



30" PLANT EFFLUENT

BILL OF MATERIAL

QTY	SP/BD	MARK	DESCRIPTION
1	CL-ASP	Y201	30" FRBELL FFE PIPE CL-53 0.51" 19.8-3/4" W/6" FR WELDED-ON OUTLET, 87-7/8" FROM FFE & 0 DEG FROM TOC, 2-2-2-2
1	ASP-ASP	Y202	30" FFE DISHED PLUG, 250 PSI, 1-2-2-2
21	CL-ASP	Y203	30" FRBELL FFE PIPE CL-50 0.39" 19.8-3/4" 2-2-2-2
1	CL-ASP	Y204	30" FRBELL FFE PIPE CL-50 0.39" 25-1/2" 2-2-2-2
1	CL-ASP	Y205	30" FRBELL FFE PIPE CL-50 0.39" 16"0-1/16" 2-2-2-2
1	CL-ASP	Y206	30" FRBELL FFE PIPE CL-50 0.39" 15"0-3/8" 2-2-2-2
1	CL-ASP	Y207	30"x20" FRBELL FFE (110-CC REDUCER 3/2", 250 PSI, 4-2-2-2
2	CL-ASPMH	Y208	20 MEGALUG RETAINER GLAND W/COATING 2
2	CL-ASPMH	Y209	20" MEGALUG ACCESSORY KIT WITH SBR GASKET AND 14 BOLTS (MEGALUG RETAINER GLAND NOT INCLUDED)
1	CL-ASP	Y210	30" FRBELL FFE PIPE CL-50 0.39" 127-1/16" 2-2-2-2
1	CL-ASP	Y211	20" FRBELL M,PE PIPE CL-300/50 0.36" 20-3/4" 2-2-2-2
2	CL-ASP	Y212	30" FRBELL FFE C153 45 BEND, CENTER TO FRBELL SOCKET 10.5", CENTER TO FFE END 19.5", 250 PSI, 4-2-2-2
1	CL-ASP	Y213	30" FRBELL FFE PIPE CL-50 0.39" 74-9/16" 2-2-2-2
3	CL-ASP	Y214	30" FRBELL FFE C153 90 BEND, CENTER TO FRBELL SOCKET 22.75", CENTER TO FFE END 31.25", 250 PSI, 4-2-2-2
1	CL-ASP	Y215	30" FRBELL FFE PIPE CL-50 0.39" 30-3/4" 2-2-2-2
1	CL-ASP	X2	20" MJ TAPPED FOR STUDS DWG P000097 TAPPED FOR STUDS DWG P000097 MJ-FAB TAPPED FOR STUDS DWG P000097 TAPPED FOR STUDS DWG P000097 PIPE CL-53 0.45" 14-1/2" OVERALL (9"LL) W/STL COLLAR 10" FROM MJ-FAB FACE, 2-2-2-2/N

** - Indicates the item has been placed on order.

SPECIFICATION BOUNDARY DEFINITIONS

Boundary ID: CL-ASPMH Service type: PROCESS
 Boundary name: MEGALUG Service temp: 50
 Boundary unit: 1 Environment: EXT/BURIED

Pipe lining: Single Thick C/L with Seal Coat, Black, 1-Coat, AMMA C104
 Pipe coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min
 Fitting lining: Double Thick C/L with Seal Coat, Black, 1-Coat, AMMA C104
 Fitting coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min

Gasket types

FAST GRIP - Fastgrip Gasket, Plain Rubber Styrene-Butadiene
 MJ MEGALUG GLAND - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene

Boundary ID: CL-ASP Service type: PROCESS
 Boundary name: CL-ASP Service temp: 50
 Boundary unit: 1 Environment: EXT/BURIED

Pipe lining: Single Thick C/L with Seal Coat, Black, 1-Coat, AMMA C104
 Pipe coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min
 Fitting lining: Double Thick C/L with Seal Coat, Black, 1-Coat, AMMA C104
 Fitting coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min

Gasket types

FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene
 FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene
 FLG LESS ACCESSORIES - none
 FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
 MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
 RIGID GROOV LESS ACC - none

Boundary ID: ASP-ASP Service type: PROCESS
 Boundary name: ASP-ASP Service temp: 50
 Boundary unit: 1 Environment: EXT/BURIED

Pipe lining: Asphaltic Lined, Black, 1-Coat, 3-Avg, 1-Min
 Pipe coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min
 Fitting lining: Asphaltic Lined, Black, 1-Coat, 3-Avg, 1-Min
 Fitting coating: Asphaltic Coated, Black, 1-Coat, 3-Avg, 1-Min

Gasket types

FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene
 FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene
 FLG LESS ACCESSORIES - none
 FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
 MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
 RIGID GROOV LESS ACC - none

NO EXCEPTIONS NOTED
 EXCEPTIONS NOTED
 RETURNED FOR CORRECTION
 RECORD COPY - NOT ACCEPTABLE
 RETURNED WITHOUT REVIEW

MAY 29 2002

REVIEW DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS, OMISSIONS, OR DEVIATIONS FROM CONTRACT REQUIREMENTS.
 BLACK & VEATCH

Approved 5/16/02

This drawing has been reviewed and found in general conformance with the contract documents.

APPROVED
 APPROVED AS NOTED
 REVISE AND RESUBMIT

DATE 5/22/02

KCI CONSTRUCTION CO. DATE
 SPEC. SECTION

RESTRAINED JOINT PIPING (NE)
 (Nominal Extension)

Flex-Ring and Lok-Ring joint pipe, designated 'NE', have been detailed on this drawing with a nominal joint extension or creep allowance of each joint of 1/4". This joint extension or 'creep' is anticipated due to normal installation practice and tolerance in the joint itself.

AMERICAN DUCTILE IRON PIPE
 A DIVISION OF AMERICAN CAST IRON PIPE COMPANY

PHONE: 1-800-442-2347 FAX: 1-800-442-2348
 P O BOX 2727 2916 16th STREET NORTH
 BIRMINGHAM, ALABAMA 35202 BIRMINGHAM, ALABAMA 35207

4"-64" Diameter Ductile Iron Pipe - Fastite Joint, Mechanical Joint, Flanged Joint
 Flex-Ring Restrained Joint, Lok-Ring Restrained Joint, Flex-Lok Restrained Joint
 ANSI A21.40, A21.53, & AMERICAN Standard Fittings
 ANSI A21.4 Cement Lining, POLYBOND Lining, plus Special Coatings & Linings
 American Flow Control - Valves And Hydrants

This drawing is a service to the customer as an aid in developing a detailed bill of material. The purchaser must verify correctness of design and dimensions. It is the responsibility of the purchaser to verify all details on receipt of prints. Changes desired shall be noted on a print and returned to American. Drawings will be revised per these changes. Drawings returned to American without signature or initial will be considered to have been reviewed by the customer with any required change noted.

REVISED BY:	DATE:	REV #
Daniel Jones	09May2002	2
Angelia Neelley	29Apr2002	1

CONDAIRE, INCORPORATED
 WATER TREATMENT FACILITIES
 O'FALLON, MO
 30" PLANT EFFLUENT
 REF. DWGS. B2, D4 & D6

DRAWN BY: Angelia Neelley PROJECT NUMBER: KMO01998
 DATE DRAWN: 16Apr2002 SCALE: NTS PROJECT NUMBER: C02010-Y2