PLAINTIFF'S EXHIBIT
KEN-53

INTER-OFFICE MEMORANDUM

TO See Distribution

COPIES TO See Below

DATE December 17, 1968

FROM V. R. Christensen for O. A. Finsand
Construction

AT Kaiser, Middletown

JOB NO. 7100

SUBJECT Kaiser Engineers' Weekly Field Activity Report

Transmitted herewith is the subject report for the week ending December 17, 1968

OAF:VRC:mcm

Distribution:

Armco

D. C. Osborne
C. G. Kramer
T. R. Foley
J. M. Thomas
P. R. Smith
D. D. Cox
J. S. Lotz
R. L. Brannaman
A. M. Greco

Kaiser

L. J. Wolf, Oakland
W. F. Bort, Oakland
D. A. Daly
S. G. Imherr
V. L. Frankson
H. C. Boucher
C. H. Swain
C. M. Mandell

cc: Central File
Kaiser Reading File
Armco Reading File

RECEIVED
Oakland

KAISER ENGINEERS, INC.
WEEKLY FIELD ACTIVITY REPORT
Week Ending December 17, 1968

WEATHER: Cold with light snow

CLIENT: Armco Steel Corporation

LOCATION: Middletown, Ohio

JOB NUMBER: 6471

TEMPERATURE: 12 degrees minimum
48 degrees maximum

JOB VISITORS

None

SUMMARY FORCE REPORT

	Kaiser Engineers Exempt	Kaiser Engineers Non-Exempt	Subcontractors	FEC	Total
Management	4	3		1	8
General Supervision	9		16	2	27
Field Engineering	34	10	8	6	58
Warehouse and Material Control	3	5		2	10
Survey	1	14	2		17
Office Services and Repro.	1	4			5
Clerical			9	1	10
Craft*	—	746	645	276	1,667
TOTAL	52	782	680	288	1,802

*Average for week of men on payroll.

Average for week of Crafts is as follows:

Kaiser Engineers, Inc.	711
Subcontractors	626
Foothill Electric Corporation	265
Total Crafts Working	1,602

KEN 004081

WEEKLY FIELD ACTIVITY REPORT

Week ending December 17, 1968

PROJECT PROGRESS

1. 7148 - HOT STRIP MILL

Project completed and in operation.

2. 7146 - SLAB MILL

Project completed and in operation.

3. 7143 - SOAKING PITS

Project completed and in operation.

4. 7128 - BASIC OXYGEN FACILITY

4.1 Excavation and Backfill: Backfill amounting to 688 cubic yards was placed this period for a total to date of 289,985 cubic yards. This fillwork was mainly surrounding the pumphouse and fill in the kitchen floor area for slabs on grade.

4.2 Concrete: Concrete amounting to 194 cubic yards was placed for a total of 32,145 cubic yards. This concrete consisted mainly of the remaining section of slab on the operating floor, the baghouse elevated floor slab, grade beams between column #26 and #25 on "D" Line, and one section of kitchen floor slab.

4.3 Structural and Miscellaneous Steel: Ohio Valley Riggers maintained an average work force of 72 men on structural steel erection. Five tons of steel was erected this period. Progress was continued on welding of the crane rails in the scrap aisle. Welding of checker plates and installation of crane access platforms together with handrail was also in progress in the scrap aisle area. Structural steel boltup was essentially complete in the west portion of the building which essentially completes boltup in general, thus remaining siding requirements can be completed without delay. Baffle plates are being installed in the slag pit area and installation of heat shields is continuing at furnace #1.

4.4 Roofing and Siding: Siding amounting to 12,331 square feet was installed for a total to date of 231,331 square feet. Siding progress for this period consisted of completing the north wall main elevation of the teeming aisle. Siding at the lower elevation platform areas is also in progress. 2,512 square feet of roofing was installed for a total to date of 216,301 square feet. Roofing work this period was related mainly to the electrical control room, the stopper rod ovens, the grease storage building, the scale house, and the maintenance office. Some progress was also related to erection of the remaining ridge ventilators and completion of sheeting of the high bay monitor ventilators.

WEEKLY FIELD ACTIVITY REPORT
Week ending December 17, 1968

4.6 Mechanical: Furnco Corporation completed the installation of the last section of the main ventilator stack above the BOF Building. Progress is continuing on the horizontal ductwork between the ID fans and the quencher tanks. In the clarifier area, installation of mechanical equipment is continuing in the clarifier building. The Marley Company continued with cooling tower erection this period. The Filter Building structural steel is now being painted in preparation for roofing and siding which is also in progress. Hunter Corporation maintained an average work force of 40 men on OG piping in the clarifier tunnels, cooling water supply and return lines between the furnace area and the pumphouse, the 18 inch nitrogen header piping between the nitrogen sphere and the main building and 6 inch through 12 inch cooling water piping at the furnace #1 hood. Honeywell, Inc., are now installing transmitter racks on the operating floor and service floor areas.

4.7 Piping: Piping by Kaiser forces amounted to 1,682 linear feet for a total of 47,261 linear feet. Major systems worked on were plant air, natural gas, oxygen, steam, well water, and raw river water. An average work force of 89 men was maintained on piping work.

4.8 Electrical: Electrical progress for the period was as follows: 15,100 lbs of exposed conduit installed for a total to date of 218,638 lbs, or 70% complete; 3,965 feet of low voltage cable was installed for a total of 33,465 feet, or 17% complete. 92 feet of crane feeder bus was installed for a total of 905 feet, or 63% complete. 792 lbs of lighting conduit together with 11,190 feet of wire and 88 fixtures were installed. Grounding amounting to 406 lbs was installed for a total of 14,749 lbs, or 74% complete. An average work force of 153 men was maintained throughout this period. Installation of major equipment together with cable trays was continued in the main control room. Sheeting of electrical equipment was also in progress in the pumphouse and Filter Building areas.

4.9 Miscellaneous Subcontractors: Kirk and Blum Manufacturing Company essentially completed boltup of the baghouse structure in the bin loading area. Ductwork from this structure to the pick up areas was also installed. This facility is now 70% complete.

In the Kish collection area, erection of mechanical equipment was resumed by Columbus Heating and Ventilating on December 17, 1968.

Refractory laydown brick was installed at all teeming aisle platforms. By the close of this period, most of the flat deck areas were essentially complete. In the furnace area, FBS Builders continued with brick lining of the main furnace foundations at both units.

WEEKLY FIELD ACTIVITY REPORT
Week ending December 17, 1968

Little progress was evident at the lab and office building this period, however, pnuematic tube terminal stations were being installed and mechanical equipment permanently located in the lab room. Permanent heating for the building will not be available until the steamline insulation is completed. This is expected by early January, 1969.

5. 7156 - 7159 PICKLE LINES

5.2 Concrete: Concrete work this period consisted of the top lift on #5 tension reel foundation, floor slabs at the delivery end of the Pickle Building, floor slabs in the Pickled Coil Storage Building, and the west wall grade beam. Concrete in the amount of 107 cubic yards was placed at Pickle Line #4 for a total of 16,923 cubic yards. At Pickle Line #5, 270 cubic yards of concrete was placed for a total of 13,189 cubic yards. McGraw Construction Company's work force has been reduced to an average of 80 men on concrete work.

5.6 Mechanical: Ohio Valley Riggers maintained an average work force of 58 men on Pickle Line mechanical work. Work activities this period consisted mainly of setting and grouting of equipment and motors on #5 Pickle Line. Grouting was accomplished on payoff mandrel motors and blocker roll motors together with #4 and #5 pinch rolls and drive motors. #4 bridle was placed on its foundation. Wet loop pit side guide installation continued and side plate installation was started on the #5 pit walls.

5.7 Piping: Delta Pipeline Contractors maintained an average work force of 56 men on Pickle Line piping this period. Piping in the amount of 655 linear feet was installed for a total of 34,785 linear feet. Major systems worked on this period included plant air, natural gas, steam, and hydraulics. Hydrostatic testing of the #4 Line entry hydraulic piping began on December 16. Hydraulic piping at the #4 Line welder was also started together with valve stands #3, #4, and #5 at the delivery section. Steam piping at the tanks on #4 Line was also in progress.

5.8 Electrical: Lake Erie Electric continued Pickle Line electrical installation with an average work force of 76 men. During the period the Sheffield representative was on the jobsite for supervision of corrective work at the #4 Line X-Ray station. This work can now proceed to completion. Intercommunication wiring is now complete on the #4 Line entry and Pickle sections with work proceeding at the delivery area. Cable pulling and terminating was initiated between the #4 Line delivery motor room and delivery end equipment. At #5 Line, 13.8 KV feeder cables were pulled into the transformer motor room. Aligning and connecting of electrical gear is in progress together with cable tray installation in the entry and delivery motor rooms.

WEEKLY FIELD ACTIVITY REPORT
Week ending December 17, 1968

5.9 Miscellaneous Subcontractors: McGraw Construction Company continued setting rails and platform supports together with conduit and pull boxes for the entry coil buggy system. Collector rail installation also started in this area. Baghouse construction by McGraw consisted of steam piping in baghouse "A", side panel and hopper installation on baghouse "B" and "C", and ductwork on baghouse "D". FBS Builders completed masonry work for the #5 entry motor room this period. Blockwork will continue in the delivery motor room next period.

6. 7160 - COLD MILL

6.1 Excavation and Backfill: Backfill, mainly at the Coil Distribution Building foundations, amounting to 4,241 cubic yards was placed for a total of 107,330 cubic yards.

6.2 Concrete: Concrete amounting to 675 cubic yards was placed for a total of 18,098 cubic yards. Major concrete work this period consisted of oil cellar slab on grade, oil cellar column piers and tank pads, entry conveyor foundations, the accumulator base and various grade beams and walls.

6.3 Structural and Miscellaneous Steel: Structural steel erection resumed this period with 257 tons being erected for a total of 1,252 tons. Major erection consisted of columns from column #21 to #27 on both "K" and "L" Lines. All building columns have now been raised with elevation steel currently in progress. Steel erection on this facility is generally ahead of schedule.

6.4 Roofing and Siding: Roofing application on the Cold Mill building was started on December 16, with 1,789 square feet being installed at the southeast corner.

6.6 Mechnical: Ohio Valley Riggers continued with boltup of Crane #408 together with miscellaneous ironwork (handrail, stairs, etc.) on cranes #408 and #409.

6.8 Electrical: Foothill Electric maintained an average of 45 electricians on Cold Mill electrical work. 15,029 lbs of embedded conduit was installed for a total of 141,370 lbs, or 24% complete. Grounding material amounting to 414 lbs was installed for a total of 5,204 lbs, or 33% complete. Embedded conduit installation was completed on MG set #2 and mill stands #1 and #2. This contractor started electrical installation on crane #408 together with collector rail installation and feeder conduit for the high bay lighting.

WEEKLY FIELD ACTIVITY REPORT
Week ending December 17, 1968

7. 7186 - 7182 WASTE DISPOSAL

Concrete work this period in the Waste Disposal Area consisted of 43 cubic yards at the #2 aeration and flocculation tank walls. Piping, amounting to 770 linear feet, was installed for a total of 18,421 linear feet. Major systems worked included spent pickle liquor to the tank farm and disposal wells, pickle rinse water to the pumps, and hydrochloric acid. Sections of the pickle rinse water and spent pickle liquor systems are now under hydro-test. Instrumentation piping was started this period. Foothill Electric installed the following: 1,332 lbs of exposed conduit for a total of 25,990 lbs, or 87% complete; 300 feet of power and control wiring for a total of 31,300 feet, or 42% complete; 130 lbs of grounding material for a total of 2,771 lbs, or 39% complete. Wire pulling to both disposal wells is now complete. Local control panel #305 was received this week and is now being installed. At the clarifier area Char-Mac completed the thickener equipment installation this week and has now left the jobsite.

8. UTILITIES

7110 - Electrical Distribution: R. H. Bouligny, Inc., has resumed work on the 13.8 KV power distribution in the Cold Mill. 6 lines have been strung between towers #7 and #8. Line work to the Pickle Building tower and Cold Mill tower will proceed after installation of additional stiffener plates is complete on these towers.

7112 - Drainage and Site Development: Armrel Construction Company completed the one inch asphalt surface course on the remaining steelmaking area roads this period. This work is now awaiting final inspection.

7113 - Trackwork: DHS Corporation completed installation of two crossovers and 520 feet of track north of Lefferson Road. This contractor also completed installation of 950 feet of track at the pollution abatement area.

9. ANNEALING

Formwork continued on building foundations intermittently as manpower becomes available.

Prepared by V. R. Christensen for O. A. Finsand Approved by D. L. McSparren for G. L. Roberts
Construction Manager

OAF:VRC:mcm