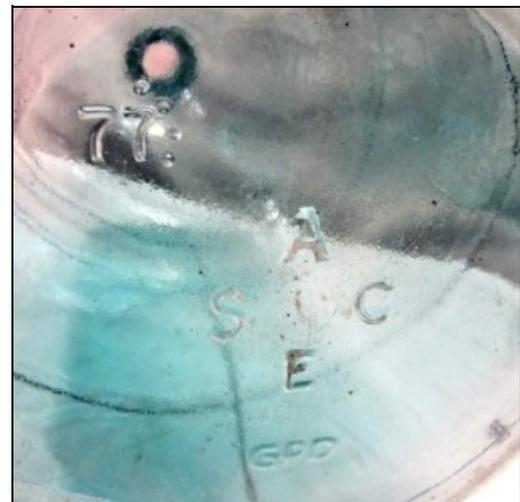


Figure 24 – ASCE (eBay)

Another group, also active in the same area, was the Aerojet ElectroSystems Co., using “AESCS” initials as a logo. According to the Federal Communications Commission (1980), the

Aerojet Puritas Water Company, a subsidiary of Coca-Cola Bottling Co. of Los Angeles, was a supplier of ‘Distilled and/or Spring Water’ to Aerojet.” While not fully conclusive, this makes Aerojet the most likely candidate for the logo.

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