Chapter 19

Concrete, steel and power

Anxiety about first the Harvey Machine Co. and then the Anaconda Company had become a media fascination by 1952 as plans finally congealed for a new aluminum plant near Columbia Falls. On Aug. 22, 1952, the Hungry Horse News reported that residents in the Flathead Valley were expecting another announcement from Anaconda regarding its proposed smelter project. The latest concern was that a nationwide steel strike could hamper construction of the plant in the fall. [1] But little by little, the project took off. By August 1953, construction payrolls at the plant site reached $50,000 per week, with 575 workers employed at the site. This compared with a high of $250,000 per week at the Hungry Horse Dam during its construction peak. Wages for excavating and concrete-form laborers working for the J.A. McNeil Co. were increased by 10 cents per hour, in line with the Montana Associated General Contractors pay schedule. [2]

Local boosters leveraged the aluminum project into a wider cause. In October 1953, the Columbia Falls Chamber of Commerce erected a large billboard sign on Highway 2 directing westbound traffic to turn right two miles to "Columbia Falls, A Growing Town! Industrial Hub of the Flathead, Lumber Mills, Aluminum Plant, North Fork Recreation Area." [3] When the new Anaconda Aluminum Co. plant began production in August 1955, it was touted as a cutting-edge facility. According to the Hungry Horse News, using Anaconda-provided copy, "The aluminum plant of The Anaconda Co. embodies the most modern and the best in technical design and equipment. The architecture, the production facilities, and the plant layout represent the culmination of the Anaconda Co.'s many years of experience in plant design." [4] Those claims would be tested over the next few decades.

Excavation and concrete work was underway at the plant site by mid-June 1953. This included leveling the overall plant site, grading for roads and stormwater systems, excavating below grade where necessary for certain buildings, and setting forms and pouring concrete for foundations, utility tunnels, basements and walls for tanks, silos and buildings across the site. Water storage tanks would be located on the lower slope of Teakettle Mountain. On the west side of the property toward the Flathead River would be the sewer treatment plant. Close by the parking lot and plant entrance gate would be administration offices, a laboratory, a warehouse, a maintenance shops building and a change house for the workers. To the east of the four long rectangular potrooms would be the boiler house, the carbon anode paste plant, storage silos and unloading facilities for carbon materials, and the alumina unloading facility. Between the potroom buildings of Potlines 1 and 2 would be the storage silos for alumina, bath chemicals and other raw materials. Running perpendicular to the four potrooms and connecting them would be the crane transfer bay at the north end and the rectifier building at the south end. Outside and south of the rectifier building would be the high-voltage switchyard. Running between some of these buildings, deep underground, would be utility tunnels for high-voltage power cables that would connect the main switchyard to the various electrical substations. Standing more than 20 feet high in the basements of each 1,140-foot long potroom would be steel-reinforced concrete “hammerhead” pillars to support the cathode pot bottoms and the anodes that hung over the cathodes.

Buildings, tanks and tunnels

In June 1953, the Mitchell-Baker Thwing Co. set up a 125 cubic yard per hour concrete batch plant at the end of a 1,000-foot long temporary railroad spur line. Two cement silos with 1,100-barrel capacities were soon erected. The J.A. McNeil Co., which held the excavating and foundation contract, ordered 500,000 board-feet of lumber and plywood for concrete forms. All exterior concrete forms above ground were to have a plywood finish. Within a week, construction equipment was scheduled to begin arriving at the site, including generators, air compressors, cranes, a paving mixer and the batch plant. [5] Four railroad cars would transport the 50-foot high batch plant from Anaconda’s new copper plant in Yerington, Nev., and it would be ready for operation by July. A 20-by-20 foot building was built next to the batch plant for the Pittsburgh Testing Laboratory, which would sample materials used in construction of the plant, including concrete. Earth excavated from the plant site was dumped along the banks of the Flathead River. [6]

By November 1953, about one-third of the 75,000 cubic yards of concrete needed for the plant’s foundations had been placed. Employment numbers continued around 700. [7] By February 1954, J.A. McNeil had doubled its excavation and foundation crews to 234 workers, mostly by hiring carpenters and laborers. [8] Concrete forming continued right up to the coldest months. In November, J.A. McNeil announced it expected to wind up its excavation and foundation contract in early December, and the concrete batch plant would be closed down and moved to another location. [9] J.A. McNeil Co. had started work at the plant site with ground-breaking ceremonies on June 9, 1953, and the last of the foundation concrete for the year was placed on Dec. 9. The Baker-Mitchell-Thwing Co. batch plant had produced 82,000 cubic yards of concrete for the plant’s foundations. [10]

While concrete was being poured in wooden forms, cranes were setting up the steel columns and I-beam rafters for the plant’s numerous buildings. In most cases, the steel structure supported wall, floors, roofs and processing equipment, but the potrooms were different. The columns and I-beams in the potlines needed to be capable of supporting the 50-ton overhead bridge cranes that ran from end to end and their heaviest cargo – 110-ton cathodes which periodically needed to be pulled out and replaced. The American Bridge Co. began erecting structural steel for the four 1,140-foot long potrooms in September 1953. Structural steel for the warehouse, shop, main office, laboratory, change house and boiler plant was erected by Vinnell Inc. of Los Angeles. Metal siding was put in place within a month after steel framing was erected. [11] In mid-October, the new warehouse was ready for steel siding. Favorable fall weather promoted construction efforts at the site. [12] The corrugated siding was hung on the warehouse by Foley Constructors, marking the first enclosing of a building at the site. The first railroad cars of brick from Lewistown, Mont., for the new office building arrived in October. [13] American Bridge anticipated the arrival of 250 tons of structural steel by rail from Memphis, Tenn., for construction of the potrooms by February 1954. [14]

The Jamar-Olmen Co. of Chicago was awarded the contract to place roof decking and corrugated siding on the potrooms. [15] The first building at the plant site to be completed was the 362-by-90 foot warehouse, which was occupied on Feb. 13, 1954. [16] By March 19, nearly 1,100 construction workers were employed at the plant site, half the plant's concrete had been set, and about 15% of the structural steel had been erected. [17] Jamar-Olmen completed their roofing, siding and ventilating contract by April 1955. The company had been working on the potrooms since March 1954 with up to 60 men. Completion of the contract meant that all 25 buildings at the plant site were finally enclosed. On the west side of the plant, work was underway to clear 799 acres of brush and trees, but no buildings were planned for the area. [18] With the 25 buildings nearly finished at the plant site, the Vinnell Co. was preparing to leave. [19]

The Anaconda Aluminum Co. announced it had awarded the general building contract for the plant to Foley Brothers Inc. of Pleasantville, N.Y., on July 9, 1953. Foley was the general contractor for the Anaconda's $130 million copper plant in Chuquicamata, Chile. The contract for major electrical equipment at the new aluminum plant went to Westinghouse. [20] Subcontractors for the first phase included the J.A. Lovett Plumbing Co. and the Fidelity Electric Co., both of Los Angeles. Harold Pound, a former Flathead County deputy sheriff, was appointed head of the AAC plant's guard service. [21] The J.R. Klemens Co. of Great Falls was awarded the contract to build the roofs for the potline buildings. [22] The contract for installing heating and ventilation equipment in the laboratory building was awarded to Johnson Service Co., also of Great Falls. [23] A contract for painting structural steel was awarded to the B&L Co. of Missoula. [24] The Armstrong Cork Co. of Spokane was given the contract for insulating piping. [25] The contract to lay tile in the 362-foot long warehouse and other buildings was awarded to Jack Veach of the Columbia Floor Covering Co. in Columbia Falls. [26]

By late October 1953, Foley Brothers was clearing land and placing concrete piers for the mile-long 230-kilovolt transmission line that would carry power across the Flathead River from the Hungry Horse Dam-Hot Springs transmission line. According to one report, a pier hole located near the river "was acting like a well." [27] Along Highway 2, brush was burning from the right-of-way for the new high voltage transmission line connecting the plant to the BPA system. The Donovan Construction Co. of St. Paul, Minn., was awarded the subcontract to install major electrical equipment in the four potrooms in November 1953. [28] An engineer for Westinghouse arrived to inspect the plant in November. The large nationally-known electrical manufacturer had the contract to supply transformers, rectifiers and other equipment for the plant. [29] By early December, the heaviest pieces of equipment arrived from the Westinghouse Electric Transformer Division in Sharon, Pa. The three 107-ton transformers were each rated at 73,000 kilovolt-amps and, with forced-cooling, rated as high as 97,000 kilovolt-amps. [30]

The contract for electrical work connecting the high-voltage switchyard to the potlines was awarded to Fischbach & Moore of Seattle, Wash., in March 1954. This work included switchyard work, connecting transformers and installing rectifier equipment. The rest of the electrical work in the plant was installed by Donovan Construction. [31] Foley Brothers and American Bridge began constructing the rectifier building in September. The exterior of the rectifier building was made of 11-foot-square slabs of concrete weighing 4.5 tons a piece. Foam rubber was placed between the slabs. The rectifier building would have its own ventilating and cooling system and be dust-proof through positive pressure ventilation to protect sensitive electrical equipment. [32] In late April 1955, the Kalman Floor Co. sent 12 men to lay a dust-proof floor in the rectifier building. [33]

In February 1955, Hal Kanzler, AAC's electrical superintendent, and Gregory Jones, the BPA's Spokane operations superintendent, oversaw a test of the high voltage switchyard in which the Hungry Horse Dam and the AAC switchyard were isolated from the rest of the BPA grid. According to the Hungry Horse News, "Down in the switchyard, once the current was boosted up near 200,000 volts, there was a sizzling sound and hum. Here and there was a sparking off lines." The test continued over several days. [34] By August 1955, the switchyard and rectifier building was ready for complete operation. Built by Fischbach and Moore, Brown-Johnston and Casey Electric Co., the facility used 16 rectifying transformers, 12 phase-shifters, three regulating transformers and three 230,000-volt power transformers, all manufactured by Westinghouse. [35] The specialized high-power transformers were used to convert three-phase alternating current into multiple phases so smoother direct current could be created by the rectifier equipment. The rectified high amperage current left the rectifier building in thick aluminum buss bars that ran through the basements of the four potrooms. Power theoretically would enter a potline at 600 volts DC with 100,000 amps and return to the rectifier building after passing through 120 reduction pots in series at zero volts and 100,000 amps.

The Graver Tank & Manufacturing Co. of East Chicago was awarded the contract to build 10 storage silos at the AAC site in November 1953. Measuring up to 85 feet high and 45 feet in diameter, the silos would be used to store alumina, coke and other raw materials. Meanwhile, the J.A. McNeil Co. began laying foundations for the pitch and oil pumping station. [36] Coal tar pitch exists as a hard black glassy material at normal temperatures and becomes molten when heated to about 350 degrees Fahrenheit, so pitch storage tanks, pipes and pumps needed to be heated and insulated. In February 1954, Graver Tank began building two 300,000-gallon water storage tanks for the plant. Each tank was 50 feet in diameter and 35 feet tall. [37] Construction of the coke and coal storage silos and the pitch and fuel oil pump house began in February 1954.[38] The contract to insulate oil and pitch storage tanks was awarded to the Bullough Asbestos Supply Co. of Salt Lake City in November 1954. [39]

Glenn Geary Inc. of Missoula began excavation work on the alumina unloading station by early January 1954. The pit for the station would be 45 feet deep, the deepest excavation at the plant site. [40] Day and swing shift schedules were set up for excavation of the 52-foot deep hole for the structure. [41] On March 8, a LaPlante-Choat 22-ton earth-hauling machine was wrecked when its steering mechanism failed and the vehicle tumbled about 50 feet into the pit. The driver, Grant Davis, a Glenn Geary employee for 10 years, was hospitalized in Whitefish with contusions and lacerations. He was expected to be released five days later. The tractor section of the $36,000 machine was totally wrecked, but the scraper was intact. [42]

Summer and winter construction

By the end of August 1954, nearly 1,500 construction workers were at the AAC site, but heavy rains curtailed outdoor work on roofing and structural steel. Workers were building the bucket elevator tower for the alumina unloader and one of the alumina silos. [43] On Nov. 18, 1954, Foley Brothers tested the alumina unloading facility. In a similar way to how wheat cars were unloaded at Great Falls, individual rail cars filled with alumina were tilted on a giant table 37.5 degrees up and 15 degrees sideways. The alumina poured out of the top of the rail cars into hoppers deep in the basement of the alumina facility, where it entered the bucket elevators, was lifted to conveyor belts and transported to the storage silos. [44] Accidents were not unexpected in such a project. On

Feb. 17, 1954, a fire broke out at the onsite Lovett Plumbing Co. shop when a spark ignited oakum. The Columbia Falls volunteer fire department responded within eight minutes of the siren, but plant personnel had knocked down the fire by the time the firefighters arrived. The interior of the 12-by-24-foot shop was charred and the sheet metal was buckled, with an estimated damage cost of $2,000. [45]

On Oct. 27, 1953, the first bricks were laid at the plant in the garage section of the new main office building. Brick-laying was ahead of schedule because of favorable weather. [46] The office building was made of “modern brick and aluminum panel design,” with 12,700 square feet of space on one floor. [47] Three days later, rain stopped work for one week as temperatures dropped and construction workers were not dressed for the conditions. Several days later, temperatures dropped to 15 degrees and crews were forced to take steps to save the new concrete. [48] As temperatures dropped into the low 20s in late October, precautions taken to protect the concrete included preheating the batch water to 180 degrees, laying one-inch thick fiberglass blankets on top of fresh concrete, and using fuel-oil burning “salamanders” to heat work areas. [49] Mild weather in mid-November favored construction progress. [50] Then in the third week of November, shelters were set up to protect bricklayers working on the main office building. Snow levels came down the nearby mountains to the valley floor before retreating back to the mountains. Many believed that once winter finally hit the Flathead, most of the construction jobs at the site would come to an end. [51]

Snow began to accumulate at the plant site by early December 1953, and some layoffs had taken place. Total employment was still high at 650 workers. The new 90-foot by 484-foot maintenance shops building recently had been enclosed with siding. [52] By mid-December, the Vinnell Co. had completed the first phase of steel construction by erecting 980 tons of structural steel for eight buildings. The final rivet was expected to be placed in a week’s time. Winter weather had increased costs at the plant by 20%, but contractors felt that mild November and December weather had provided them a break. [53] By the third week of December, however, the work force saw a major reduction as a result of winter weather. The J.A. McNeil Co. laid off 100 carpenters and half of its total work force with 30,000 cubic yards of concrete placed out of the 70,000 needed for the plant. The concrete work season had extended one month later than expected as a result of mild weather. Meanwhile work continued on enclosing buildings with aluminum and galvanized siding. Four buildings were mostly enclosed. [54]

Mild weather with temperatures in the 40s returned in January 1954, much to the dismay of contractors who had already laid off many workers in anticipation of worse weather. Excavation began on the paste plant building and the sewage treatment plant building, while the warehouse building was ready for occupancy. [55] Then about a week later, a winter storm hit the Flathead with heavy snow, cold temperatures and high winds. The storm tore roofing off the new warehouse, which had not been completed, and construction was curtailed. One week later, workers were called back with the sentiment of the contractors that the worst was over. Workers came prepared, bundled up with warm clothing, but absenteeism was high. Electricians were mostly unaffected as they worked in the basement of the main office building and in the tunnels beneath the potrooms. Unemployment numbers for the Flathead Valley were 1,873 workers, up from 1,367 at the same time in 1953. Overall, the 1952-1953 winter had been considered mild. [56]

Normal winter construction conditions returned to the plant site by the end of January 1954. Concrete was poured into the foundations for the new alumina unloading station and the nearby paste plant building. [57] Ralph Mason, an electrician for Donovan Construction, was seen carrying snowshoes to work at the site. [58] Mild winter weather continued into February. Bricklayers were at work on the laboratory, change house and main office buildings, and workers were installing 15,000 feet of 10-inch and 12-inch asbestos-cement water mains. The sewage treatment plant was under construction, and the Lane-Minnesota Co. was drilling the second main water well. The first well measured 34 inches in diameter and 118 feet deep and produced 2,000 gallons of water per minute. [59] The number of workers increased by 150 in late February to 900, which passed the high mark of 700 workers at the plant site in 1953 and passed the high winter mark for construction at the Hungry Horse Dam. Unemployment in the Flathead dropped to 1,300 from a peak of 1,873 on Jan. 21. Great Northern Railway traffic stopping at Columbia Falls reached record levels, with most of the incoming material headed for the AAC plant site. [60]

Looking like a plant

With construction past a second winter, the job total at the plant site in March 1954 topped 1,000 for the first time, with weekly payrolls reaching $100,000. The effect of the payrolls on the local economy was being noticed by local businessmen. [61] Employment on July 29, 1954 reached 1,130 construction workers. The largest employer was J.A. McNeil, with 550 workers excavating and laying foundations. [62] By Aug. 7, there were 1,166 construction workers at the plant site. Siding was going up on Potroom 1, and structural steel was 70% complete on Potroom 2. One observer described the buzz of activity as “an impressive more of the same.” [63] By Aug. 19, the weekly payroll was close to $170,000, and J.A. McNeil had 718 workers. The company hoped to complete its contract by December and was working its crews six days a week. Excavation had begun on a treatment plant at the northeast corner of the plant that would handle waste water from the air pollution scrubber towers, which would be located between the potrooms. The waste water would be treated before being discharged into settling ponds. [64]

Favorable weather in mid-September helped boost employment to 1,579 workers. The American Bridge Co. was erecting structural steel in the fourth and last potroom. Two 84-foot tall 48-foot diameter storage silos had been erected by Graver Tank & Manufacturing Co., including the coke storage silo and one of the alumina silos. The Jamar-Olmen Co. was finishing up siding and roofing Potroom 1. The roofing had an asbestos-tar coating. [65] Employment reached 1,650 workers a week later. The J.A. McNeil Co. was completing concrete work on the 484-by-90-foot maintenance building. [66] By the end of September, about 80% of the concrete work was completed for floors, foundations and walls. Concrete placement averaged 500 cubic yards per day with a peak day of 617 cubic yards. Approximately 12,000 tons of structural steel was in place, about two-thirds of the total. Overall, the plant was considered about half completed. [67] By October, about half of the 1,600 workers were inside enclosed buildings. The roof of Potroom 3 was under construction, and structural steel was being erected for the crane transfer building. [68] Excavation and foundation work was about 90% complete by mid-October as employment continued above 1,600 workers. The American Bridge Co. expected to complete erecting structural steel in the potlines in December 1954. All 60 cathode shell casings were in place in Potroom 1. [69]

By Oct. 22, 1954, the Jamar-Olmen Co. had completed installation of 60% of the potroom roofs, but contractors were expressing concern about approaching winter weather. [70] The American Bridge Co. became the first building contractor to complete its contract, erecting the last structural steel for the potlines buildings in early November. Foley Brothers completed enclosing the 483-foot long rectifier building with 11-foot square concrete slabs, and Fischbach & Moore crews began installing electrical equipment in the rectifier building. With winter weather approaching, AAC rented a steam locomotive and hooked it up to the plant's steam distribution system to heat the warehouse, machine shops and office buildings, where plastering and tile work would need heat. [71] Contractors estimated they could keep 1,000 to 1,200 workers employed through the winter – more winter employment than at the Hungry Horse Dam. With its dependence upon lumber mills, agriculture and tourism for jobs, the Flathead typically saw 1,400 workers unemployed in winter. [72]

Employment climbed to 1,635 workers in mid-November 1954, with an increase in the number of electricians and pipefitters and a decline in the number of carpenters. Klaas DeWit, the AAC warehouse foreman, moved his crew into offices at the plant's warehouse, the first permanent offices to be occupied on the plant site. The oil-burning steam locomotive on loan from the Great Northern Railway that was connected to the plant's steam distribution system to provide a temporary source of steam for heating the buildings was operated on three different shifts by O.W. Wendt, Roy Johnston and Lee Decker. [73] Employment reached what was considered a peak of 1,666 workers in late November. Except for one week, more than 1,600 workers had been employed since Sept. 20, 1954. McElroy & Wilken of Kalispell was awarded a subcontract under Baker-Mitchell-Thwing to furnish concrete to the plant after Dec. 1. Concrete finishers worked the longest hours, up to seven days per week, but Thanksgiving Day was a holiday for all workers except maintenance personnel. [74] Graver Tank began building four 84-foot tall alumina storage silos in mid-December. Both the Foley Brothers and AAC staff were looking forward to three-day weekends at Christmas and New Year's. The AAC plant's office staff planned to move out of the Bank of Columbia Falls building in downtown Columbia Falls and into the office building at the plant site early in January. [75]

Employment dropped to 1,162 workers by Dec. 22, 1954, but no more decreases were expected through the winter unless severe weather threatened. Most of the winter-time construction would be inside enclosed buildings. [76] Relatively mild temperatures and below-normal snow depth aided construction work that winter. [77] The worst week of weather hit the Columbia Falls area in late-February 1955, slowing construction work. Cold weather and wind reduced the Foley Brothers workforce from more than 1,000 workers to 95. A local radio station provided information to construction workers on whether or not to report to work. Six inches of fresh snow lay on the ground, and temperatures hovered near zero. [78] The steel framework for the 130-foot tall paste plant was completed in February, and sheeting was being attached. The 10-story building was the tallest structure at the plant and in Flathead County. [79] The paste plant was filled with machinery interconnected with pipes and conveyor belts, including roll crushers, rod and ball mills, shaker screens, bucket elevators, hoppers, scales, mixing tanks, pumps and briquetting machines. The anode briquettes were made by mixing petroleum coke ground into three different sizes with hot coal tar pitch at 300 degrees Fahrenheit. The anode paste was then extruded into briquettes and quickly quenched with cold water. [80]

By May 1955, the surrounding land was being grading and prepared for installation of underground sprinkler systems. [81] In June, AAC staff estimated the cost of the new plant at $65 million when completed. [82] The plant began producing metal in August, and construction crews were down to 441 workers on Sept. 2 from 722 a week earlier. Final wrap-up of construction work was expected in late September. [83] In mid-October, many of the temporary buildings were purchased by plant employees and hauled away. Part of the Foley office building was donated to the Columbia Falls public library, and the rest went to the Columbia Falls Rifle Club. [84] The plant's maintenance department was based in the 57,535 square foot shops building, which housed an electric shop, machine shop, pipe shop, boiler shop and blacksmith shop. A garage for repairing industrial trucks and other plant vehicles was located near the potrooms The warehouse building had 32,580 square feet of space to store raw materials and parts for repairs. The boiler house near the paste plant supplied steam and compressed air to the entire plant. The change house included a conference room with space for 50 people to be used for training workers in production techniques and safety. [85]

Decades later, Fischbach & Moore, the electrical contractor that built the switchyard at the AAC plant, became embroiled in a federal fraud case. Fischbach & Moore was the largest electrical contractor in the U.S. in 1983 when it was charged with violating the Sherman Anti-Trust Act in two separate cases. On June 8, 1983, six construction companies and eight of their top officers were indicted in federal court in Seattle on charges of rigging bids for electrical work for four nuclear power plants in Washington and one in Indiana. The indictment claimed the companies conspired by discussing the preparation and submission of bids, shared prices and other information, reached understandings on which firms should be the low bidders, and "submitted collusive, rigged and non-competitive bids." Fischbach & Moore had won a $151 million contract for Washington Public Power Supply System's Projects 3 and 5 at Satsop, Wash. – derisively nicknamed "Whoops." The defendants faced maximum penalties of three years in prison and $100,000 in fines for the individuals and $1 million in fines for the companies. [86]

The case was moved from Seattle after the defense requested a change of venue. A witness testified that the six contracting companies, as members of the Conference Club of Electrical Contractors, had met at the Queensway Bay Hilton Hotel in Long Beach, Calif., on May 4, 1978, and at the La Quinta resort in Palm Springs, Calif., on April 17-18, 1978, to exchange information and agree on which company would be the lowest bidder. In November 1983, U.S. District Court Judge John C. Coughenour fined one of the companies, the Howard P. Foley Co., the maximum $1 million fine and sentenced the company president, Bancroft P. Foley Jr., to five months in prison. Another company, Wismer & Becker Contracting Engineers, pleaded no contest and received a $50,000 suspended fine. [87]

In March 1985, Fischbach & Moore was acquitted on 12 charges related to construction of the nuclear reactors. The trial had been moved from Seattle to Phoenix. The jury couldn't reach a verdict on the other defendants, who entered into plea-bargaining rather than face a new trial. Fischbach & Moore had been acquitted of other charges related to the nuclear reactors in 1984. The Washington Public Power Supply System was in the middle of a $24 billion construction program involving five nuclear power plants in 1981 when problems emerged. Two of the plants were terminated in 1982 as WPPSS was unable to sell bonds to continue construction. The financial crisis reached a climax in 1983 when WPPSS said it was unable to pay the $2.25 billion in debt for the two plants – the largest default in U.S. municipal bond history. [88]

Fischbach & Moore faced similar anti-trust charges in Pennsylvania about the same time. On July 2, 1983, six construction companies and five of their top officers were indicted by a federal grand jury in Pittsburgh on charges they rigged bids for electrical contracts at eight U.S. Steel Corp. plants in the Pittsburgh area. The defendants were charged with conspiracy violations under the Sherman Anti-Trust Act from 1974 through 1981. [89] Fischbach & Moore was expected to plead no contest on Feb. 1, 1984, after filing a motion stating its intention to enter the plea. The six companies and five corporate officers were charged with discussing bid-rigging by telephone and at meetings in the Duquesne Club in downtown Pittsburgh. [90]

Early AAC management

The Anaconda Aluminum Co. received about 2,000 applications by February 1955 for permanent jobs at the plant. [91] A survey of 1,000 applications showed that 700 came from men living within 20 miles of the plant. [92] About 450 workers were needed once the plant was running, and it was expected that about 375 of those positions would be filled locally. Many locals who worked at the Hungry Horse Dam had learned carpentry or cement-finishing skills, and AAC planned to teach local workers about the aluminum smelting business. [93] A job training program for production workers started on March 1. About 30 plant superintendents and foremen with prior experience in aluminum smelting conducted the training, including James Smith, production superintendent, Ed Woster, potlines superintendent, and Don McMaster, casting superintendent. Most of the 450 jobs at the plant were expected to be semi-skilled, including 300 general laborers, potmen, tappers, crane operators, pot-relining men, utility men, casting room men, firemen, electric truck operators and crucible liner men. [94]

An additional 70 workers would be employed in the maintenance department under Carl Lundborg as electricians, mechanics, welders, pipefitters, carpenters and other craftsmen. The procedure for men seeking work was to put an application on file and wait to be called. According to the Hungry Horse News, the "plan then is to have the prospective employee see the job, and if he likes it, and he looks like the right man, he will be sent to a physician for a physical examination. Final step is issuance of safety equipment, and two lockers – one for street clothes and the other for work clothes – and reporting to the foreman for work." Production employees would work in three shifts in four crews, reporting for day shift one week, swing shift the next week, and night shift the third week. About 250 of the 450 employees would work the day shift. [95]

Seven future AAC production supervisors arrived at the plant site in August 1954. John C. Kearns would be the plant's safety engineer. He had worked for 12 years at the Reynolds aluminum smelter in Longview, Wash., as a safety engineer and employment manager. Donald McMaster, the plant's casting superintendent, came from the Kaiser aluminum plant in Newark, Ohio. W. Dwight Kimzey, the plant's casting foreman, had worked for the Kaiser rolling mill at Trentwood outside Spokane, Wash. Robert Mohr, a chemist in the plant's laboratory, was a graduate student at the University of Washington in Seattle. Benjamin E. Bowerman, a potline foreman, had worked for Kaiser at the Mead plant in Spokane. Dean M. Tusing, also a potline foreman, had worked for a plywood plant in Bellingham, Wash., and had some aluminum smelting experience. Joe Slobojan, another a potline foreman, had worked for a shipyard in Longview. [96] In October 1958, Kearns was promoted from plant personnel director to personnel manager for the Anaconda Company's western operations. Kearns was with Reynolds at Longview from 1942 to 1954 when he came to the AAC plant. He had worked as a potman at the Longview plant before advancing to safety engineer and employment manager. [97] A graduate of North Dakota State College in 1939, Kearns was promoted to director of employee relations for AAC in Louisville, Ky., in June 1965. [98]

Two plant managers who came to the AAC plant with experience at the Hungry Horse Dam project also shared outdoor recreation interests. Charles E. Fisher began working at the AAC plant on Oct. 21, 1954, as a foreman in the mechanical section. He received a mechanical engineering degree from the University of Wisconsin in 1949 and then worked for the Army Corps of Engineers and Allis Chalmers. He was with the Bureau of Reclamation building the Hungry Horse Dam before he came to the AAC plant. An avid outdoorsman, mountaineer and photographer, Fisher was promoted to mechanical maintenance engineer on May 1, 1963, and took over at the plant's Field Maintenance department on June 10, 1965. [99] Fisher opted for early retirement when the plant underwent serious downsizing in March and April 1983. [100] The second new plant manager was Hal Kanzler, a World War II Marine of national renown both in engineering and outdoor pursuits whose tragic death was memorialized in literature.

Harrel W. "Hal" Kanzler graduated from Oregon State University in 1943 with a degree in electrical engineering. [101] Born in Kansas City, Mo., on Dec. 29, 1920, Kanzler served as a captain in the U.S. Marines during World War II. [102] He received a master's degree in electrical and mechanical engineering in 1947. Kanzler first came to the Flathead Valley area in 1948 as an electrical engineer for General-Shea-Morrison, the general contractor building the Hungry Horse Dam. In 1952, he went to work for Alcoa during construction of the company's smelter in Rockdale, Texas. Kanzler returned to the Flathead in August 1953 for less money to manage Casey Electric, which was involved in building the AAC plant. On March 15, 1954, Kanzler was hired as the electrical superintendent at the AAC plant. [103]

Kanzler was an avid outdoorsman who promoted and developed a hunter safety program in the valley. As a mountaineer, he climbed Mount St. Nicholas in Glacier National Park and other difficult peaks. He wrote outdoor articles illustrated with his own photographs for national magazines. [104] Kanzler was awarded one of the top three Field and Stream magazine Shooter Awards at the Waldorf-Astoria Hotel in New York City on May 25, 1961. The award was presented by Lt. Gen. Jimmy Doolittle. [105] On Jan. 19, 1962, Kanzler presented a slide show on outdoor sports in the Flathead Valley area at the AAC Employees Club in Columbia Falls, including fishing, hunting, alpine and mountaineering skiing and mountain climbing. [106] Nationally known in both the engineering field and for his wildlife photography, Kanzler wrote several articles with photographs for outdoor magazines and created a survey map of the Mission Range in Montana, which was published in 1963. [107] On June 10, 1965, as head engineer at the AAC plant, Kanzler was promoted to chief mechanical and electrical engineer for Anaconda Company operations and moved to Butte. [108]

Tragedy first came to the Kanzler family on Jan. 21, 1967, when Hal Kanzler took his own life in Butte. He was 46 years old. Kanzler was buried at Glacier Memorial Gardens, in Kalispell, and was survived by his wife Jean and sons James and Jerald. [109] Tragedy hit the Kanzler family again on Dec. 28, 1969, when Jerald died in an avalanche while climbing the upper west face of Mount Cleveland in Glacier National Park. Hal had taught his two sons to enjoy outdoor activities, and while working in Glacier Park, older son James once received a box of pitons from his father with a note that said, "These pitons will not be used on the North Face of Mount Cleveland or the North Face of Siyeh." But according to McKay Jenkins' 2001 book "The White Death: Tragedy and Heroism in an Avalanche Zone," James and his friends were already planning to climb the 4,000 foot north face of Mount Cleveland. Hal and his family moved to Butte after he gave the pitons to James. As it turned out, James was unable to go on the climb, and the group that went to Mount Cleveland that winter included younger brother Jerald Kanzler, Clare Pogreba, Ray Martin, Mark Levitan and James Anderson. The entire party perished in the winter avalanche. Jerald was carrying the gun Hal used to kill himself with plans to bury it on the summit. [110] James Kanzler, who went on to work with Exum Mountain Guides in Grand Teton National Park and as a ski patroller at Bridger and Jackson Hole ski areas, took his own life with a gun on April 18, 2011. [111]

Filling the smelter ranks

The first hourly workers at the AAC plant began their jobs at the boiler house in March 1955. [112] Fred J. Kost was hired as a boiler and compressor operator on March 28, 1955. The Kost family moved to Martin City in 1948 during the dam boom days. He opened up a store and repair shop and worked as an oiler for heavy equipment during construction of the Hungry Horse Dam. Later, Kost served as a member of the Columbia Falls City Council, a justice of the peace for Martin City, and president of the Martin City Lions Club. He retired from the AAC plant on April 1, 1974. [113] In early April 1955, the first member of the plant protection crew reported to work. The crew, which would include first aid and firefighting personnel, was expected to total 12 by the time the plant went into full operation. [114] Also in April, five potline foremen joined the workforce. The five were former employees at the Kaiser plant in Tacoma, Wash., the Alcoa plant in Port Lavaca, Texas, the Kaiser plant in New Orleans and the Reynolds plant in Longview. Eight foremen would eventually be employed in the plant's four potrooms. [115] The AAC plant planned to hire 250 additional production workers between July 15 and Aug. 15. [116] The parking lot in front of the smelter had space for 250 automobiles and was systematically patrolled. [117]

John A. Kelly was one of many construction workers who stayed on to work at the AAC plant. He also was the first employee to retire from the plant. Kelly came to Montana from Seattle in 1915 to work in a mine near Lewistown. He later lived in Butte and then worked for Anaconda's chromium mine near Columbus, Mont. before moving to the Flathead in 1950. He and his wife operated a motel in Martin City for three years, at which time Kelly went to work for the McNeil Construction Co. at the AAC site. Kelly went to work at the plant in 1955 as a warehouseman. On May 22, 1959, Kelly was feted at his retirement party by fellow employees and presented a power drill and accessories as a going-away gift. [118] Another dam and plant builder was William D. Potter. He graduated from Coyne Electrical School in Chicago in 1941 and went to work for Lockheed Aircraft in Burbank, Calif. He returned to the Flathead in 1950, where he worked for General-Shea-Morrison building the Hungry Horse Dam. With the dam project winding down in 1953, Potter went to work for Donovan Construction building the AAC plant. He went to work at the new smelter in 1955 while continuing to own and operate the Evergreen Motel in Coram. Potter later served as chairman of the board of directors of the AAC Employees Club, and he ran for the Columbia Falls school board in March 1963. [119]

In an unusual origin story, Bill Sands left Illinois in 1920 at the age of 21 in a covered wagon to bring his mother to a healthier climate. His first job in Montana was as a lineman south of Miles City. He came to the Flathead Valley to help during construction of the Hungry Horse Dam. After serving two years as deputy sheriff in Martin City and two years as a guard at the dam, he went to work with the construction crew that built the transmission line connecting the new aluminum plant to the BPA grid. He hired on as an electrician for AAC in 1955 and stayed on until March 1964. Sands said his most immediate plan for retirement was to go fishing at Duck Lake on the other side of the Continental Divide in the Blackfeet Indian Reservation. [120] Twin brothers Jim Graham and Bob Graham also were early hourly workers at the new plant. They graduated from high school in 1944, entered the service during World War II and worked on construction of the Hungry Horse Dam. They went to work building the AAC plant in 1953 and were hired at the plant in 1955 as sheet metal workers. The two worked together in the same shop until they retired on April 26, 1991, after 35 years at the plant. [121]

Gene Orem came to the Flathead Valley in 1953 as a superintendent for Vinnell Steel, a contractor that helped build the AAC plant. He later obtained a job at the plant and was the material coordinator in 1966. [122] Prior to his coming to Montana, Orem had worked with steel erection crews at atomic testing sites in Nevada, where 22 atomic bombs were set off, including the first underground tests. After the AAC plant was completed, Orem became a foreman, and in 1955 he purchased 40 acres in the Deer Park area below Columbia Mountain. By 1975, his holdings had expanded to 600 acres, including a five-bedroom house with aluminum siding and a small irrigation dam on the side of the mountain. He raised 80 cows at a time on his land while continuing his job as a foreman at the plant. [123] Orem ran for the District 6 School Board in April 1966 and passed away in June 2000. [124]

An unusual early hire was Vince Caciari, who spent 12 years in the Italian navy. When World War II broke out, he was captured while his ship was in port in New York City. After a brief detention in Fort Missoula, Caciari worked for the Great Northern Railway and then enlisted in the U.S. Army and fought against the Japanese in the Pacific Theater. After the war, Caciari worked as a lead man for the Bureau of Reclamation on the Hungry Horse Dam project. In 1953, he went to work in the warehouse for the new AAC plant. By 1955, Caciari was named assistant to the electrical superintendent and later an engineering assistant in the engineering department. In 1970, Caciari was promoted to coordinator of the technical department, a position he held when he retired on May 1, 1976, after 23 years of service. [125]

Perhaps the most senior employee at the AAC plant was Michael E. "Mickey" Sullivan, who was transferred to the AAC plant in June 1955 to work as the garage supervisor. Sullivan started working for the Anaconda Company in 1912 as a machinist's helper in Butte. He later worked as a chauffeur and then garage supervisor at the Butte mines.

Sullivan fought in several well-known World War I battles and served during World War II. [126] He descended from Montana pioneers – his father arrived in Montana Territory in 1868. Sullivan worked as a pipefitter and machinist in Butte before heading off to Georgetown University in Washington, D.C., where he completed a degree in chemistry. He returned to work for Anaconda in 1927, where he worked as a garage foreman at various mines in Butte. While working in the Steward Mine in Butte in 1931, he became friends with Mike Mansfield – as a result, Sullivan was invited to President Kennedy's inauguration. In the Flathead, Sullivan was an instructor in hunter safety courses ever since the program began in 1957. His wife helped establish the local branch of the Flathead County Library and was a member of the board. [127] Sullivan received the Golden Arrowhead Service Pin from the Anaconda Company on Feb. 24, 1960, in recognition of 35 years of employment. [128] Sullivan retired from the AAC plant in March 1963. [129]

Starting up the smelter

The smelter was about half built when AAC received word in May 1954 that the Carter Oil Co., a subsidiary of Standard Oil, planned to build a new fluid-coking unit at its oil refinery in Billings, Mont. The coking unit, a series of 195-foot high teakettles, extracted high octane gasoline and produced pet coke as a result. The best market for the pet coke was the aluminum industry, where coke was used to make carbon paste for anodes, and Carter Oil was hoping to sell its coke to AAC once its new smelter was in operation. Shipping costs could be reduced by using coke produced in Montana. [130] The first railroad car carrying raw materials to the new AAC plant arrived in March 1955, loaded with treated anthracite coal from the National Carbon Co. in Niagara Falls. Raw materials needed to put the plant into operation included 120,000 tons of alumina from Texas or Arkansas, 23,000 tons of petroleum coke, 2,200 tons of cryolite and 2,050 tons of other chemicals. [131] Three hopper cars filled with petroleum coke arrived at the plant in March. According to the Hungry Horse News, "A score of engineers and plant officials had a look as the coke and coal unloading equipment and conveyor belts were put to work for the first time." A 24-inch wide conveyor belt transported the material toward a storage silo. [132] Other raw materials such as coke, pitch, coal and cryolite were unloaded by payloaders or bottom-dumping box cars. [133]

Nearly all of the 1,892 railroad cars arriving in the Flathead in 1955 were bound for the AAC plant, with two-thirds carrying construction materials and one-third hauling raw materials. [134] The first shipment of alumina arrived on May 11, 1955. The six railroad cars carrying 62 tons of alumina came from Arkansas. Future shipments of alumina would come from Corpus Christi, where the Reynolds Aluminum Co. refined bauxite ore shipped from Jamaica. The goal was for the AAC plant to receive 36 railroad carloads of alumina every two weeks for a total of 120,000 tons per year in order to produce 60,000 tons of aluminum metal per year. The plant's four big silos were capable of storing 12,000 tons of alumina, a two-month supply. [135] To ensure the quality of raw materials and production processes, the plant maintained a well-equipped laboratory. The laboratory contained the latest in metal-production testing equipment, including a production-control quantometer capable of analyzing a sample for 16 elements within four minutes. The quantometer, a spectroscopic instrument, would make it possible to maintain quality control over raw materials arriving at the plant, materials undergoing the smelting process and the finished metal product. [136]

Each potroom measured 1,080 feet long and 87 feet wide and held 60 reduction pots. A potline consisted of two rooms and 120 pots. Alumina was dispensed into each pot by a specially designed industrial truck. About 6 million pounds of aluminum was used to make the buss bars connecting all 240 pots in the plant to the rectifier building. [137] Construction crews set the first reduction pots in place on Sept. 8, 1954. The 25-ton empty steel cathode shells were built by the Consolidated Western Steel Co. of Orange, Texas, and were set in place by Foley Brothers crews. [138] The inside measurements of the cathodes pot bottoms were 24 feet 9 inches long, 12 feet 1 inch wide and 1 foot 6 inches deep. The cathodes were lined with carbon paste to conduct electrical current and fire brick to withstand the 1,742-degree Fahrenheit temperature of the molten bath. [139]

The Soderberg-design anodes measured 21 feet 4 inches long and 6 feet 6 inches wide and were periodically refilled with carbon paste briquettes by another specially-designed industrial truck. The temperature at the top of the anode was high enough to melt the briquettes, and the temperature at the bottom was high enough to harden the resulting mixture into a single solid block of carbon. The anode block was connected to the electrical buss bars by 50 large steel pins. As the anode was lowered into the cathode, the current flowed from the buss bars through the steel pins into the carbonized anode block, then into the molten bath and on to the carbon-lined cathode and its steel collector bars at the bottom of the pot. As the anode was raised and lowered to maintain pot voltage, the anode carbon burned off. The steel pins were changed out on a regular schedule by pin-puller crews so they never came within eight inches of the bottom of the anode. Anode briquettes were added to the top of the anode periodically to make up for the loss of carbon. [140]

The first step in getting a brand-new aluminum reduction pot operating correctly was called the electrode bakeout period. When a smelter started up for the first time, the bakeout period involved multiple pots all at once, and the result could be a difficult and messy process. As heat was applied, the carbon paste in the 30-ton Soderberg anodes was expected to emit smoke and fumes as the mixture of coal, coke and pitch melted, congealed and eventually hardened. As reduction pots reached the end of their useful life, they were removed and replaced. Replacement pots included a completely rebuilt cathode pot bottom, but older anodes were refurbished to avoid the bake-out process. The bakeout period for the pots in the first two potrooms at the new AAC plant was scheduled to begin in mid-July and expected to last 10 to 12 days. [141] At 9:15 a.m. on July 20, 1955, electrical current was applied to the 120 aluminum reduction pots of Potline 1 and soon climbed to 90,000 amps. Not much smoke reportedly was created, and none was visible from the town of Columbia Falls. Stacked next to the pots and ready to be poured into the cathode potliners once the bakeout period was completed were stacks of 100-pound bags of cryolite from Greenland. The white flour-like substance would melt into a liquid bath at high temperatures. [142]

Temperatures in the reduction pots reached 1,706 to 1,724 degrees Fahrenheit. Alumina added to the pots dissolved in the molten bath and was converted into aluminum. [143] Molten aluminum collected at the bottom of the cathode and was removed daily by a siphon crucible carried by a special tapping truck. Large hoses carrying high-pressure air from the compressor house were connected to a venturi device at the top of the siphon crucible to create a strong vacuum inside the crucible. Molten metal was sucked out of the cathode bottom into the siphon crucible. The metal was then poured into a transfer crucible and hauled to the 407-foot long casting building, where it was poured into one of three 75,000-pound holding furnaces. [144] Nine kilowatt-hours of electrical power and two pounds of alumina were needed to produce one pound of aluminum, and each pot was expected to produce 1,400 pounds of aluminum per day. [145]

The metal from the one of the casting furnaces was poured into molds in a straight-line casting machine, forming 30-pound ingots or 50-pound pigs that were stacked by a machine. The other two furnaces fed two 25,000-pound casting furnaces which in turn fed direct-chill casting stands, where molten aluminum was poured into an open mold cooled by a large volume of water in a semi-continuous process that created wire bars or alloy-sheet ingots. The finished wire bars measured 6 feet long and 6 inches square. The finished sheet ingots measured 150 inches long by 36 1/2 inches wide and 7 inches high. [146] About 60% of the aluminum from the pots would be cast into wire bars and shipped to the Anaconda wire mill in Great Falls. The rest would be made into ingots and pigs for shipment. [147] Reduction pots in the second potline were charged for the first time in mid-October 1955, as Foley Constructors completed their work and left. [148] By the third week in November, the reduction pots in Potline 2 were producing aluminum. [149] The last of the 240 reduction pots were charged with cryolite and alumina ore by the second week of November, and the plant was at 100% capacity. [150]

One of the new features of the AAC plant that the Anaconda Company boasted of was its air pollution control system. According to information the company provided media at the plant's dedication, waste products from the burning of anode carbon mostly consisted of carbon dioxide and carbon monoxide, but it also included volatiles distilled out of the anode paste compounds and small amounts of inorganic volatiles released by the bath or by air currents carrying off bath particulates. A burner at the end of the pot converted most of the carbon monoxide to carbon dioxide, and 5-inch ducts carried away the pot gas to common 18-inch ducts connected to multiclones, to remove dust, and then the plant's 12 wet scrubber towers. The scrubber towers were located in the courtyards, six between Potrooms 1 and 2, and six between Potrooms 3 and 4. Pot gas entered stainless steel chambers mounted on each tower, where a water spray converted some of the hydrogen fluoride gas emissions in the pot gas into an acid solution. The acid solution flowed down into reactor tanks where slaked lime was added to precipitate out insoluble fluorides. The solids were settled in a Dorr tank, where the clear overflow solution was recycled back into the towers. The rest of the fluid was pumped to settling ponds located north of the plant. [151]

The plant produced its first aluminum on Aug. 12, 1955, cast in 50-pound pigs. [152] The first railroad car load of aluminum ingot was shipped from the plant on Aug. 25. [153] As production levels increased, the plant expected to be shipping out three carloads per day, each carrying 100,000 pounds of finished aluminum. Potroom 1 was the only potroom in operation at that time, and the new casting department was only making 50-pound pigs. [154] By early September, the plant was producing 100,000 pounds of aluminum a day cast into 50-pound pigs. [155] There was ample demand for that virgin aluminum. As early as 1953, while construction was just starting at the plant, the Nichols Wire & Aluminum Co. placed the plant's first order for aluminum. [156] By March 1956, Pacific Power & Light began construction of a new 45-mile power transmission line linking Billings to the new Yellowtail Dam on the Big Horn River. About half the aluminum used in the transmission cables had been produced by the AAC smelter. The total weight of the aluminum-clad steel-reinforced cable shipped to Billings for the project weighed 140 tons. [157]

The aluminum picture

U.S. aluminum production reached a record monthly output of about 138,000 tons in August 1955 and was 10,000 tons higher in September than in September 1954. Production for the first nine months of 1955 was 75,000 tons more than in the same period in 1954. [158] That was good news for customers of the new AAC smelter. Beginning in 1955, aluminum produced at the smelter was allocated to four categories of customers. The Harvey Machine Co., by a 1952 agreement, had an option to purchase a portion. The smelter was 95% owned by Anaconda and 5% by Harvey. Other customers included two aluminum fabricators that were Anaconda subsidiaries. The Anaconda Wire and Cable Co. owned and operated five aluminum mills around the U.S. that manufactured aluminum conductors, including a new and modern facility in Great Falls. The American Brass Co. subsidiary ran a small aluminum sheet mill in Torrington, Conn., and had begun construction of a $25 million rod mill in Terre Haute, Ind., which was expected to be in operation by 1956. The fourth category of AAC customers was the open market. [159]

The Hungry Horse News reported on the manufacturing of aluminum cable at the Anaconda Wire & Cable Co.'s plant in Great Falls in early November 1952. The plant had long manufactured copper wire and cable products, but now it was making ACSR cable, with a steel cable core and aluminum conductors wrapped around it. [160] On July 9, 1953, the U.S. Office of Defense Mobilization ruled that the Anaconda Company could write off up to 50% of the cost of its new aluminum rod and bar mill in Great Falls. The tax write-off would be worth nearly $2.7 million over a five-year period. [161] The Great Falls rod-rolling mill was still under construction in 1955 as the new AAC plant that would supply the Great Falls plant with aluminum pigs was nearing completion. [162] In an Aug. 28, 1953 editorial, Mel Ruder commented on Anaconda's decision to build its aluminum rod and wire mill in Great Falls rather than next to the new smelter in Columbia Falls. The decision meant a loss of 100 jobs to the Flathead Valley, he noted. Anaconda based its decision on the fact that it already had a wire and rod mill in Great Falls and because the new aluminum smelter had not been proven, Ruder said. A realistic question was how much it would cost per pound to produce aluminum at the new plant. Ruder felt that after the new plant had proven itself, further expansion was possible. [163] Meanwhile, the Anaconda Wire & Cable Co. was also building up facilities in Orange, Calif., Sycamore, Ill., and Hastings-on-Hudson, N.Y. in anticipation of aluminum from the Columbia Falls smelter. [164]

The new AAC smelter had an estimated cost of $65 million and estimated capacity of 67,500 tons per year. [165] According to industry experts, the cost of building a new aluminum smelter plant in 1955 was estimated at $1,500 per ton of capacity. This figure reflected the costs from ore to ingot. The cost in 1939 was one-quarter of that figure, or about $375 per ton of capacity, but the price of aluminum had only increased by 20% from 1939 to 1955. As a result, finding financing for the construction of new aluminum smelter plants in the U.S. was becoming more and more difficult. [166] Only the largest metals mining and processing companies, such as Anaconda, could seriously consider the investment. As of Dec. 31, 1955, the Anaconda Company had a net worth of $701 million. For the year 1955, the company had a gross income of $152 million and a net income after taxes of $65 million. [167]

By the end of 1955, the Anaconda Company was a major and diversified producer of metals and metal products in the world. The new AAC smelter added to Anaconda's vast holdings throughout the U.S., Mexico and Chile. Anaconda had expanded beyond its traditional base in copper and zinc production to manganese, uranium and now aluminum, with mines, smelters and fabricating plants linked in a complex interacting network. [168] Anaconda mined what was believed to be the largest uranium property in the world. In 1955, the company changed its name from the Anaconda Copper Mining Co. to the Anaconda Company, signaling its diversification from copper into other kinds of metals, including aluminum. [169]

When plans were announced for a dedication ceremony at the Columbia Falls plant on Aug. 14 and 15, 1955, the city of 2,000 residents took on a festive air as the date approached. Downtown storefronts were decorated and people were seen wearing Western garb. The opening event was a parade featuring 125 horses from the 15 Western Montana saddle clubs attending the annual O-Mok-See horse games in Columbia Falls. The schedule for the dedication included an introduction by AAC President R.B. Caples; a singing of the national anthem; an invocation by Reverend Father John Cronin of Whitefish; speeches by Montana Gov. J. Hugo Aronson, Anaconda President R.E. Dwyer and Anaconda Chairman R.H. Glover; a dedication speech by former Anaconda Chairman Con Kelley; a benediction by Reverend L.D. Peck of Kalispell; and the singing of the song "Montana" by Columbia Falls High School students. Tours of the aluminum plant would begin afterwards. [170] Leading industrialists from around the U.S. traveled to Columbia Falls for the dedication. They represented railroads, banks, investment firms, insurance companies, aluminum and other nonferrous metals fabricators, and the Bonneville Power Administration. Among those attending was Lawrence A. Harvey of the Harvey Machine Co. and representatives from the Kaiser Aluminum and Chemical Corp., Revere Copper and Brass Inc., Reynolds Metals Co., U.S. Steel Corp., Westinghouse Electric Corp. and Great Northern Railway. [171]

In his speech, Glover described the political difficulties Anaconda faced in getting sufficient electric power from the Hungry Horse Dam. Soon after transferring the power contract from Harvey and obtaining the necessary government agreements and authorizations, "It did not take long to discover that other forces were at work and that there were designs upon the use of Hungry Horse power outside the state of Montana," he said. "A political battle royal ensued." The company eventually enlisted the assistance of Sens. James Murray and Mike Mansfield as well as President Truman. Glover told the spectators at the dedication, "I have in my possession a letter from Harry S. Truman, as President of the United States, to John W. Bonner, as governor of the state of Montana, assuring Gov. Bonner that the project would be permitted to proceed." Among the key supporters Anaconda found in Washington, D.C. was Paul

Raver, at that time the BPA administrator, who was determined that power generated at the Hungry Horse Dam be used within the state of Montana. According to Glover, Raver believed that was the intent and meaning of the act of Congress which authorized construction of the Hungry Horse Dam. [172] According to Glover, "every possible political string" was pulled to prevent construction of the plant, but in the end President Truman intervened and helped get the plant approved. About 2,000 people attended the dedication ceremony and another 5,500 took guided tours of the plant. Token aluminum ingots were handed out to those in attendance with the inscription "Anaconda" on one side and "Columbia Falls, Mont." on the other. [173]

The Hungry Horse News published a special edition in honor of the dedication on Aug. 12, and many local businesses paid for ads in support of the new plant. Among the ads was one placed by the Aluminum Workers Trades Council of Columbia Falls AFL, headquartered in Room 14 of the Bank of Columbia Falls building. The ad was a solicitation to plant workers to join the union. "Greetings to the new aluminum workers at the Anaconda aluminum plant in Columbia Falls," it began in large type, "We extend to you an invitation to join with the Aluminum Workers A.F. of L. throughout the United States and Canada who are enjoying the highest wage rates and other conditions of employment in the Aluminum industry." This was followed by a list of benefits members of the trades council enjoyed, including six paid holidays per year, double time if worked on Sunday; time and a half for work on other Sundays; time and a half for work on the sixth day of each week and double time for work on the seventh day of each week; insurance for death while employed, death upon retirement, a week of lost time due to accident, or sickness and for hospital expenses; vacations of one week after one year of service, two weeks after five years and three weeks after 15 years; a retirement plan paying a pension of $140 per month; and an iron-clad seniority clause with an effective grievance procedure. Lastly, the ad reminded workers at the AAC plant about the kind of work they performed: "You are not a steelworker or a copper worker: You Are an Aluminum Worker – Don't Be Misled." [174]

By 1955, the Anaconda Company had located a site, lined up raw materials, acquired a long-term electrical power contract and built a modern aluminum smelter. It was organized to become the fourth company in the U.S. aluminum industry. What weren't yet organized were the workers.

---

[1] Mel Ruder, "Long-'waited word on aluminum plant 'finally' at hand," Hungry Horse News, Aug. 22, 1952 [AL1454]
[2] "Plant payrolls reach $50,000," Hungry Horse News, Aug. 28, 1953 [AL2311]
[3] Photo with caption of a billboard sign advertising Columbia Falls, Hungry Horse News, Oct. 30, 1953 [AL2321]
[4] "New plant features most modern design," Hungry Horse News, Aug. 12, 1955 [AL0212]

[5] "Flathead sees AAC plant start," Hungry Horse News, June 12, 1953 [AL2304]
[6] "Steel, form work nears at plant" and "Award contract for five AAC homes," Hungry Horse News, June 19, 1953 [AL2306]
[7] "Weather favors plant construction," Hungry Horse News, Nov. 13, 1953 [AL2323]
[8] "AAC plant jobs jump to 600" and "Monegan to build 10 homes for sale," Hungry Horse News, Feb. 12, 1954 [AL2337]
[9] "Winter jobs at plant look promising," Hungry Horse News, Nov. 12, 1954 [AL2399]
[10] "McNeil places last concrete of contract," Hungry Horse News, Dec. 10, 1954 [AL2404]
[11] Hungry Horse News, Aug. 28, 1953 [AL2311]
[12] "Siding, brick work near at plant," Hungry Horse News, Oct. 16, 1953 [AL2316]
[13] "Start enclosing plant buildings," Hungry Horse News, Oct. 16, 1953 [AL2318]
[14] Hungry Horse News, Feb. 12, 1954 [AL2337]
[15] "Jobs continue upward at plant" and "Rail traffic at record level here," Hungry Horse News, Feb. 26, 1954 [AL2339]
[16] AAC promotional brochure, 1980 [AL0252]
[17] Mel Ruder, "Strike shadows busy plant," Hungry Horse News, March 19, 1954 [AL2344]
[18] "Enclosing last AAC plant building" and "Guided tours," Hungry Horse News, April 29, 1955 [AL0199]
[19] "Hire first manufacturing employees at AAC plant," Hungry Horse News, April 8, 1955 [AL0195]
[20] "AAC awards general contract," Hungry Horse News, July 10, 1953 [AL2307]
[21] Hungry Horse News, June 19, 1953 [AL2306]
[22] "Bricks rising at AAC plant," Hungry Horse News, Oct. 30, 1953 [AL2320]
[23] "Jobs at plant pass 1,100 mark," Hungry Horse News, July 30, 1954 [AL2380]
[24] "Payrolls at plant increase," Hungry Horse News, Sept. 17, 1954 [AL2392]
[25] "AAC employment reaches 1,650," Hungry Horse News, Sept. 24, 1954 [AL2393]
[26] Hungry Horse News, Nov. 12, 1954 [AL2399]
[27] Hungry Horse News, Oct. 30, 1953 [AL2320]
[28] Mel Ruder, "Award plant electrical contract," "Discuss Anaconda housing policies as affects Col. Falls" and "AAC president sees progress of plant," Hungry Horse News, Nov. 6, 1953 [AL2322]
[29] Hungry Horse News, Nov. 13, 1953 [AL2323]
[30] "Big AAC transformers arriving," Hungry Horse News, Dec. 4, 1953 [AL2326]
[31] "AAC plant jobs top 1,000 "and "Major electrical contract awarded," Hungry Horse News, March 12, 1954 [AL2341]
[32] Hungry Horse News, Sept. 24, 1954 [AL2393]
[33] "Employment jumps at plant," Hungry Horse News, April 22, 1955 [AL0198]
[34] "Most AAC employees to be locals," Hungry Horse News, Feb. 18, 1955 [AL0188]
[35] Photo with caption of part of the switchyard at the AAC plant, Hungry Horse News, Aug. 12, 1955 [AL0512]
[36] "Anaconda awards contract for silos," Hungry Horse News, Nov. 20, 1953 [AL2324]
[37] Hungry Horse News, Feb. 12, 1954 [AL2337]
[38] Hungry Horse News, Feb. 26, 1954 [AL2339]
[39] Hungry Horse News, Nov. 12, 1954 [AL2399]
[40] "To start AAC plant unloading station," Hungry Horse News, Jan. 1, 1954 [AL2330]
[41] "Finishing first plant building," Hungry Horse News, Jan. 8, 1954 [AL2331]
[42] Hungry Horse News, March 12, 1954 [AL2341]
[43] "AAC jobs stay near 1,500," Hungry Horse News, Aug. 27, 1954 [AL2385]
[44] "AAC plant jobs continue over 1,600," Hungry Horse News, Nov. 19, 1954 [AL2400]
[45] "Fire chars shop at AAC plant," Hungry Horse News, Feb. 19, 1954 [AL3524]

[46] Hungry Horse News, Oct. 30, 1953 [AL2320]
[47] Hungry Horse News, Aug. 12, 1955 [AL0212]
[48] Hungry Horse News, Nov. 6, 1953 [AL2322]
[49] Hungry Horse News, Oct. 16, 1953 [AL2318]
[50] Hungry Horse News, Nov. 13, 1953 [AL2323]
[51] Hungry Horse News, Nov. 20, 1953 [AL2324]
[52] Hungry Horse News, Dec. 4, 1953 [AL2326]
[53] "Steel for 8 plant buildings up," Hungry Horse News, Dec. 11, 1953 [AL2327]
[54] "Plant jobs take winter level," Hungry Horse News, Dec. 25, 1953 [AL2329]
[55] "Finishing first plant building," Hungry Horse News, Jan. 8, 1954 [AL2331]
[56] "Men resume work at plant" and "Weather jumps out-of-work total," Hungry Horse News, Jan. 22, 1954 [AL2332]
[57] "AAC comments on sewage disposal" and "AAC plant employing 425," Hungry Horse News, Jan. 29, 1954 [AL2335]
[58] "State chamber has AAC plant article," Hungry Horse News, Jan. 22, 1954 [AL2334]
[59] "Mild weather encourages jobs," Hungry Horse News, Feb. 5, 1954 [AL2336]
[60] Hungry Horse News, Feb. 26, 1954 [AL2339]
[61] Hungry Horse News, March 12, 1954 [AL2341]
[62] "Jobs at plant pass 1,100 mark," Hungry Horse News, July 30, 1954 [AL2380]
[63] "AAC job total climbs to 1,166," Hungry Horse News, Aug. 6, 1954 [AL2381]
[64] "Activity soars at AAC plant" and "Place value on right-way land," Hungry Horse News, Aug. 20, 1954 [AL2383]
[65] Hungry Horse News, Sept. 17, 1954 [AL2392]
[66] Hungry Horse News, Sept. 24, 1954 [AL2393]
[67] "AAC plant concrete nearing finish," Hungry Horse News, Oct. 1, 1954 [AL2394]
[68] "AAC men working out of weather," Hungry Horse News, Oct. 8, 1954 [AL2395]
[69] "Plant contracts in finishing stages," Hungry Horse News, Oct. 15, 1954 [AL2396]
[70] "AAC plant contractors eye weather," Hungry Horse News, Oct. 22, 1954 [AL2397]
[71] "American Bridge finishes at AAC plant," Hungry Horse News, Nov. 5, 1954 [AL2398]
[72] Hungry Horse News, Nov. 12, 1954 [AL2399]
[73] Hungry Horse News, Nov. 19, 1954 [AL2400]
[74] "AAC employment considered at peak," Hungry Horse News, Nov. 26, 1954 [AL2401]
[75] "Construction job total finding level for winter" and "To occupy AAC plant offices," Hungry Horse News, Dec. 17, 1954 [AL2405]
[76] "Plant jobs at winter level," Hungry Horse News, Dec. 24, 1954 [AL2407]
[77] Photo with caption of new alumina storage silo at AAC plant, Hungry Horse News, Jan. 14, 1955 [AL0183]
[78] "Winter slows AAC construction," Hungry Horse News, Feb. 25, 1955 [AL0189]
[79] Photo with caption of paste plant at AAC plant, Hungry Horse News, Feb. 11, 1955 [AL0186]
[80] Hungry Horse News, Aug. 12, 1955 [AL0212]
[81] "Arrives at AAC plant," Hungry Horse News, May 13, 1955 [AL0201]
[82] "AAC hiring for production near," Hungry Horse News, June 3, 1955 [AL0203]
[83] "Plant construction in wind-up stage," Hungry Horse News, Sept. 2, 1955 [AL0219]
[84] "Start wire bar casting at AAC plant," Hungry Horse News, Oct. 14, 1955 [AL0229]
[85] Hungry Horse News, Aug. 12, 1955 [AL0212]
[86] Joni Balter, "Nuclear power plant contractors indicted," UPI Archives, June 8, 1983 [AL5332]
[87] "'Witness lied,' defense attorney in bid-rigging trial claims," Spokane Chronicle, Dec. 1, 1983 [AL5335]
[88] "Contractor sentenced to jail, fined," AP News Archive, April 23, 1985 [AL5337]

[89] "6 electrical companies indicted," New York Times, July 5, 1983 [AL5334]
[90] Harry Tkach, "No contest plea likely in bid case," Pittsburgh Post-Gazette, Feb. 1, 1984 [AL5336]
[91] Hungry Horse News, Feb. 25, 1955 [AL0189]
[92] Hungry Horse News, Feb. 18, 1955 [AL0188]
[93] "Construction job total finding level for winter" and "To occupy AAC plant offices," Hungry Horse News, Dec. 17, 1954 [AL2405]
[94] "At aluminum plant," Hungry Horse News, Feb. 4, 1955 [AL0185]
[95] Hungry Horse News, Feb. 4, 1955 [AL0185]
[96] "Operations men arrive for plant," Hungry Horse News, Sept. 10, 1954 [AL2390]
[97] "AAC promotes Kearns, McMaster, Card," Hungry Horse News, Oct. 24, 1958 [AL1692]
[98] "Expect 1,000 construction jobs in Col. Falls next year," Hungry Horse News, Sept. 16, 1966 [AL2265]
[99] "Outstanding Flathead outdoorsman, Hal Kanzler gets Butte job, Sneddon, Fisher promoted," Hungry Horse News, June 11, 1965 [AL2226]
[100] "Longtime employees opt for early retirement plan," Hungry Horse News, March 10, 1984 [AL2524]
[101] Hungry Horse News, June 11, 1965 [AL2226]
[102] "Harrell W. 'Hal' Kanzler," Find A Grave online, Oct. 2, 2013 [AL5075]
[103] Hungry Horse News, June 11, 1965 [AL2226]
[104] Hungry Horse News, June 11, 1965 [AL2226]
[105] Mel Ruder, "Hal Kanzler scores," Hungry Horse News, May 19, 1961 [AL2079]
[106] "To show Kanzler outdoor slides," Hungry Horse News, Jan. 19, 1962 [AL2113]
[107] Find A Grave online, Oct. 2, 2013 [AL5075]
[108] Hungry Horse News, June 11, 1965 [AL2226]
[109] Find A Grave online, Oct. 2, 2013 [AL5075]
[110] "Digging for the truth, an imperfect account of Glacier's perfect avalanche," Missoula Independent, March 22, 2001 [AL5076]
[111] Bozeman Daily Chronicle, "James H. Kanzler," April 22, 2011
[112] "Employed at plant," Hungry Horse News, April 1, 1955 [AL0194]
[113] "Kost retires at Anaconda plant," Hungry Horse News, April 5, 1974 [AL3562]
[114] Hungry Horse News, April 8, 1955 [AL0195]
[115] "AAC plant adds new line foremen," Hungry Horse News, April 15, 1955 [AL0197]
[116] "AAC nears large scale hiring period," Hungry Horse News, July 1, 1955 [AL0204]
[117] Hungry Horse News, Aug. 12, 1955 [AL0212]
[118] "AAC retires first hourly-wage employee," Hungry Horse News, May 29, 1959 [AL1731]
[119] "Seek school board positions," Hungry Horse News, March 8, 1963 [AL2156]
[120] Dale A. Burk, "Bill Sands retires at AAC plant," Hungry Horse News, March 13, 1964 [AL1524]
[121] Brian Kennedy, "CFAC's only twins retire after 35 years," Hungry Horse News, April 25, 1991 [AL2797]
[122] "To select school trustees," Hungry Horse News, March 25, 1966 [AL2253]
[123] "Industrious Gene Orem works at AAC and farms," Hungry Horse News, April 11, 1975 [AL1320]
[124] Hungry Horse News, March 25, 1966 [AL2253]
[125] "Caciari retiring from AAC plant," Hungry Horse News, April 1, 1976 [AL1382]
[126] "Anaconda 'old timer' retires after 37 years," Anaconda Aluminum Courier, 1962 [AL2868]
[127] "Mickey Sullivan retires at AAC," Hungry Horse News, March 9, 1962 [AL2116]
[128] "Honor Sullivan at Anaconda plant," Hungry Horse News, March 4, 1960 [AL2043]
[129] "Alton named garage foreman," Hungry Horse News, March 9, 1962 [AL2117]

[130] Mel Ruder, "Building for aluminum," Hungry Horse News, May 28, 1954 [AL2368]
[131] "Coming for plant," Hungry Horse News, March 11, 1955 [AL0192]
[132] "Raw materials arrive at plant" and "Four men join AAC plant staff," Hungry Horse News, March 18, 1955 [AL0193]
[133] Hungry Horse News, Aug. 12, 1955 [AL0212]
[134] "Aluminum boost economy," Hungry Horse News, Dec. 16, 1955 [AL0239]
[135] Hungry Horse News, May 13, 1955 [AL0201]
[136] Hungry Horse News, Aug. 12, 1955 [AL0212]
[137] Hungry Horse News, Aug. 12, 1955 [AL0212]
[138] "Start placing potlines at plant" and "Operations men arrive for plant," Hungry Horse News, Sept. 10, 1954 [AL2390]
[139] Hungry Horse News, Aug. 12, 1955 [AL0212]
[140] Hungry Horse News, Aug. 12, 1955 [AL0212]
[141] Hungry Horse News, July 1, 1955 [AL0204]
[142] "First Montana aluminum production," "AAC employment takes big jump," "Labor meeting" and "Plant paving," Hungry Horse News, July 22, 1955 [AL0206]
[143] Hungry Horse News, July 1, 1955 [AL0204]
[144] Hungry Horse News, Aug. 12, 1955 [AL0212]
[145] [Hungry Horse News, July 1, 1955 AL0204]
[146] Hungry Horse News, Aug. 12, 1955 [AL0212]
[147] Hungry Horse News, July 1, 1955 [AL0204]
[148] Hungry Horse News, Oct. 14, 1955 [AL0229]
[149] "Second plant potline starts producing," Hungry Horse News, Oct. 21, 1955 [AL0231]
[150] "All pots at plant into production," Hungry Horse News, Nov.4, 1955 [AL0233]
[151] Hungry Horse News, Aug. 12, 1955 [AL0212]
[152] "Montana becomes aluminum producer" and "Newsmen present for AAC dedication," Hungry Horse News, Aug. 19, 1955 [AL0215]
[153] "CFAC's plant provides 739 local jobs," Hungry Horse News, July 25, 1991 [AL2808]
[154] "Anaconda plant ships first aluminum," Hungry Horse News, Aug. 26, 1955 [AL0216]
[155] "Aluminum output at 100,000 pounds," Hungry Horse News, Sept. 9, 1955 [AL0222]
[156] AAC promotional brochure, 1980 [AL0252]
[157] "PP&L using Flathead aluminum," Hungry Horse News, March 9, 1956 [AL1568]
[158] "Aluminum output high," New York Times, Oct. 15, 1955 [AL1209]
[159] "Industrial leaders coming for dedication" and "Flathead aluminum for U.S. markets," Hungry Horse News, Aug. 12, 1955 [AL0510]
[160] "Making aluminum cable at copper plant," Hungry Horse News, Nov. 7, 1952 [AL1470]
[161] Hungry Horse News, July 10, 1953 [AL2307]
[162] Maxine Johnson, "The effects of the Anaconda Aluminum Company plant on Flathead County, Montana," 1960 [AL0277]
[163] Mel Ruder, "This isn't Pittsburgh," Hungry Horse News, Aug. 28, 1953 [AL2312]
[164] Hungry Horse News, Jan. 22, 1954 [AL2334]
[165] William Spence, "New CFAC owner has solid industry reputation, second suitor bowed out end of last month, plant can expect some upgrades," Daily Inter Lake, May 22, 1999 [AL0090]
[166] District Judge John M. Cashin, United States of America, Plaintiff, v. Aluminum Company of America et.al., Defendants, United States District Court, S.D. New York. 153 F. Supp. 132, June 28, 1957 [AL0903]
[167] Cashin, June 28, 1957 [AL0903]
[168] Photo with caption of chart used at the dedication of the AAC plant, Hungry Horse News, Dec. 30, 1955 [AL0244]

[169] "Anaconda Co. may become largest uranium producer," Hungry Horse News, Jan. 6, 1956 [AL1552]

[170] "Falls prepares for two-day celebration," "Invite public to plant dedication" and "Operations jobs now past 350," Hungry Horse News, Aug. 5, 1955 [AL0208]

[171] Hungry Horse News, Aug. 12, 1955 [AL0510]

[172] Isaac F. Marcosson, "Chapter 15, Into The Aluminum Field," from "Anaconda," 1957 [AL0320]

[173] Hungry Horse News, Aug. 19, 1955 [AL0215]

[174] Aluminum Workers Trade Council "Greetings To The New Aluminum Workers At The Anaconda Aluminum Plant In Columbia Falls," Hungry Horse News, Aug. 12, 1955 [AL0214]