G-000-104.56

4084

FERNALD HAMILTON COUNTY APPLICATION NO. 05-5471 APPLICATION FOR NEW TANKAGE, A ROTARY VACUUM FILTER AND ANCILLARY EQUIPMENT FOR FEMP MODIFICATION OF PLT. 8

1/19/93

OEPA/DOE-FN

6
LETTER

OhioEPA
State of Ohio Environmental Protection Agency

P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020
FAX (614) 644-2329

Date Rec'd JAN 21 1993 Original File
Log G-01766
File AR
Library

George V. Voinovich
Governor

Donald R. Schregardus
Director

4084

January 19, 1993

Re: Fernald
Hamilton County
Application No. 05-5471
Application for New tankage, a rotary vacuum filter and ancillary equipment for Femp Modification of Plt. 8 Sump
Plans Received April 24, 1992
From Wemco/Jacobs Engineering Group, Incorporated

CERTIFIED MAIL

U.S. Department of Energy - Fernald
P. O. Box 398705
Cincinnati, OH 45239

Gentlemen:

Enclosed is the Ohio EPA Permit to Install which will allow you to install the described source in the manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

As indicated on the permit, you are required to pay a permit fee as provided for by Section 3745.11 of the Ohio Revised Code and any rules established thereunder. The exact amount of this fee is indicated on page 1 of the Permit to Install. This amount must be remitted within fifteen (15) days of the effective date of the Permit to Install. Checks should be made payable to: Treasurer, State of Ohio and sent to: Permits Bookkeeper, Ohio Environmental Protection Agency, 1800 WaterMark Drive, P. O. Box 1049, Columbus, OH 43266-0149.

You are hereby notified that this action of the director is final any may be appealed to the Environmental Board of Review pursuant to Section 3745.04 of the Ohio Revised Code by any person who was a party to this proceeding. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Board of Review within thirty (30) days after notice of the director's action. A copy of the appeal must be served on the director of the Ohio Environmental Protection Agency and the Environmental Law Division of the Office of the Attorney General within three (3) days of filing with the board. An appeal must be filed with the Environmental Board of Review at the following address:

Environmental Board of Review
236 East Town Street, Room 300
Columbus, OH 43266-0557

Submit Permit FEE

Printed on recycled paper

You should note that a general condition of your permit states that issuance of the permit does not relieve you of the duty of complying with all applicable federal, state, and local laws, ordinances, and regulations.

If you have any questions, please contact the Ohio EPA district office to which you submitted your application.

Sincerely

Robert E. Phelps

Robert E. Phelps, P.E., Manager
Permit Administration Section
Division of Water Pollution Control

REP/trh

Enclosure

cc: Southwest District Office
Hamilton County Health Department
Jacobs Engineering Group, Inc.

Ohio Environmental Protection Agency

Permit to Install

Application No. 05-5471

Permit Fee $200.00

Applicant's Name: U.S. Department of Energy - Fernald

Address: P. O. Box 398705

City: Cincinnati State: Ohio 45239

Person to Contact: Steve Brandstetter
Telephone: 513-738-6475

Description of Proposed Source: New tankage, a rotary vacuum filter and ancillary equipment for Femp Modification of Plt. 8 Sump, Fernald, Hamilton County

Issuance Date: January 19, 1993

Effective Date: January 19, 1993

The above named entity is hereby granted a permit to install for the above described source pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source of environmental pollutants will operate in compliance with applicable state and federal laws and regulations, and does not constitute expressed or implied assurance that, if constructed or modified in accordance with those plans and specifications, the above described source of pollutants will be granted the necessary operating permits. This permit is granted subject to the following conditions attached hereto.

Ohio Environmental Protection Agency

Donald R Schregardus

Donald R. Schregardus
Director
P. O. Box 1049, 1800 WaterMark Drive
Columbus, OH 43266-0149

This permit shall expire if construction has not been initiated by the applicant within eighteen months of the effective date of this permit. By accepting this permit, the applicant acknowledges that this eighteen month period shall not be considered or construed as extending or having any effect whatsoever on any compliance schedule or deadline set forth in any administrative or court order issued to or binding upon the permit applicant, and the applicant shall abide by such compliance schedules or deadlines to avoid the initiation of additional legal action by the Ohio EPA.

The director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, examining records, or reports pertaining to the construction, modification, or installation of the above described source of environmental pollutants.

Issuance of this permit does not relieve you of the duty of complying with all applicable federal, state, and local laws, ordinances, and regulations.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code, and shall be invalid unless the permit fee specified above has been paid in full to the Ohio EPA within fifteen days of issuance of this permit to install.

Any well, well point, pit, or other device installed for the purpose of lowering the ground water level to facilitate construction of this project shall be properly abandoned in accordance with the provisions of this plan or as directed by the director or his representative.

Any person installing any well, well point, pit or other device used for the purpose of removing ground water from an aquifer shall complete and file a Well Log and Drilling Report form with the Ohio Department of Natural Resources, Division of Water, within 30 days of the well completion in accordance with the Ohio Revised code Section 1521.01 and 1521.05. In addition, any such facility that has a capacity to withdraw waters of the state in an amount greater than 100,000 gallons per day from all sources shall be registered by the owner with the chief of the Division of Water, Ohio Department of Natural Resources, within three months after the facility is completed in accordance with Section 1521.16 of the Ohio Revised Code. For copies of the necessary well log, drilling report, or registration forms, please contact:

Ohio Department of Natural Resources
Fountain Square
Columbus, OH 43224-1387
(614) 265-6717

The proposed wastewater disposal system shall be constructed in strict accordance with the plans and application approved by the director of the Ohio Environmental Protection Agency. There shall be no deviation from these plans without the prior express, written approval of the agency. Any deviations from these plans or the above conditions may lead to such sanctions and penalties as provided for under Ohio law. Approval of this plan and issuance of this permit does not constitute an assurance by the Ohio Environmental Protection Agency that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

This permit to install applies only to the wastewater treatment works listed above. The installation of drinking water supplies, air contaminant sources, or solid waste disposal facilities will require the submittal of a separate application to the director.

No liquids, sludges, or toxic or hazardous substances other than those set forth in the approved permit shall be accepted for disposal without the prior written approval of the Ohio Environmental Protection Agency.

The appropriate district office of the Ohio Environmental Protection Agency shall be notified in writing as to (a) the construction starting date; (b) the construction completion date; and (c) the date the wastewater disposal system was placed into operation.

Please return this copy with your remittance.

4084

Ohio Environmental Protection Agency

Permit to Install

Application No. 05-5471

Permit Fee $200.00

Applicant's Name: U.S. Department of Energy - Fernald

Address: P. O. Box 398705

City: Cincinnati State: Ohio 45239

Person to Contact: Steve Brandstetter
Telephone: 513-738-6475

Description of Proposed Source: New tankage, a rotary vacuum filter and ancillary equipment for Femp Modification of Plt. 8 Sump, Fernald, Hamilton County

Issuance Date: January 19, 1993

Effective Date: January 19, 1993

The above named entity is hereby granted a permit to install for the above described source pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source of environmental pollutants will operate in compliance with applicable state and federal laws and regulations, and does not constitute expressed or implied assurance that, if constructed or modified in accordance with those plans and specifications, the above described source of pollutants will be granted the necessary operating permits. This permit is granted subject to the following conditions attached hereto.

Ohio Environmental Protection Agency

Donald R Schregardus

Donald R. Schregardus
Director
P. O. Box 1049, 1800 WaterMark Drive
Columbus, OH 43266-0149

REPORT ON DETAIL PLANS FOR
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
PLANT 8 SUMP
WASTEWATER TREATMENT SYSTEM MODIFICATION
FERNALD, OHIO - HAMILTON COUNTY

PTI application 05-5471 was received at the Southwest District Office of Ohio EPA on April 24, 1992. The application is for the upgrade and modernization of the Plant 8 sump.

The Plant 8 sump receives wastewaters from the following sources:

* Plant 8 drum reconditioning
* rotary kiln operations (scrubber water)
* general sump sludge
* stormwater from storage pads
* miscellaneous uranium-bearing washwaters
* waste slurries, filter backwashes and ion exchange regeneration wastewater from the operation of the Advanced Waste Water Treatment (AWWT) system.

The proposed plan calls for the installation of the following:

* three new 25,300 gallon receiver/treatment tanks with agitators
* two new rotary vacuum filters
* one new 50,000 gallon filtrate receiver tanks to compliment three existing tanks which have a total capacity of 22,325 gallons
* one new lime slurry tank
* one new filtrate receiver seal tank
* new pumps and ancillary equipment.

The plant 8 sump receives metal ion-bearing waste waters where it is directed to a receiver tank for batch treatment. A lime slurry is added to the agitated treatment tank (jar testing is a common method to be used to determine treatment requirements) to raise the pH and precipitate the metallic ions. The batch waste slurry is then pumped to a rotary drum vacuum filter which has been precoated with diatomaceous filter aid. The filter cake is removed via knife scraper and placed into drums after which it will be dried in a rotary kiln prior to ultimate disposal.

The filtrate from the vacuum filter is collected in a filtrate receiver seal tank and then pumped to the general sump for further treatment and handling as is currently practiced. Expected volumes are 60,000 gpd average, and 106,000 gpd maximum.

The treatment employed in the Plant 8 sump has the following design criteria:

Parameter	Maximum Concentration (mg/)	Average Concentration (mg/l)
Cadmium	0.010	0.005
Chromium	0.081	0.036
Copper	0.270	0.135
Lead	0.015	0.007
Nickel	0.126	0.087
Molybdenum	0.260	0.114

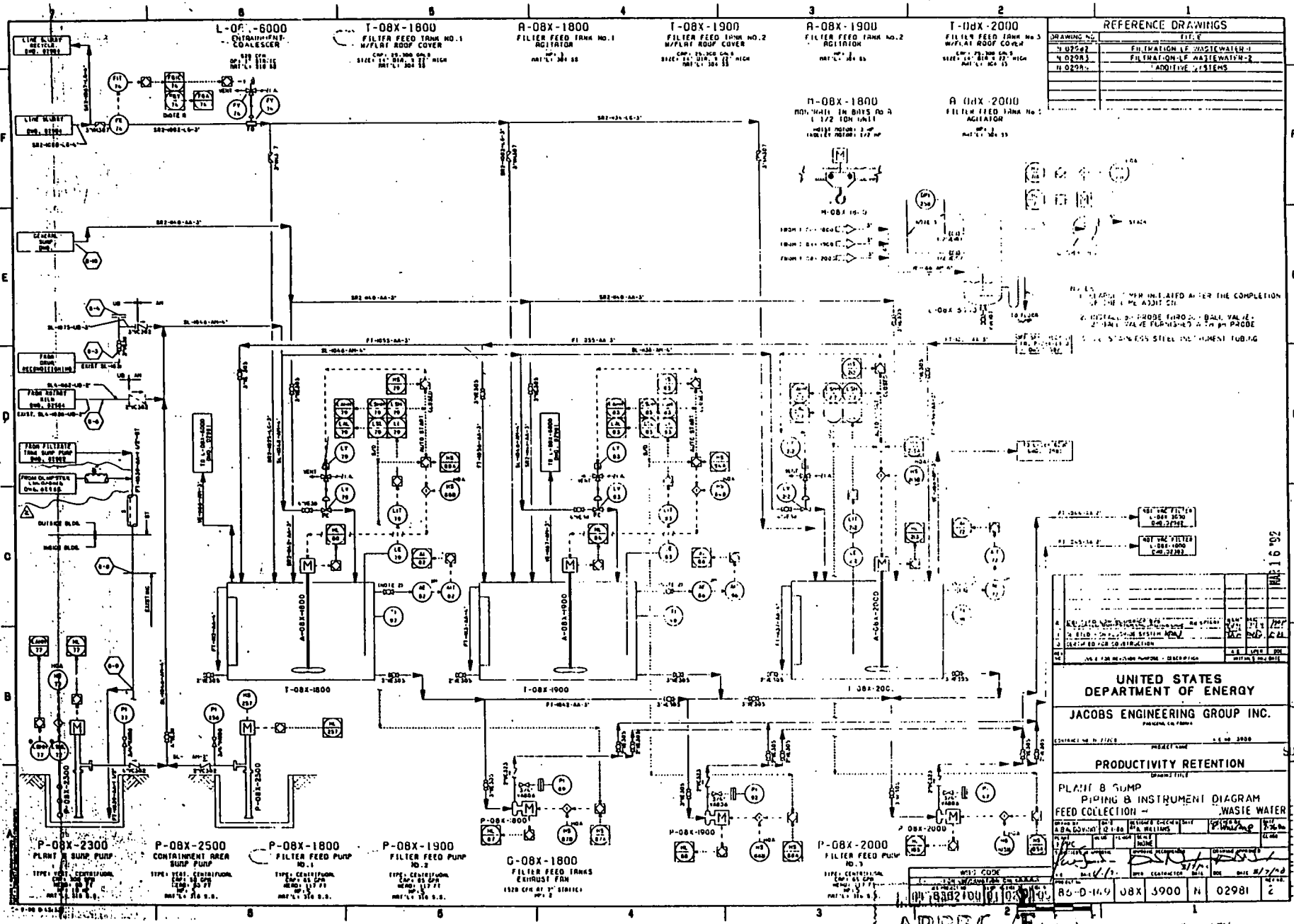
Any filtrate that fails to meet these criteria will be returned to the head of the process for further treatment. Process control equipment will include liquid level sensors, pH probes,

automatic control valves and equipment status indicators. Since treatment will be done in a batch process, consistently high treatment levels can be expected.

We find the plans to be satisfactory and recommend that they be approved.

Matt Walbridge
Div. of Water Pollution Control
Permits Group

Richard L. Shoemaker
Permits Group Leader
Div. of Water Pollution Control



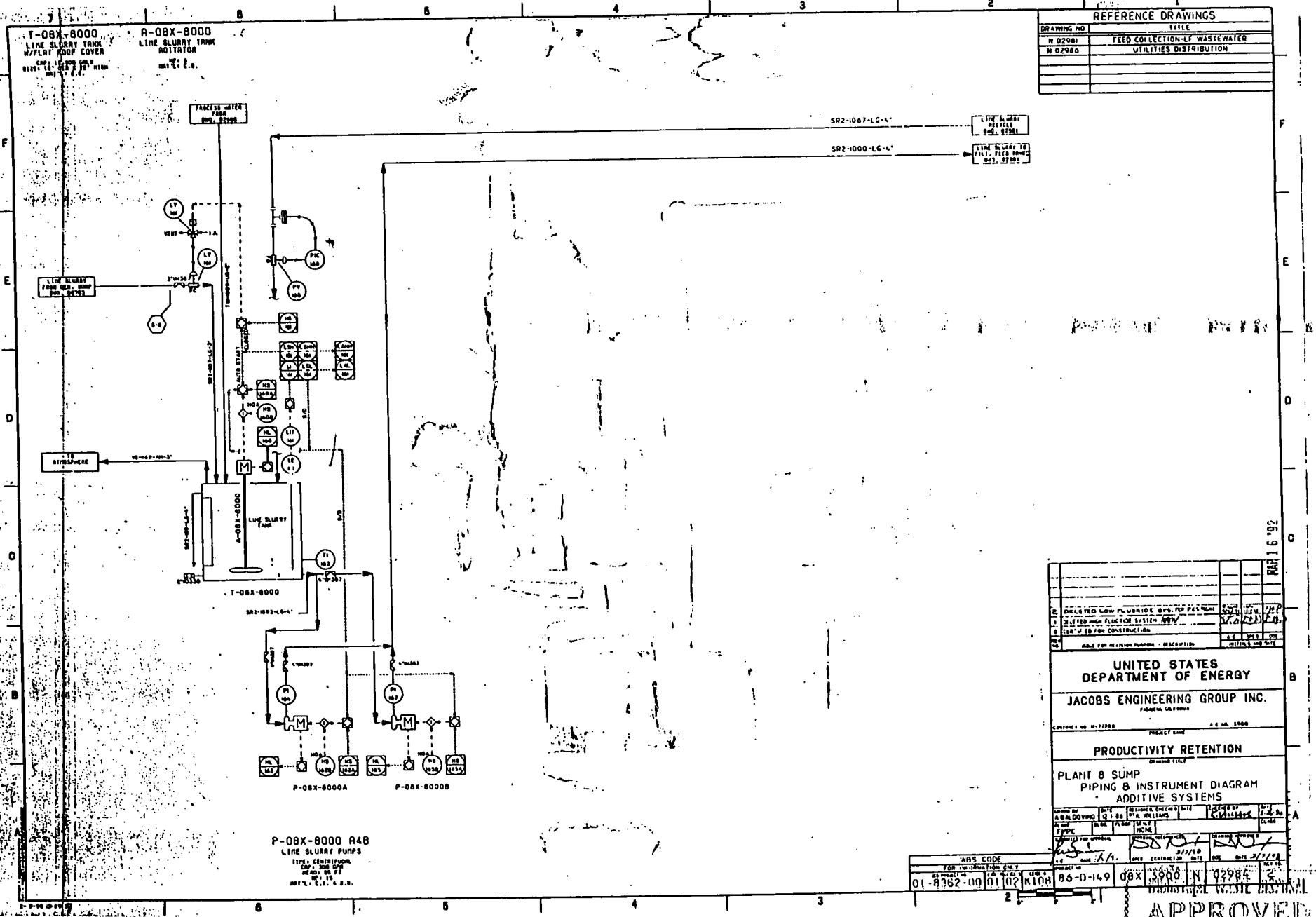
RECEIVED
OHIO EPA
APR 24 1992
SOUTHWEST DISTRICT

APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HEREBY ATTACHED

65-5471

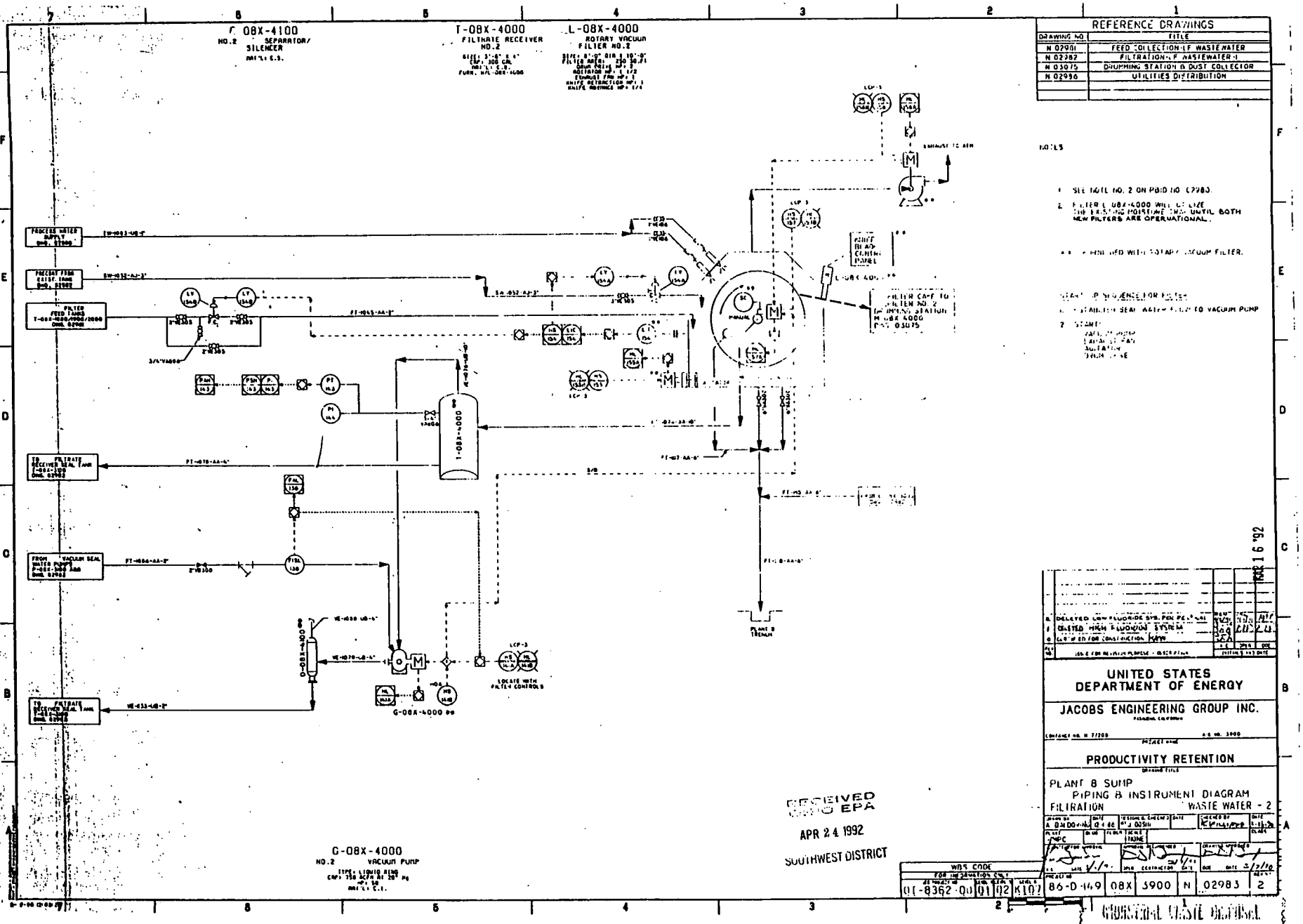
PAID
Amount 56,516.6 Date 4-24-
Check # 14-51 Date 4-22-

014



T-08X-8000
LINE SLURRY TANK W/FLAT ROOF COVER
A-08X-8000
LINE SLURRY TANK AGITATOR
SR2-1067-LG-4"
SR2-1000-LG-4"
LINE SLURRY RECYCLE
LINE SLURRY TO FILT. FEED TANKS
LINE SLURRY FROM NEW. SUMP
TO ATMOSPHERE
A-08X-8000
LINE SLURRY TANK
T-08X-8000
P-08X-8000A
P-08X-8000B
P-08X-8000 A&B
LINE SLURRY PUMPS
REFERENCE DRAWINGS
DRAWING NO
TITLE
N 02981
FEED COLLECTION-LF WASTEWATER
N 02986
UTILITIES DISTRIBUTION
UNITED STATES
DEPARTMENT OF ENERGY
JACOBS ENGINEERING GROUP INC.
PRODUCTIVITY RETENTION
PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
ADDITIVE SYSTEMS
WBS CODE
01-8362-00
01
02
K108
86-0-149
08X
5900
N
02984
APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HEREIN ATTACHED

4024

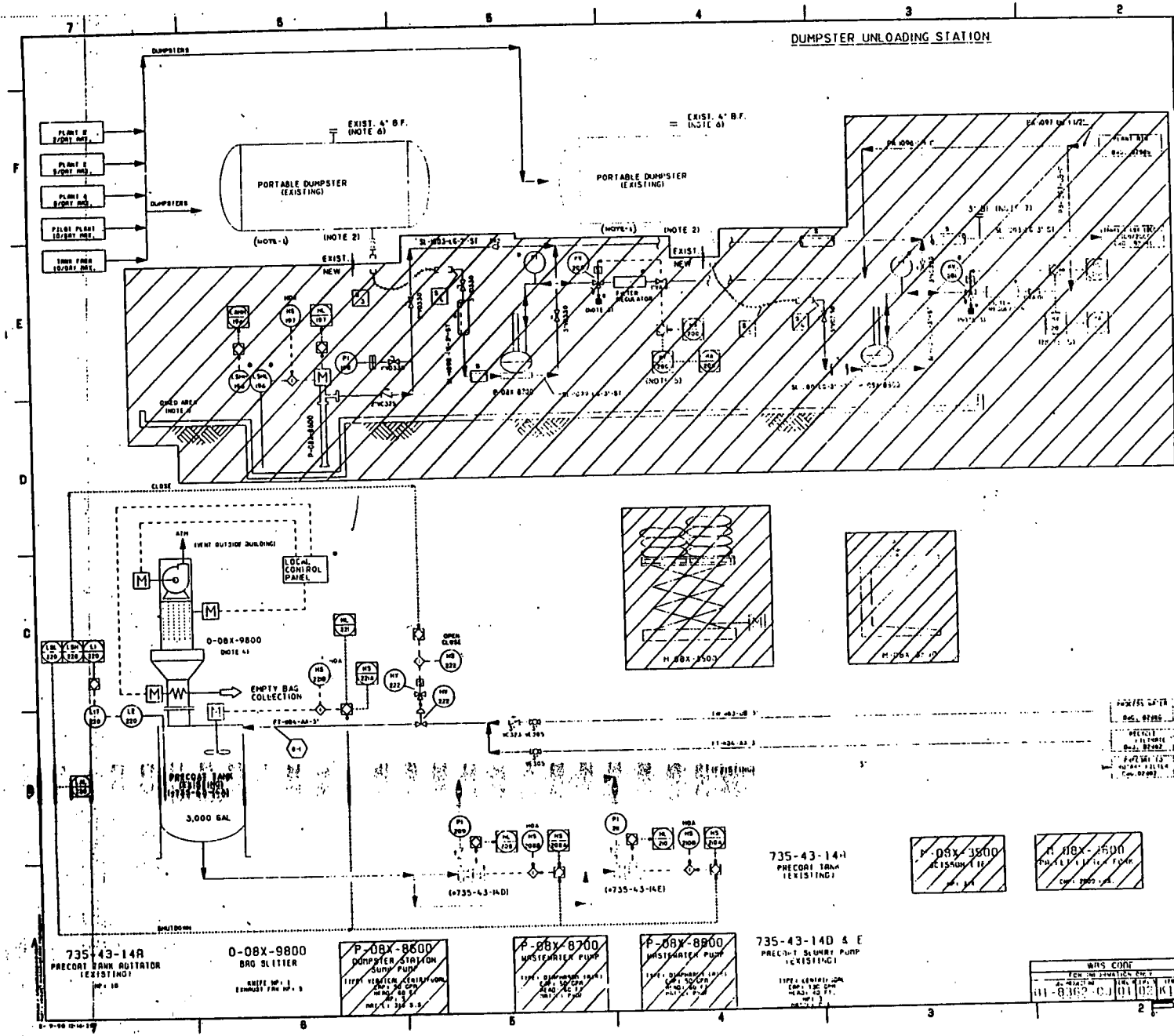


C 08X-4100
NO.2 SEPARATOR/ SILENCER
T-08X-4000
FILTRATE RECEIVER NO.2
L-08X-4000
ROTARY VACUUM FILTER NO.2
G-08X-4000
NO.2 VACUUM PUMP
PROCESS WATER SUPPLY
FILTER FEED TANKS
TO FILTRATE RECEIVER SEAL TANK
FROM VACUUM SEAL WATER PUMPS
TO FILTRATE RECEIVER SEAL TANK
FILTER CAKE TO FILTER NO. 2 DRUMMING STATION
PLANT 8 TRENCH
LOCATE WITH FILTER CONTROLS
REFERENCE DRAWINGS
DRAWING NO. | TITLE
N 02981 | FEED COLLECTION-LF WASTEWATER
N 02982 | FILTRATION-LF WASTEWATER-1
N 03075 | DRUMMING STATION & DUST COLLECTOR
N 02956 | UTILITIES DISTRIBUTION
NOTES
1. SEE NOTE NO. 2 ON PBID NO. C2983.
2. FILTER L-08X-4000 WILL UTILIZE THE EXISTING MOISTURE TRAP UNTIL BOTH NEW FILTERS ARE OPERATIONAL.
UNITED STATES DEPARTMENT OF ENERGY
JACOBS ENGINEERING GROUP INC.
PRODUCTIVITY RETENTION
PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
FILTRATION WASTE WATER - 2
WBS CODE
01-8362-00 01 02 K107
86-D-149 08X 3900 N 02983 2
RECEIVED
EPA
APR 24 1992
SOUTHWEST DISTRICT
MAR 16 '92
GROUNDWATER WASTE DISPOSAL
APPROVED
UNITED ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF LETTER OF APPROVAL

4084

013

RECEIVED
APR 24 1992
SOUTHWEST DISTRICT



REFERENCE DRAWINGS	
DRAWING NO	TITLE
N 02982	FILTRATION-LF WASTEWATER-1
N 02983	FILTRATION-LF WASTEWATER-2
N 02984	ADDITIVE SYSTEMS
N 02986	UTILITIES DISTRIBUTION

NOTES:

1. [illegible] AREA UNDER DUMPSTERS
2. USE EXISTING NOZZLES & KAMLOCK COUPLER.
3. ~~[illegible]~~
4. A MANUAL FEED BAG SLITTER WITH A DUST EXTRACTION UNIT TO BE PROVIDED AT EXISTING PRECOAT TANK.
5. ~~[illegible]~~
6. DUMPSTER MUST BE VENTED PRIOR TO EMPTYING.
7. [illegible] BRAIDED HOSE 20 FT LONG [illegible] 3" KAMLOCK [illegible] COUPLER ON BOTH ENDS. [illegible] WITH 2 [illegible] CLAMPS.
8. [illegible] 3" PVC THREADED [illegible]
9. ~~[illegible]~~

* - [illegible] WITH EQUIPMENT.

2 - DUMPSTER UNLOADING STATION TO BE LOCATED OUTSIDE WEST WALL OF PLANT-B. DUMPSTERS TO BE DISCHARGED TO PLANT-B FLOOR SUMP. SUMP VIA HOSES. CONNECTED TO MATING INLETS.

9 - FREQUENCY OF DUMPSTERS UNPREDICTABLE. TO BE USED AS NEEDED TO BRING ANY WASTE WATER FOR TREATMENT FROM OTHER BUILDINGS, AS REQUIRED.

REV. NO.	REVISION DESCRIPTION	DRAWN BY	CHECKED BY	DATE	INITIALS AND DATE
1	GENERAL REVISIONS PER P&ID & P-[illegible]	[illegible]	[illegible]	MAR 16 '92	
2	[illegible] SYSTEM ADDED	[illegible]	[illegible]		
3	[illegible] FOR CONSTRUCTION	[illegible]	[illegible]		

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.

PRODUCTIVITY RETENTION

PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
DUMPSTER UNLOADING STATION & PRECOAT SYSTEM

DRAWN BY	DATE	CHECKED BY	DATE	CHECKED BY	DATE
J.A.G. GOMEZ	10-1-90	D.A. WILLIAMS			

SCALE	FLOW	SIZE
1"=1'-0"		NONE

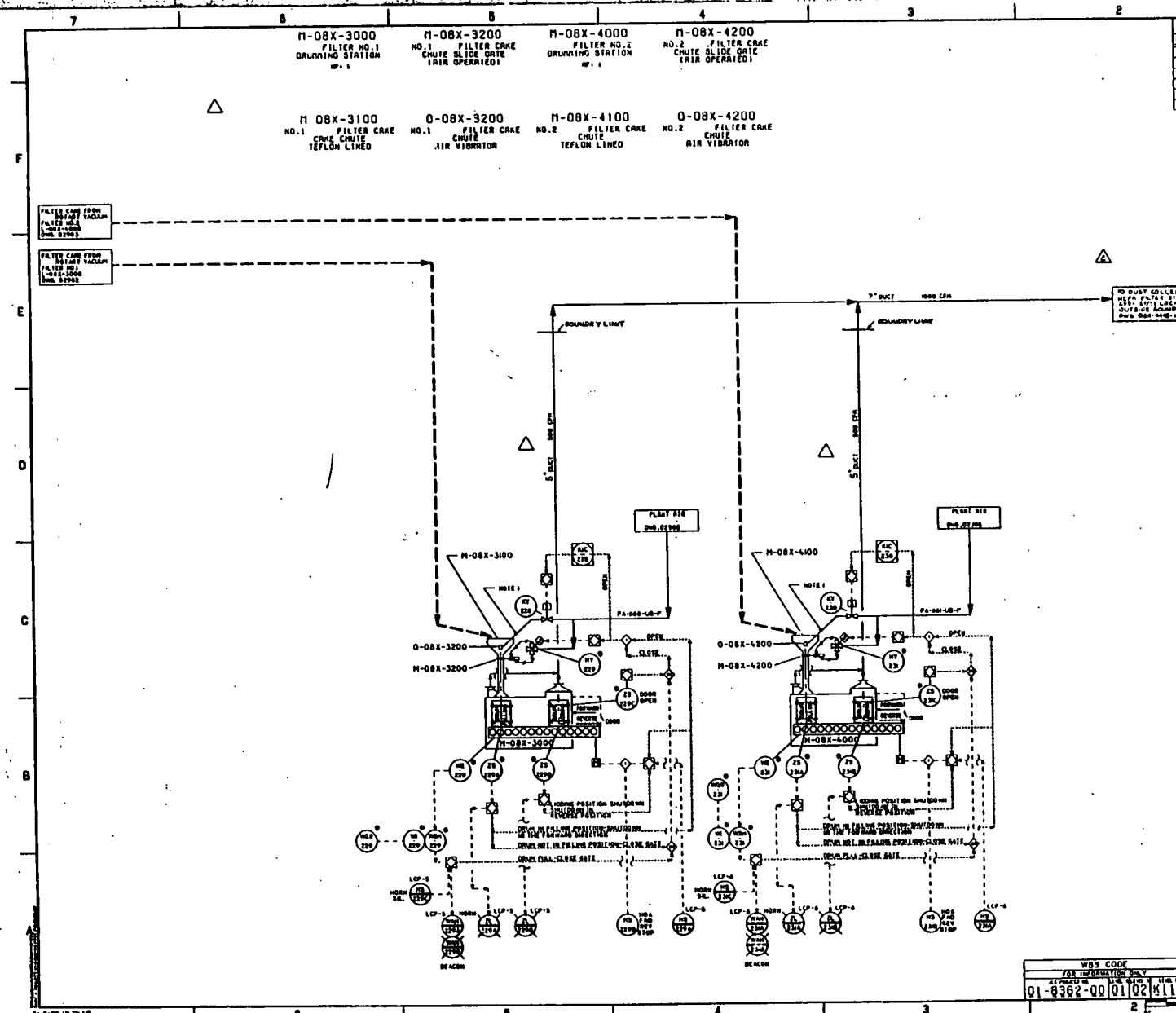
DRAWN BY	DATE	CHECKED BY	DATE	DRAWN BY	DATE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

PROJECT NO.							
85	0	149	08X	3900	N	02985	[illegible]

WBS CODE

FOR THE DIVISION ONLY				
01-8362-0	01	02	K10	

APPROVED
U.S. ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL



REFERENCE DRAWINGS

DRAWING NO.	TITLE
N-02982	FILTRATION-LF WASTWATER-1
N-02983	FILTRATION-LF WASTEWATER-2
N-02986	UTILITIES DISTRIBUTION

NOTES:

- FURNISHED WITH EQUIPMENT.

1. CONNECTION BETWEEN SOLENOID VALVES AND O-08X-2200, 3200 & 4200 SHALL USE HOSE, UNIROYAL P290 OR EQUAL.

APR 24 1992

SOUTHWEST DISTRICT

MAR 16 '92

REV. NO.	ISSUE FOR REVISION PURPOSE - DESCRIPTION	MITTALS AND DATE
2	DELETED LOW FLUORIDE SYS. PER P&S #1601	
1	DELETED HIGH FLUORIDE SYSTEM	
0	CERTIFIED FOR CONSTRUCTION	

UNITED STATES
DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. N-77205 A.E. NO. 3900

PROJECT NAME

PRODUCTIVITY RETENTION

DRAWING TITLE

PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
DRUMMING STATIONS & DUST COLLECTOR

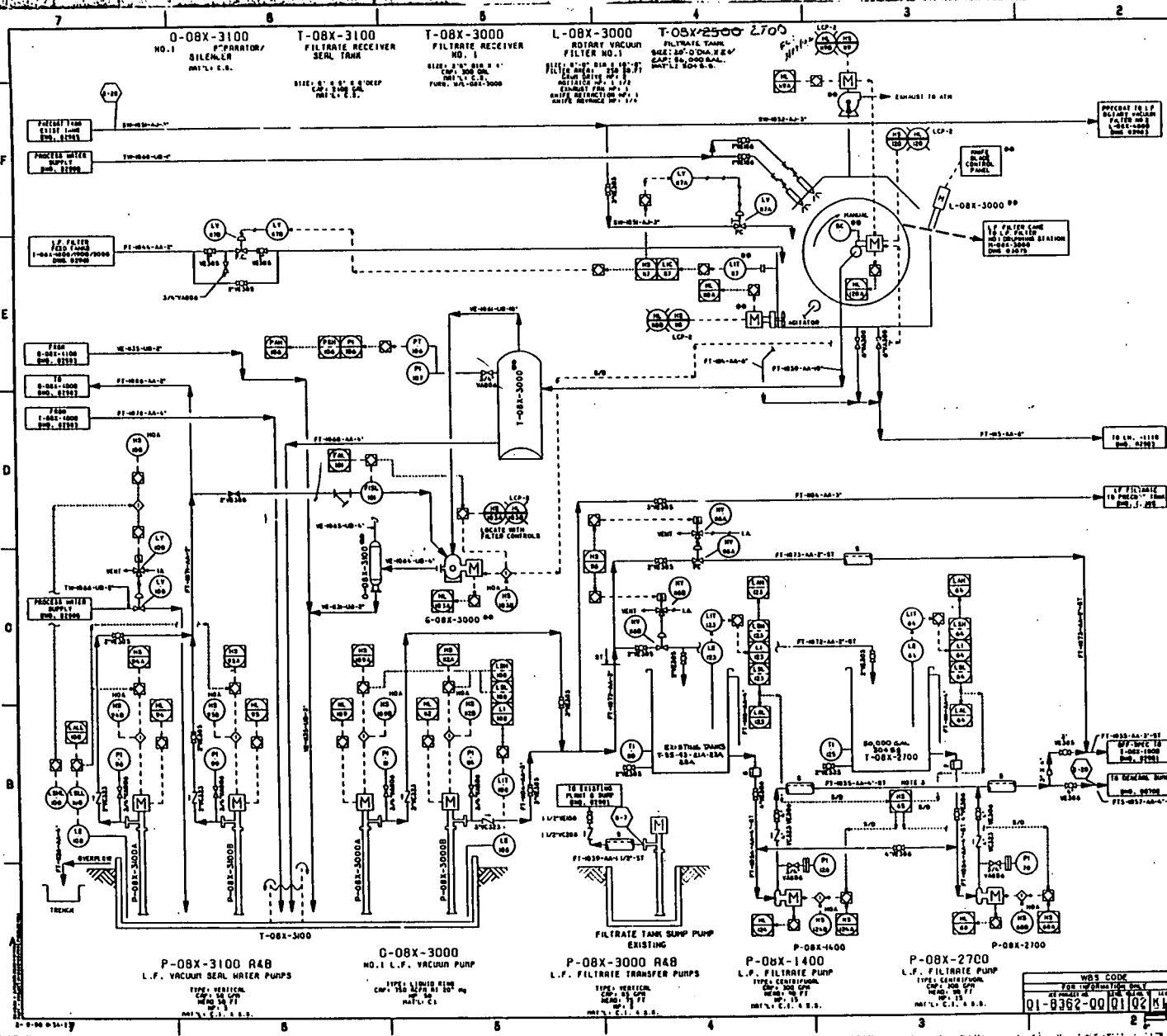
DRAWN BY A. HAAK | DATE 5-17-88 | DESIGNED & CHECKED BY K. WILLIAMS | DATE | PLANT FMPC | BLDG. | FLOOR | SCALE NONE

WBS CODE
FOR INFORMATION ONLY

01-8362-00	01	02	K111	86-D-149	08X 3900 N 03075 2

APPROVED
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HERETO ATTACHED

015



REFERENCE DRAWINGS

DRAWING NO	TITLE
N 02981	FEED COLLECTION-LF WASTEWATER
N 02983	FILTRATION-LF WASTEWATER-2
N 02935	DUMPSTER UNLOADING & PRECOAT
N 03075	DRUMMING STATION & DUST COLLECTOR
N 02986	UTILITIES DISTRIBUTION

NOTES:

1. THE LOW FLUORIDE WASTEWATER TREATMENT SEQUENCE IS DESCRIBED ON PROCESS FLOW-1 DIAGRAM NO. 02978.
2. HS IS THE TANK/PUMP LINEUP SELECTOR SWITH.

** FURNISHED WITH ROTARY VACUUM FILTER.

START-UP SEQUENCE FOR FILTER:

1. ESTABLISH SEAL WATER FLOW TO VACUUM PUMP.
2. START:
   VACUUM PUMP
   EXHAUST FAN
   AGITATOR
   DRUM DRIVE

RECEIVED
APR 24 1992
SOUTHWEST DISTRICT

MAR 16 '92

REV	REVISION	DATE	BY	CHK
5	REVISED PER KCS #1840			
4	DELETED LIME/FLOCCING SYS. PER KCS #1840			
3	DELETED HIGH FLUORIDE SYSTEM (OPW)			
0	CERTIFIED FOR CONSTRUCTION			

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. H-77200 J.E. NO. 3000

PROJECT NAME: PRODUCTIVITY RETENTION

DRAWING TITLE:
PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
FILTRATION - LOW FLUORIDE WASTE WATER-1

DRAWN BY A. BALDOVINO	DATE 12-4-86	DESIGN & CHECKED R.A. WILLIAMS	DATE 2-26-92
PLANT FPPC	BLDG.	PLANT TICKET NONE	

PROJECT NO. 86-D-149 | 08X | 3000 | N | 02982 | 3

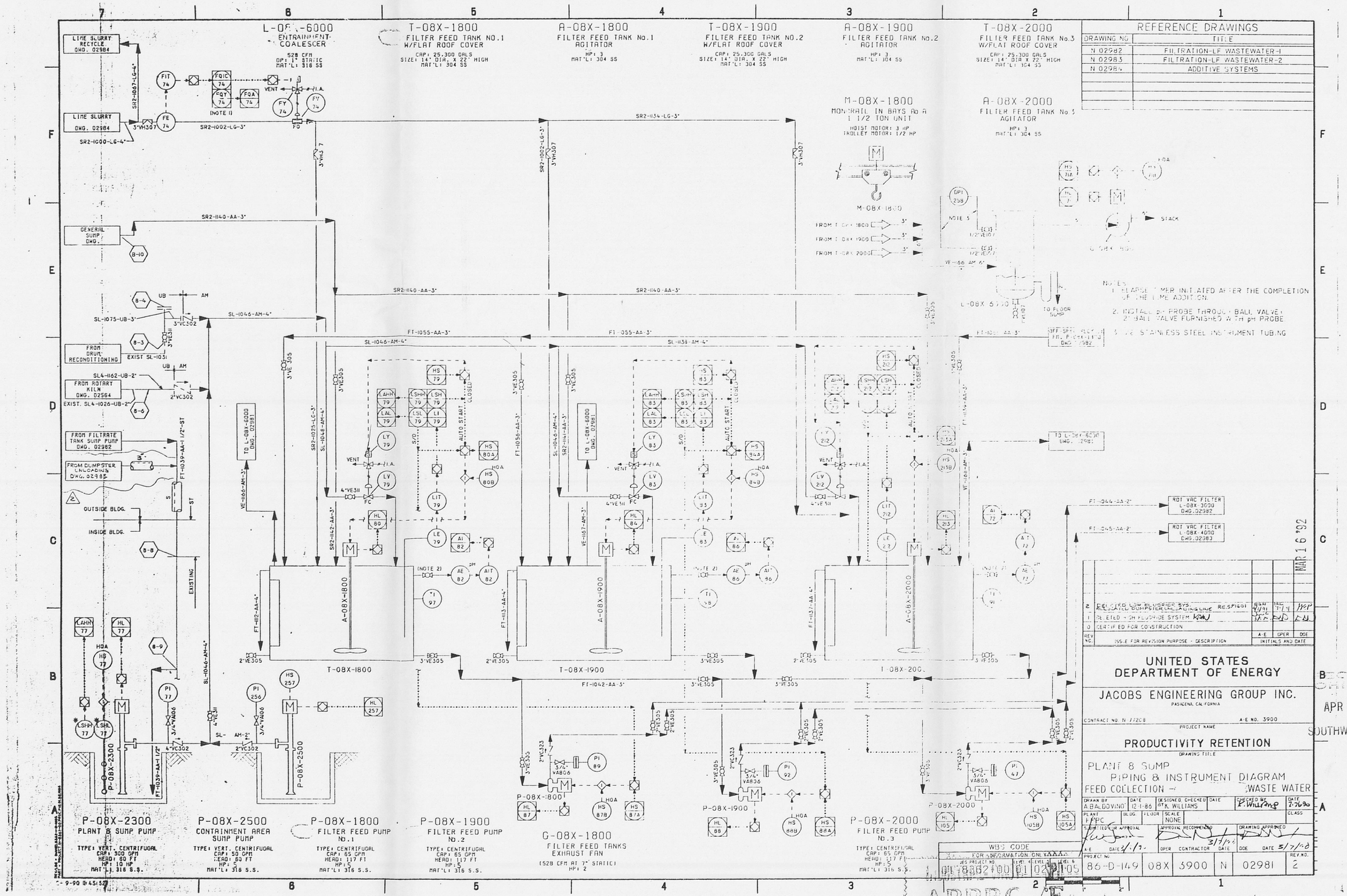
INDUSTRIAL WASTE DIV. DIRECT

APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HERETO ATTACHED

XXXX

4

015



REFERENCE DRAWINGS

DRAWING NO	TITLE
N 02982	FILTRATION-LF WASTEWATER-1
N 02983	FILTRATION-LF WASTEWATER-2
N 02984	ADDITIVE SYSTEMS

NOTES
1. ELAPSE TIMER INITIATED AFTER THE COMPLETION OF THE LIME ADDITION.
2. INSTALL pH PROBE THROUGH BALL VALVE; 2" BALL VALVE FURNISHED WITH pH PROBE.
3. 1/2" STAINLESS STEEL INSTRUMENT TUBING

REV NO.	ISSUE FOR REVISION PURPOSE - DESCRIPTION	A-E	OPER	DOE
2	DELETED LOW FLUORIDE SYS. RELOCATED DUMPSTER UNLOADING LINE RE.SF1601			
1	DELETED HIGH FLUORIDE SYSTEM			
0	CERTIFIED FOR CONSTRUCTION			

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. N 77208 A-E NO. 3900

PROJECT NAME
PRODUCTIVITY RETENTION

DRAWING TITLE
PLANT & SUMP
PIPING & INSTRUMENT DIAGRAM
FEED COLLECTION - WASTE WATER

DRAWN BY A.BALDOVINO DATE 12-1-86 DESIGNED BY K. WILLIAMS CHECKED BY K. Williams DATE 2-26-90
PLANT FPPC BLDG. FLOOR SCALE NONE CLASS
SUBMITTED FOR APPROVAL A-E DATE 3/1/90 APPROVAL RECOMMENDED OPER CONTRACTOR DATE 3/7/90 DRAWING APPROVED DOE DATE 3/7/90

PROJECT NO.						REV. NO.
86-D-149	08X	3900	N	02981		2

WBS CODE
FOR INFORMATION ONLY
JEG PROJECT NO. 01-8862-00 LEVEL 4 01 LEVEL 5 02 LEVEL 6 05

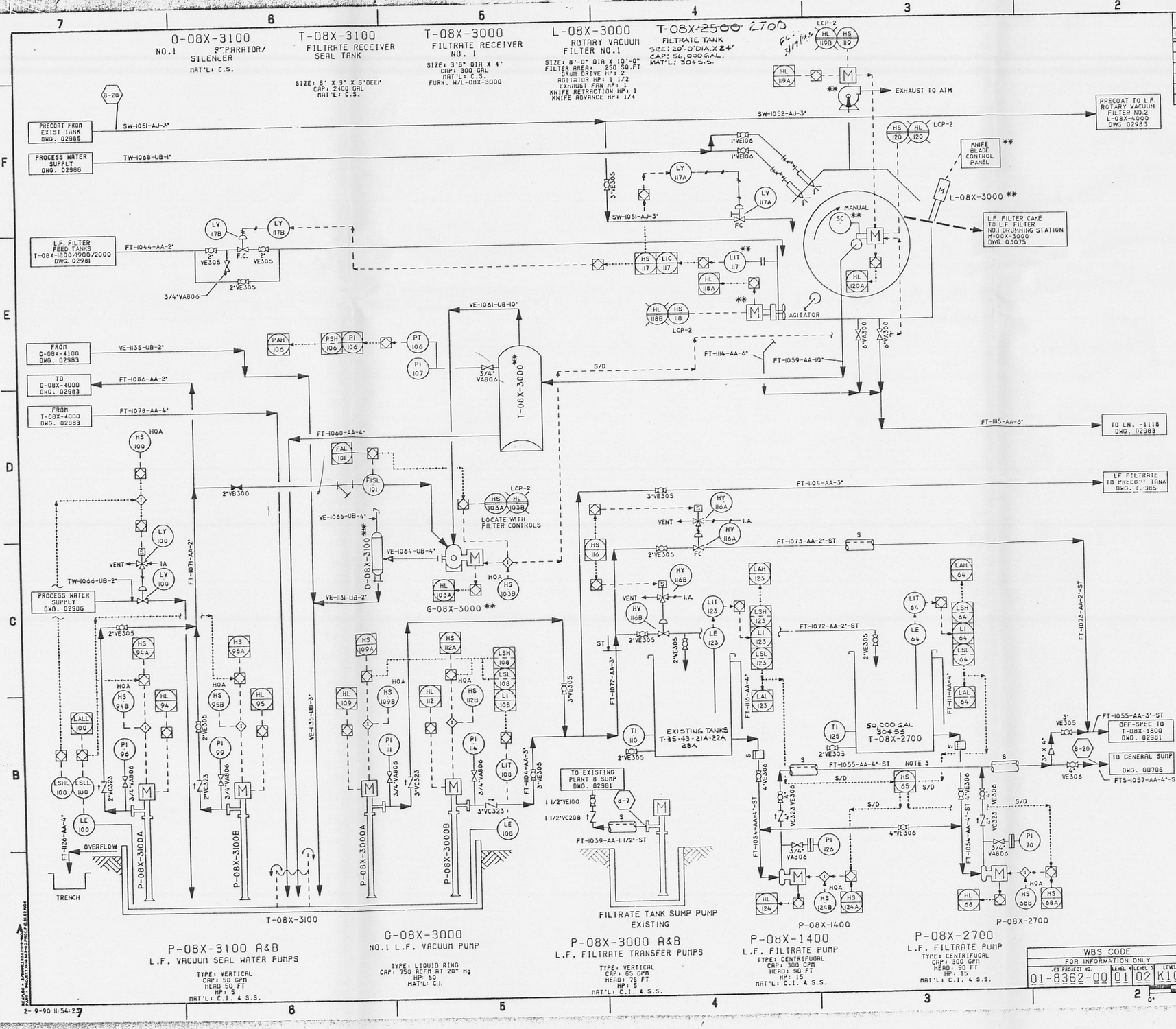
MAR 16 '92

RECEIVED OHIO EPA
APR 24 1992
SOUTHWEST DISTRICT

APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF LETTER OF APPROVAL HERETO ATTACHED

05-5471
PAID
Amount 5015.00 Date 4-24-92
Check # 10051 Date 4-22-92

4084



REFERENCE DRAWINGS

DRAWING NO.	TITLE
N 02981	FEED COLLECTION-LF WASTEWATER
N 02983	FILTRATION-LF WASTEWATER-2
N 02985	DUMPSTER UNLOADING & PRECOAT
N 03075	DRUMMING STATION & DUST COLLECTOR
N 02986	UTILITIES DISTRIBUTION

NOTES:

1. THE LOW FLUORIDE WASTEWATER TREATMENT SEQUENCE IS DESCRIBED ON PROCESS FLOW DIAGRAM NO. 02978.
2. HS IS THE TANK/PUMP LINEUP SELECTOR SWITH.

** FURNISHED WITH ROTARY VACUUM FILTER.

START-UP SEQUENCE FOR FILTER:

1. ESTABLISH SEAL WATER FLOW TO VACUUM PUMP.
2. START:
   VACUUM PUMP
   EXHAUST FAN
   AGITATOR
   DRUM DRIVE

SOUTHWEST DISTRICT
APR 24 1992
RECEIVED

MAR 16 '92

REV NO.	ISSUE FOR REVISION PURPOSE - DESCRIPTION	A-E	OPER	DOE
3	REVISED PER RES #1864			
2	DELETED LOWFLUORIDE SYS. PER RES #1604			
1	DELETED HIGH FLUORIDE SYSTEM			
0	CERTIFIED FOR CONSTRUCTION			

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. N-77208 A-E NO. 3900

PROJECT NAME: PRODUCTIVITY RETENTION

DRAWING TITLE:
PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
FILTRATION - LOW FLUORIDE WASTE WATER-1

DRAWN BY	DATE	DESIGNED, CHECKED	DATE	CHECKED BY	DATE
A. BALDOVINO	12-1-86	BY K. WILLIAMS		K. Williams	2-26-90

PLANT: FMPC | BLDG. | FLOOR | SCALE: NONE | CLASS

SUBMITTED FOR APPROVAL: A-E DATE 3/1/90
APPROVAL RECOMMENDED: OPER CONTRACTOR DATE 3/7/90
DRAWING APPROVED: DOE DATE 3/7/90

WBS CODE: FOR INFORMATION ONLY
JEG PROJECT NO. 01-8362-00 | LEVEL 1 01 | LEVEL 2 02 | LEVEL 3 K106

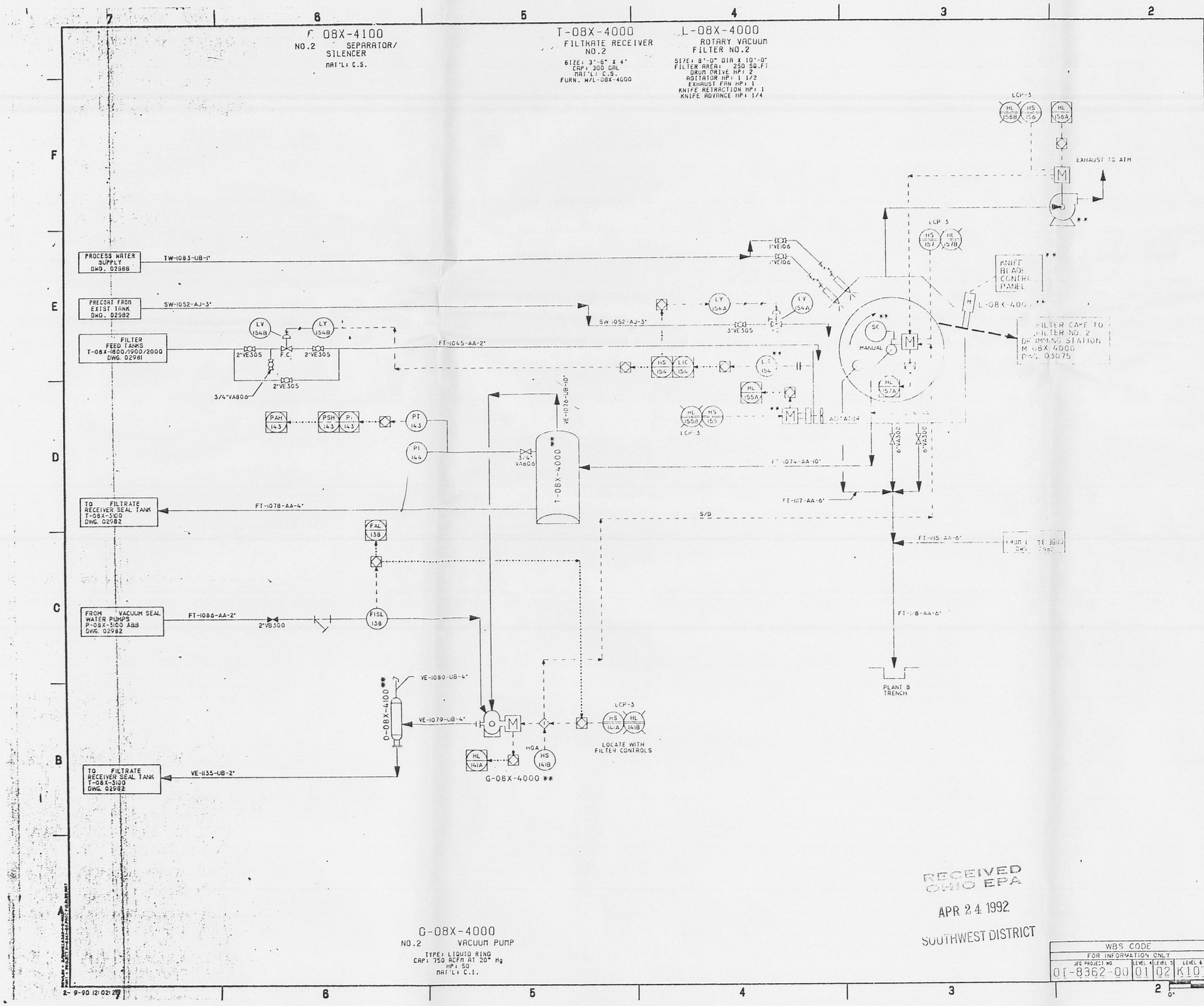
PROJECT NO. 86-D-149 | 08X 3900 N 02982 | REV. NO. 3

INDUSTRIAL WASTE DISPOSAL
APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF LETTER OF APPROVAL HERETO ATTACHED

2-9-90 11:54:23

011

4084



REFERENCE DRAWINGS	
DRAWING NO.	TITLE
N 02981	FEED COLLECTION-LF WASTEWATER
N 02982	FILTRATION-LF WASTEWATER-1
N 03075	DRUMMING STATION & DUST COLLECTOR
N 02986	UTILITIES DISTRIBUTION

NOTES:

1. SEE NOTE NO. 2 ON P&ID NO. 02980.
2. FILTER L-08X-4000 WILL UTILIZE THE EXISTING MOISTURE TRAP UNTIL BOTH NEW FILTERS ARE OPERATIONAL.

** FURNISHED WITH ROTARY VACUUM FILTER.

START-UP SEQUENCE FOR FILTER

1. ESTABLISH SEAL WATER FLOW TO VACUUM PUMP
2. START:
   VACUUM PUMP
   EXHAUST FAN
   AGITATOR
   DRUM DRIVE

MAR 16 '92

REV NO.	ISSUE FOR REVISION PURPOSE - DESCRIPTION	A-E	OPER	DOE
2	DELETED LOW FLUORIDE SYS. PER RES.#1601	RGN 4/2/91		
1	DELETED HIGH FLUORIDE SYSTEM			
0	CERTIFIED FOR CONSTRUCTION KAW			

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. N-77208 A-E NO. 3900

PROJECT NAME

PRODUCTIVITY RETENTION

DRAWING TITLE

PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
FILTRATION WASTE WATER - 2

DRAWN BY	DATE	DESIGNED, CHECKED BY	DATE	CHECKED BY	DATE
A. BALDOVINO	12-1-86	J. DOSHI		K. WILLIAMS	2-26-90

PLANT	BLDG.	FLOOR	SCALE	CLASS
MPC			NONE	

SUBMITTED FOR APPROVAL	APPROVAL RECOMMENDED	DRAWING APPROVED
A-E DATE 3/1/91	OPER CONTRACTOR DATE 3/5/90	DOE DATE 3/7/90

WBS CODE FOR INFORMATION ONLY					
JEG PROJECT NO.	LEVEL 4	LEVEL 5	LEVEL 6		
01-8362-00	01	02	K107		

PROJECT NO.					REV. NO.
86-D-149	08X	3900	N	02983	2

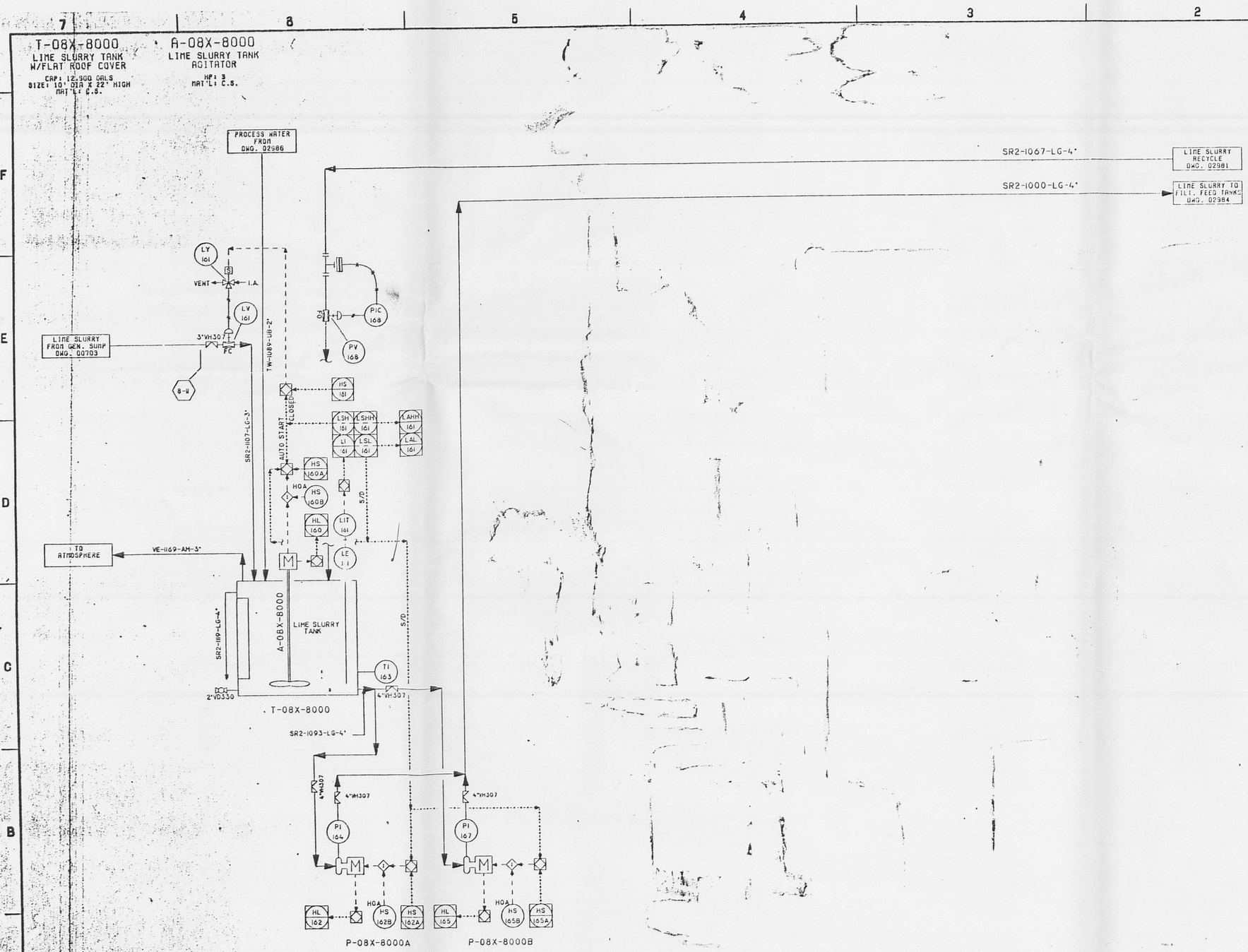
RECEIVED OHIO EPA
APR 24 1992
SOUTHWEST DISTRICT

INDUSTRIAL WASTE DISPOSAL
APPROVED

2-9-90 12:02:29

APR 24 1992
NORTHWEST DISTRICT
- 4084 -

REFERENCE DRAWINGS	
DRAWING NO.	TITLE
N 02981	FEED COLLECTION-LF WASTEWATER
N 02986	UTILITIES DISTRIBUTION



REV. NO.	ISSUE FOR REVISION PURPOSE - DESCRIPTION	A-E	OPER	DOE
2	DELETED LOW FLUORIDE SYS. PER RES 4651			
1	DELETED HIGH FLUORIDE SYSTEM			
0	CERTIFIED FOR CONSTRUCTION			

INITIALS AND DATE

MAR 16 '92

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. N-77208 A-E NO. 3900

PROJECT NAME: PRODUCTIVITY RETENTION

DRAWING TITLE: PLANT 8 SUMP PIPING & INSTRUMENT DIAGRAM ADDITIVE SYSTEMS

DRAWN BY	DATE	DESIGNED, CHECKED	DATE	CHECKED BY	DATE
A BALDOVINO	12-1-86	B.K. WILLIAMS		K. WILLIAMS	2-26-90

PLANT	BLDG.	FLOOR	SCALE	CLASS
FMPC			NONE	

SUBMITTED FOR APPROVAL — A-E DATE 3/1/90
APPROVAL RECOMMENDED — OPER CONTRACTOR DATE 3/7/90
DRAWING APPROVED — DOE DATE 3/7/90

WBS CODE FOR INFORMATION ONLY				
JEG PROJECT NO	LEVEL 4	LEVEL 5	LEVEL 6	
01-8362-00	01	02	K108	

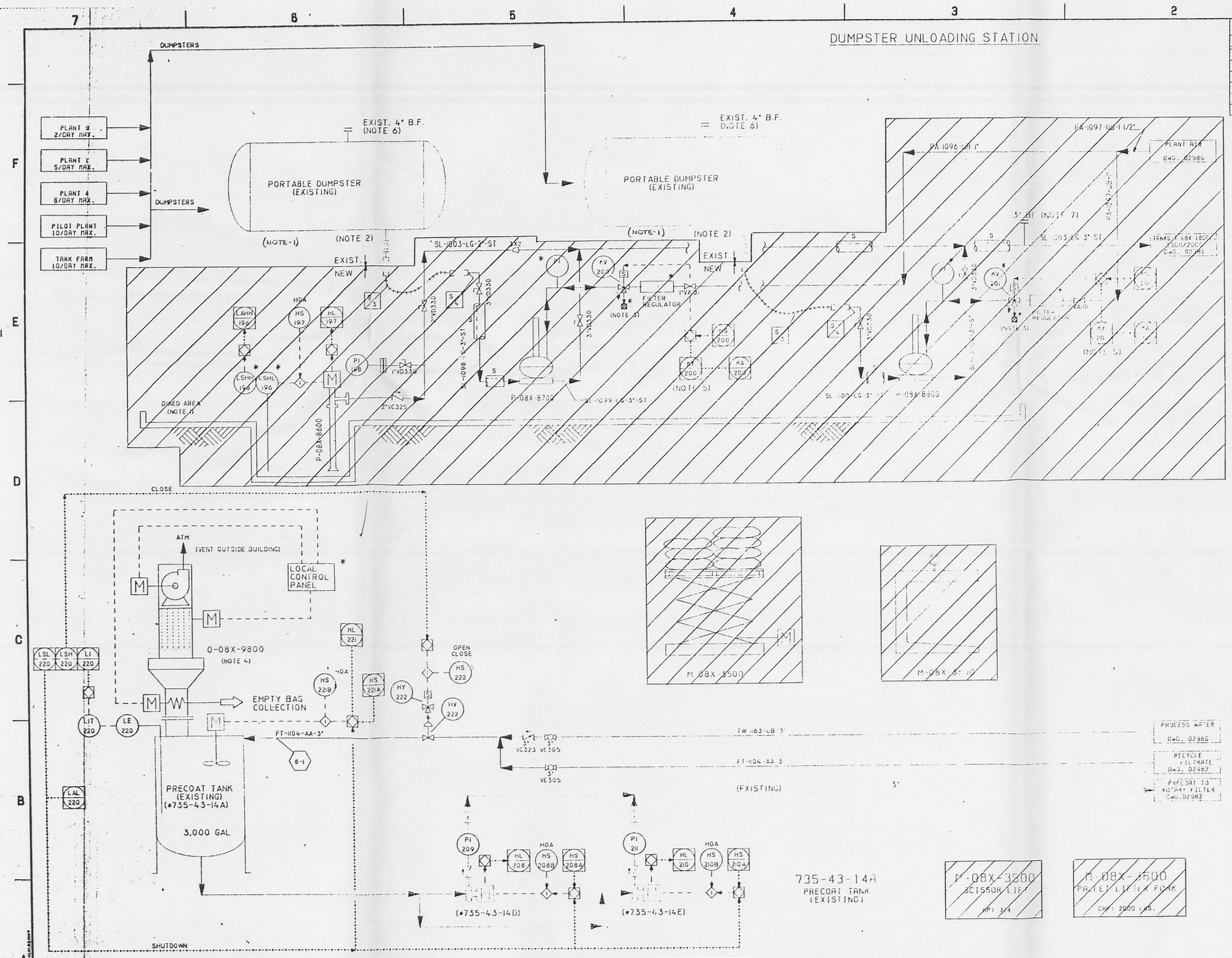
PROJECT NO					REV. NO.
86-D-149	08X	3900	N	02984	2

INDUSTRIAL WASTE DISPOSAL
APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY

2-9-90 12:09:57

4084
SOUTHWEST DISTRICT
APR 24 1992
RECEIVED
OHIO EPA

DUMPSTER UNLOADING STATION



REFERENCE DRAWINGS	
DRAWING NO.	TITLE
N 02982	FILTRATION-LF WASTEWATER-1
N 02983	FILTRATION-LF WASTEWATER-2
N 02984	ADDITIVE SYSTEMS
N 02986	UTILITIES DISTRIBUTION

NOTES:

1 - PAVED AREA UNDER DUMPSTERS

2 USE EXISTING NOZZLES & KAMLOCK COUPLER.

~~3. FILTER REGULATOR, 3-WAY VALVE AND GAGE TURNSPED WITH PUMP.~~

4. A MANUAL FEED BAG SLITTER WITH A DUST EXTRACTION UNIT TO BE PROVIDED AT EXISTING PRECOAT TANK.

~~5. SOUND ALARM AFTER 15 MINUTES.~~

6 DUMPSTER MUST BE VENTED PRIOR TO EMPTYING.

7. USE LINED TEXTILE BRAIDED HOSE 20 FT LONG WITH WIRE REINFORCEMENT AND 3" KAMLOCK ASS'Y C POL (PRC COUPLER ON BOTH ENDS. SECURED WITH 2 S.S. CLAMPS

8. 3" KAMLOCK MALE NPT ADAPTER 633-F, POLYPROPYLENE, MOUNTED ON 3" PVC THREADED FLANGE.

~~9. CONNECT TO FUTURE TIE-INS FROM ANY OTHER PLANT AND TANK FARM.~~

* FURNISHED WITH EQUIPMENT

8 - DUMPSTER UNLOADING STATION TO BE LOCATED OUTSIDE WEST WALL OF PLANT-8. DUMPSTERS TO BE DISCHARGED TO PLANT-8 FLOOR SUMP. SUMP VIA HOSES. CONNECTED TO MATING INLETS.

9 - FREQUENCY OF DUMPSTERS UNPREDICTABLE. TO BE USED AS NEEDED TO BRING ANY WASTE WATER FOR TREATMENT FROM OTHER BUILDINGS, AS REQUIRED.

MAR 16 '92

REV. NO.	ISSUE FOR REVISION PURPOSE - DESCRIPTION	A-E	OPER	DOE
2	GENERAL REVISION PER R.E.S. #1601			
1	DELETED HIGH FLOURIDE SYSTEM			
0	ISSUED FOR CONSTRUCTION			

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. N-77208 A-E NO. 3900

PROJECT NAME: PRODUCTIVITY RETENTION

DRAWING TITLE: PLANT 8 SUMP PIPING & INSTRUMENT DIAGRAM DUMPSTER UNLOADING STATION & PRECOAT SYSTEM

DRAWN BY	DATE	DESIGNED, CHECKED	DATE	CHECKED BY	DATE
A.B.ALDOVINO	12-1-86	D.K. WILLIAMS			2-26-90

PLANT: FMPC | BLDG. | FLOOR | SCALE: NONE | CLASS

SUBMITTED FOR APPROVAL 3/1/92 | APPROVAL RECOMMENDED 3/2/92 | DRAWING APPROVED 3/2/92

A-E DATE | OPER CONTRACTOR DATE | DOE DATE

WBS CODE FOR INFORMATION ONLY: AS PROJECT NO 01-8362-00 | LEVEL 1 01 | LEVEL 2 02 | LEVEL 3 K109

PROJECT NO					REV. NO.
86-D149	08X	3900	N	02985	-

INDUSTRIAL WASTE DIVISION APPROVED

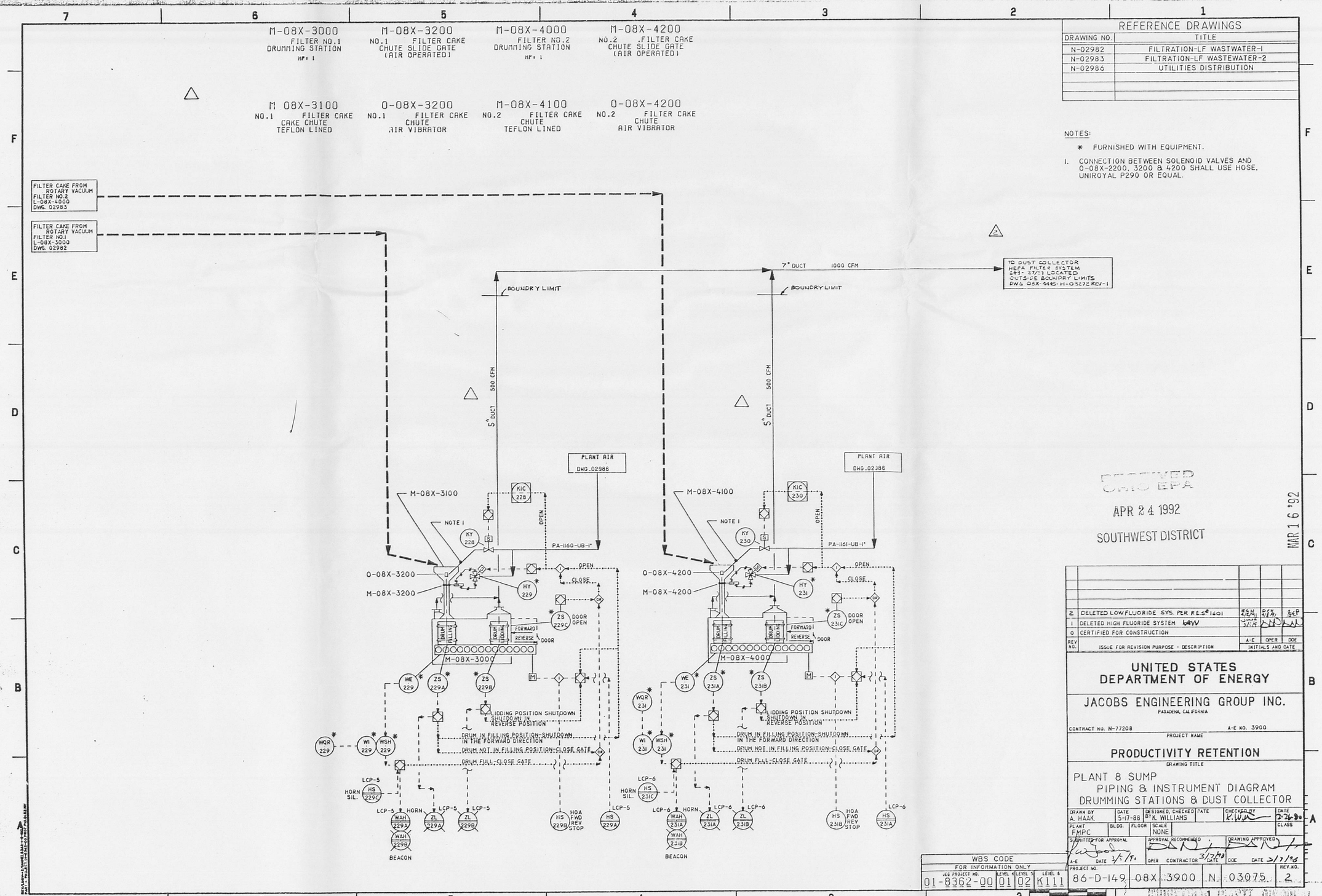
Z-9-90 12:16:29

REFERENCE DRAWINGS	
DRAWING NO.	TITLE
N-02982	FILTRATION-LF WASTWATER-1
N-02983	FILTRATION-LF WASTEWATER-2
N-02986	UTILITIES DISTRIBUTION

NOTES:

* FURNISHED WITH EQUIPMENT.

1. CONNECTION BETWEEN SOLENOID VALVES AND 0-08X-2200, 3200 & 4200 SHALL USE HOSE. UNIROYAL P290 OR EQUAL.



DRAFT EPA

APR 24 1992

SOUTHWEST DISTRICT

MAR 16 '92

REV NO.	ISSUE FOR REVISION PURPOSE - DESCRIPTION	A-E	OPER	DOE
2	DELETED LOW FLUORIDE SYS. PER R.E.S.# 1601	RSH 4/24/91	5/17/91	RCP 3/7/91
1	DELETED HIGH FLUORIDE SYSTEM			
0	CERTIFIED FOR CONSTRUCTION			

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY

JACOBS ENGINEERING GROUP INC.
PASADENA, CALIFORNIA

CONTRACT NO. N-77208 A-E NO. 3900

PROJECT NAME

PRODUCTIVITY RETENTION

DRAWING TITLE

PLANT 8 SUMP
PIPING & INSTRUMENT DIAGRAM
DRUMMING STATIONS & DUST COLLECTOR

DRAWN BY	DATE	DESIGNED, CHECKED BY	DATE	CHECKED BY	DATE
A. HAAK	5-17-88	K. WILLIAMS		K. Williams	2-26-90

PLANT	BLDG.	FLOOR	SCALE	CLASS
FMPC			NONE	

SUBMITTED FOR APPROVAL — A-E DATE 3/5/90

APPROVAL RECOMMENDED — OPER CONTRACTOR DATE 3/13/90

DRAWING APPROVED — DOE DATE 3/21/90

WBS CODE FOR INFORMATION ONLY				PROJECT NO.					REV. NO.
JEG PROJECT NO.	LEVEL 4	LEVEL 5	LEVEL 6	86-D-149	08X	3900	N	03075	2
01-8362-00	01	02	K111						

INDUSTRIAL WASTE DISPOSAL

APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HERETO ATTACHED