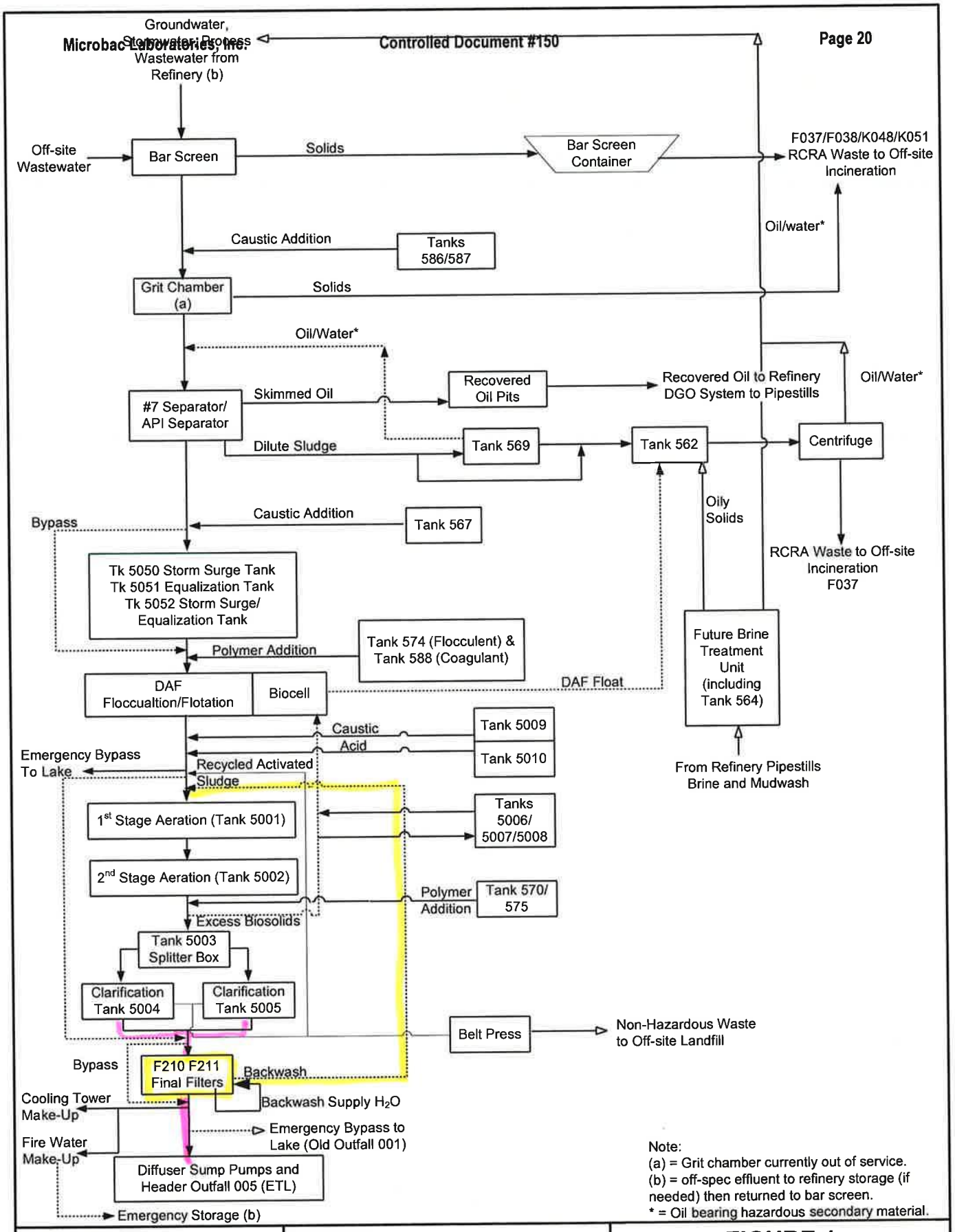


Note:
(a) = Grit chamber currently out of service.
(b) = off-spec effluent to refinery storage (if needed) then returned to bar screen.
* = Oil bearing hazardous secondary material.

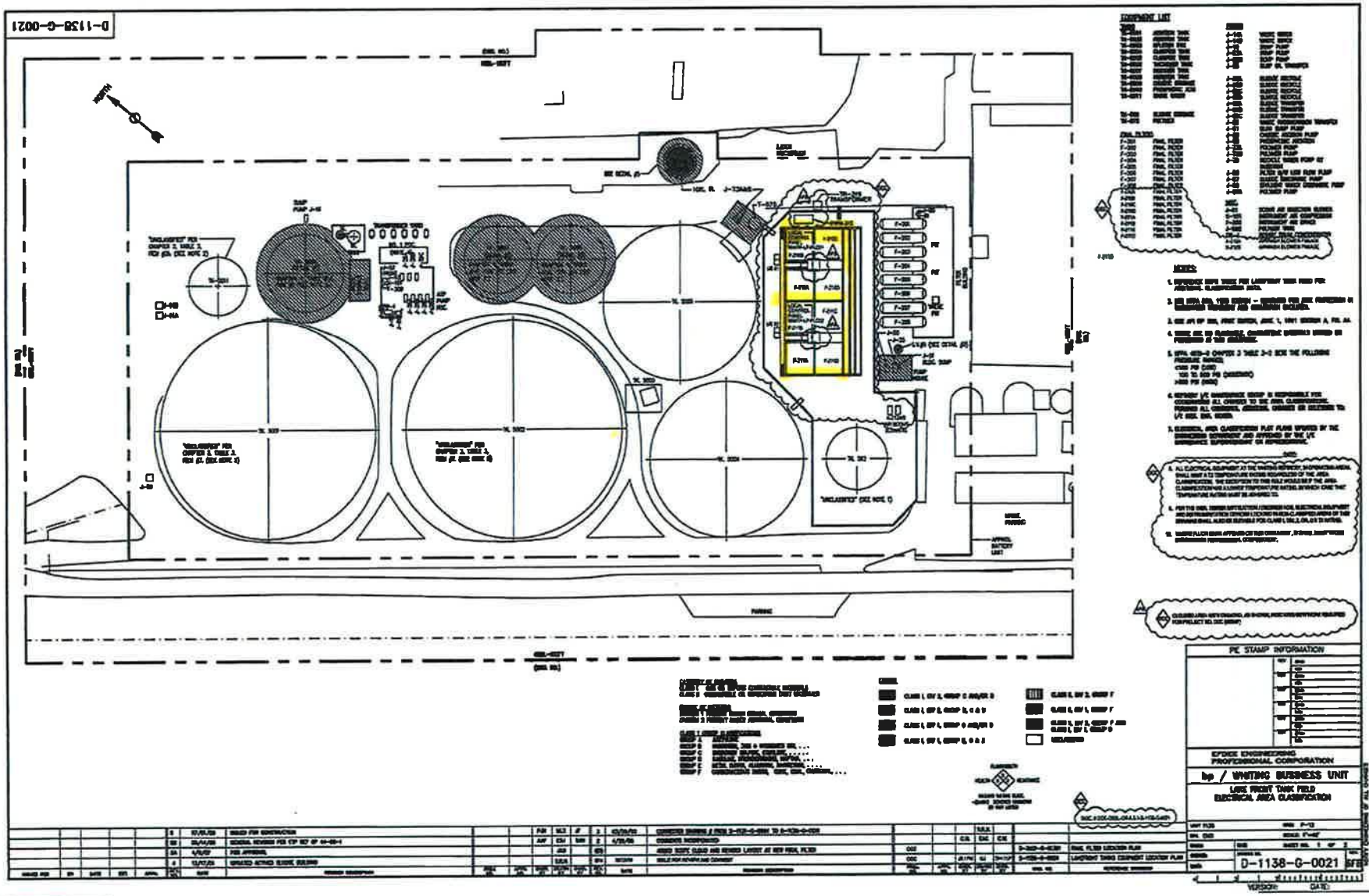
Prepared for: bp Whiting, Indiana

Prepared by: ENVIRON

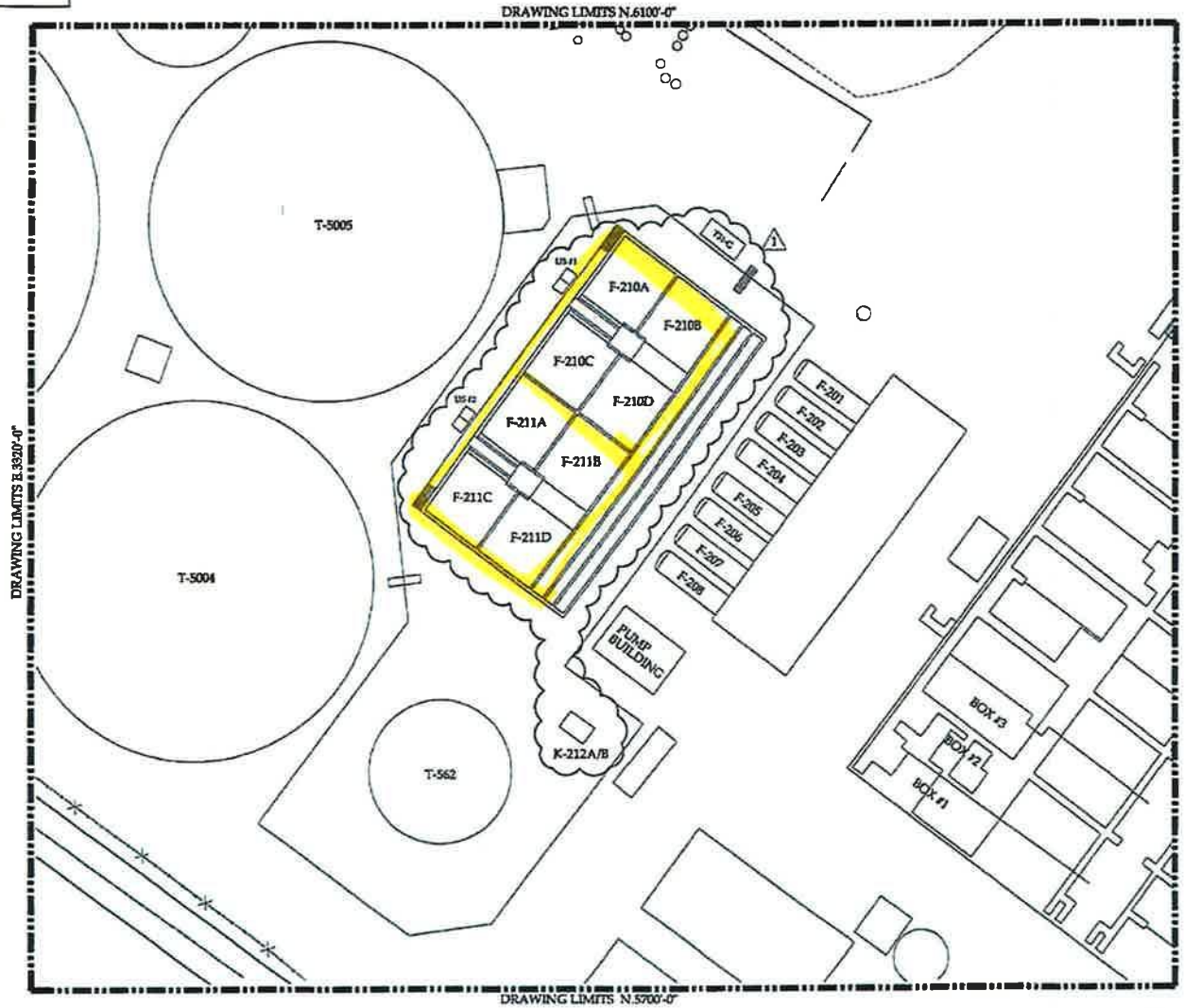
FIGURE 1
Lakefront WWTP Process Diagram

20-24994A 17Jul12

D-1138-G-0021


EQUIPMENT LIST
NOTES:
PE STAMP INFORMATION
EPOCH ENGINEERING PROFESSIONAL CORPORATION
bp / WRITING BUSINESS UNIT
LAKE FRONT TANK FIELD
ELECTRICAL AREA CLASSIFICATION
D-1138-G-0021
VERSION:
DATE:

D-3001-G-01381



EQUIPMENT SCHEDULE

NUMBER	DESCRIPTION
F-210A	FINAL FILTER
F-210B	FINAL FILTER
F-210C	FINAL FILTER
F-210D	FINAL FILTER
F-211A	FINAL FILTER
F-211B	FINAL FILTER
F-211C	FINAL FILTER
F-211D	FINAL FILTER
K-212A	AIR BLOWER
K-212B	AIR BLOWER

0' 10' 20' 40
SCALE IN FEET

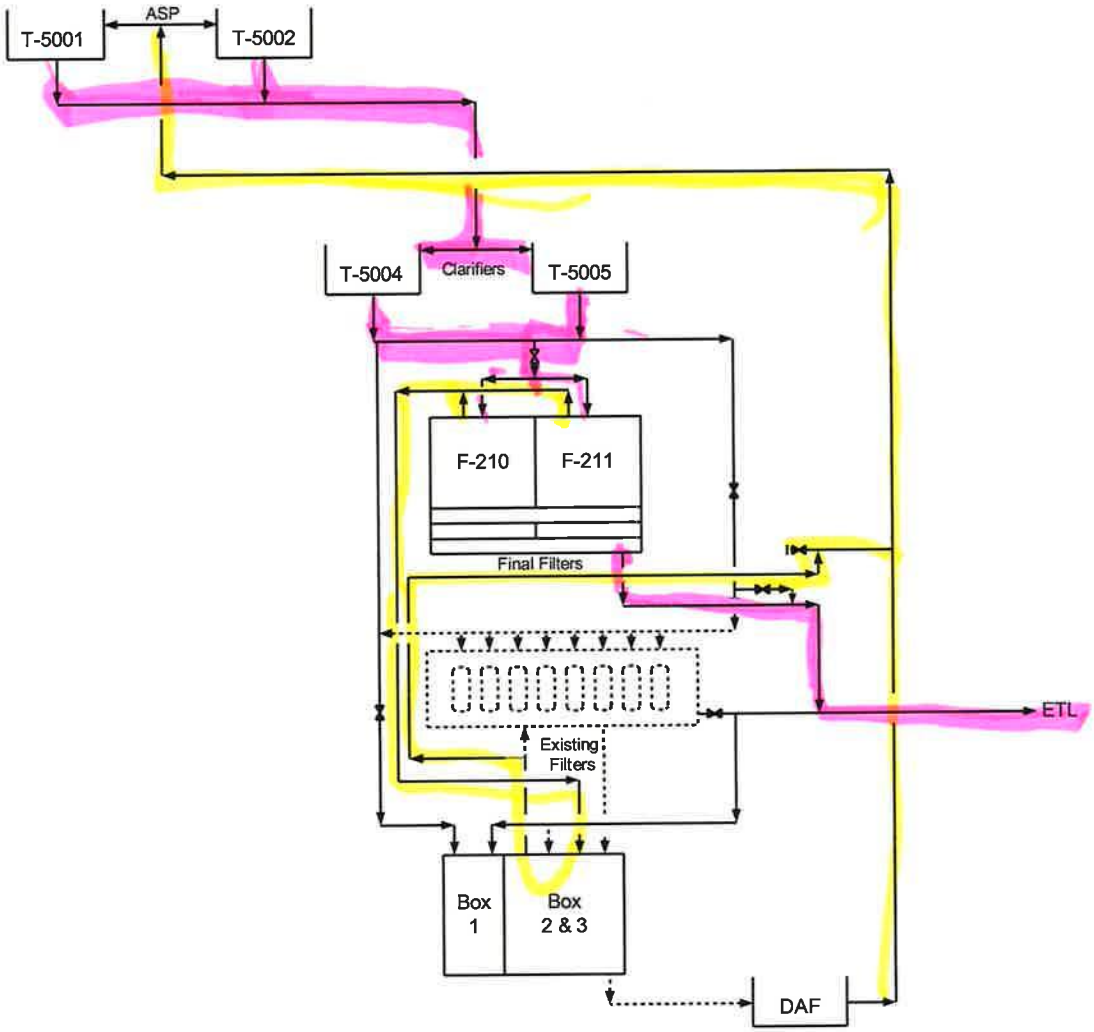
FLUOR.
BP PRODUCTS NORTH AMERICA, INC
WHITING BUSINESS UNIT

DCC PROJECT
FINAL FILTER
LOCATION PLAN

D-3001-G-01381 1

D-1138-SK-00003

NOTES
1. PIPE IS RUN IN PHASE 1, BUT WILL NOT BE CONNECTED UNTIL PHASE 2.



Line Legend	
———	Phase 2- New Piping
———	Existing
- - - -	Phase 2 - Demoed Piping

FIGURE 2
Final Filters
Flow Diagram

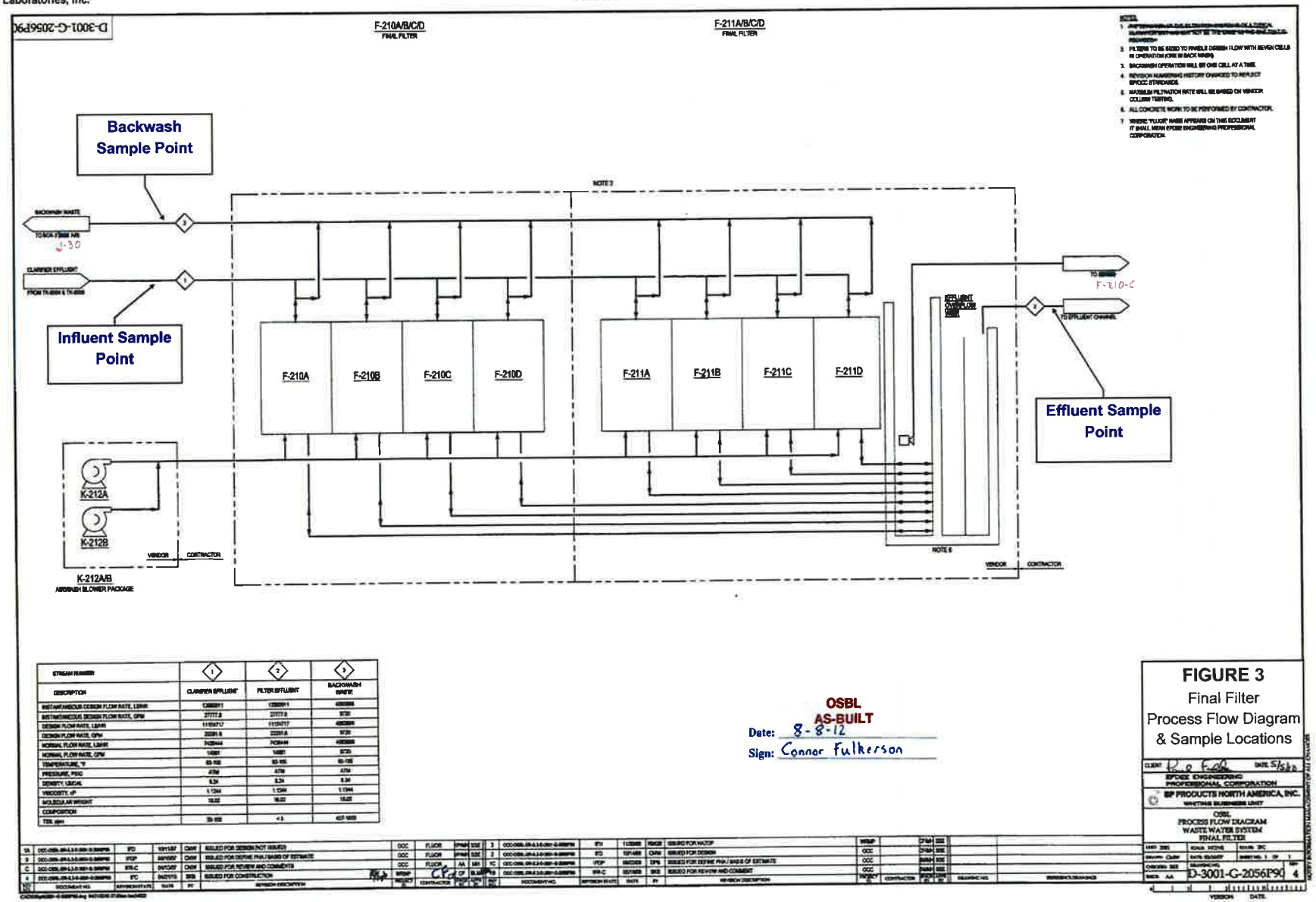
FLUOR
BP PRODUCTS NORTH AMERICA, INC
WHITING BUSINESS UNIT

CSBL
BLOCK FLOW DIAGRAM
FINAL FILTERS
PHASE 2

UNIT: 1138 | SCALE: NONE | STATE: IFD
DRAWN: MH | DATE: 10/20/09 | SHEET NO. 3 OF 3
CHECKED: SSE | DRAWING NO. D-1138-SK-00003 | REV. 1
ENGR: MH

VERSION	DATE	REVISION DESCRIPTION
1	10/20/09	ISSUED FOR DESIGN

NOTICE: INFORMATION MANAGEMENT OF ALL CHANGES


D-3001-G-2056P9C
F-210A/B/C/D
FINAL FILTER
F-211A/B/C/D
FINAL FILTER
Backwash Sample Point
Influent Sample Point
Effluent Sample Point
F-210A
F-210B
F-210C
F-210D
F-211A
F-211B
F-211C
F-211D
K-212A
K-212B
K-212A/B
AIRWASH BLOWER PACKAGE
VENDOR
CONTRACTOR
NOTE 2
NOTE 6
F-210-C
OSBL
AS-BUILT
Date: 8-8-12
Sign: Connor Fulkerson
FIGURE 3
Final Filter
Process Flow Diagram
& Sample Locations
EPCOS ENGINEERING PROFESSIONAL CORPORATION
BP PRODUCTS NORTH AMERICA, INC.
OSBL
PROCESS FLOW DIAGRAM
WASTE WATER SYSTEM
FINAL FILTER
D-3001-G-2056P9C
4

Tertiary Section

Final filtration and polishing

Final Filters Side View

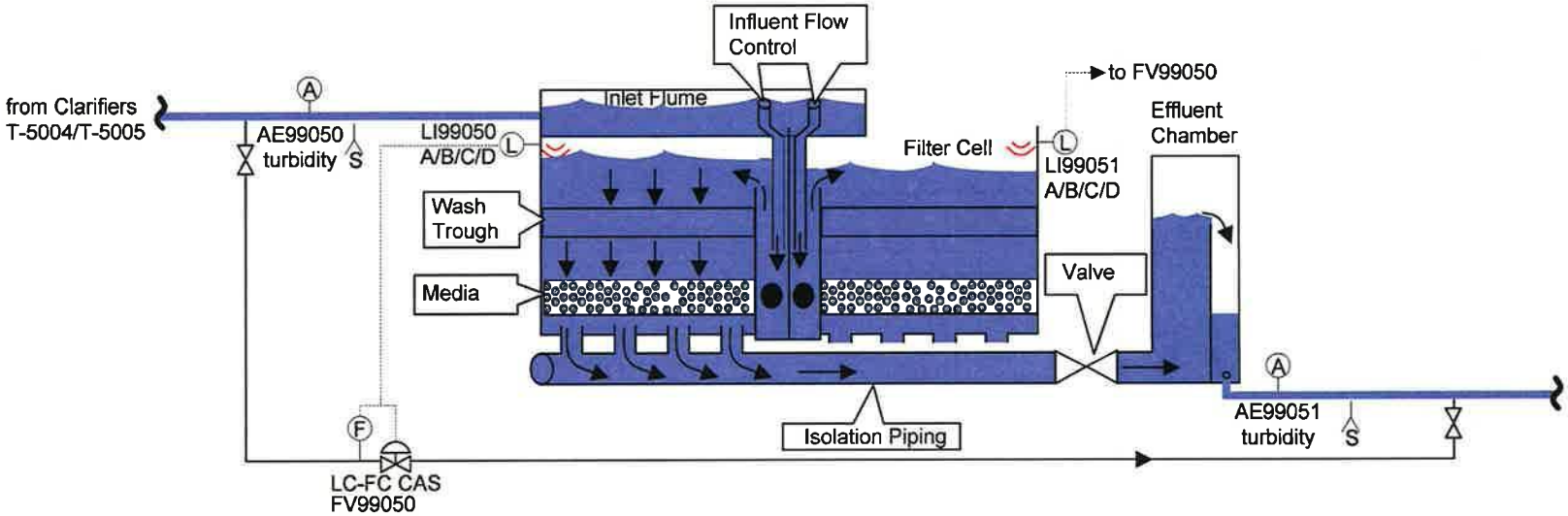


FIGURE 4. Final Filter Side View Under Normal Operating Conditions.

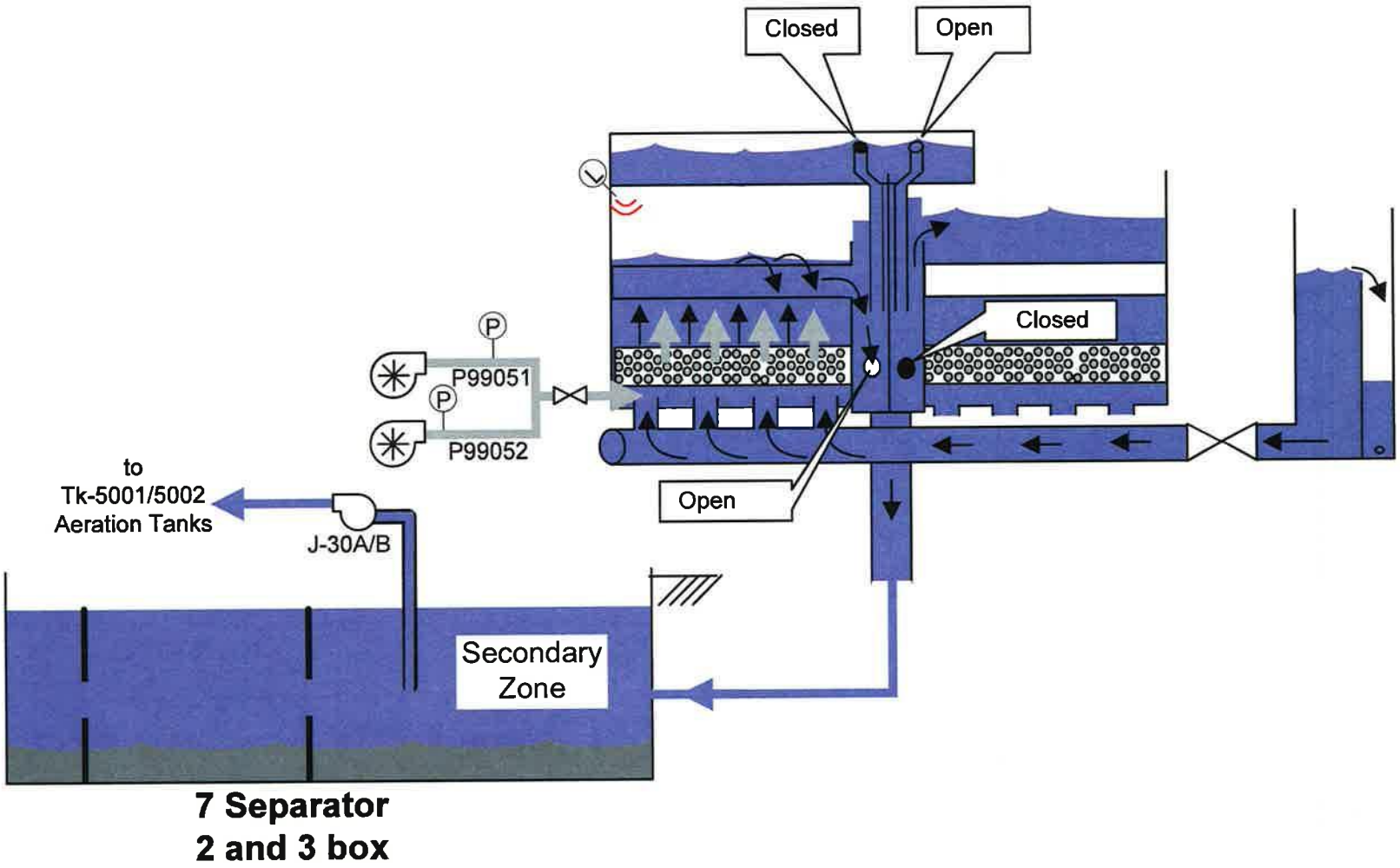


FIGURE 5. Final Filter Side View During a Backwash Cycle.