United States Nuclear Regulatory Commission Official Hearing Exhibit
In the Matter of: Entergy Nuclear Operations, Inc.
(Indian Point Nuclear Generating Units 2 and 3)
ASLBP #: 07-858-03-LR-BD01
Docket #: 05000247 | 05000286
Exhibit #: NYS000180-00-BD01 Identified: 10/15/2012
Admitted: 10/15/2012 Withdrawn:
Rejected: Stricken:
Other:

NYS000180
Submitted: December 16, 2011

Entergy

CORRECTIVE ACTION

LO-IP3LO-2008-00151

CA Number: 19

	Site	Group	Name
Assigned By:	IP3	ISE Project Mgmt IP3	Mayer,Donald M
Assigned To:	IP3	P&C Eng Component Mgmt IP3	Burroni,Richard J
Subassigned To :	IP3	P&C Eng Codes Staff IP3	Lee,Robert C

Originated By: Haynes,Harry 10/8/2008 05:38:00
Performed By: Azevedo,Nelson F 12/30/2008 11:00:08
Subperformed By: Lee,Robert C 12/30/2008 10:05:53
Approved By:
Closed By:

Current Due Date: 12/31/2008 **Initial Due Date:** 12/31/2008
CA Type: PERFORM CA
Plant Constraint: NONE

CA Description:

Document the actions taken and results determined in response to ISE Panel recommendation (R-7) to explore options for reducing the vulnerability of buried piping to the occurrence of any future unanticipated leak. Such options include excavating a few selected locations to confirm the presence of protective coating on the piping, as well as to measure and confirm the existence of sufficient wall thickness of the thus exposed piping using existing inspection techniques (Reference ISE Report page # 51)

Note: A copy if the ISE Report is attached to LO-IP3LO-2008-151

Response:

See sub response below.

Subresponse :

See attached CA #19 Response.

Closure Comments:

Attachments:

Subresp Description
CA #19 Response
Attach 1 - Buried Piping Assessment Methodology
Attach 2 - IP2 CST Inspection SItes
Attach 3A - IP2 Buried Piping Inspection Schedules
Attach 3B - IP3 Buried Piping Inspection Schedules

IPEC00161425

LO-IP3LO-2008-00151-CA-19 due on 29-DEC-08

Document the actions taken and results determined in response to ISE Panel recommendation (R-7) to explore options for reducing the vulnerability of buried piping to the occurrence of any future unanticipated leak. Such options include excavating a few selected locations to confirm the presence of protective coating on the piping, as well as to measure and confirm the existence of sufficient wall thickness of the thus exposed piping using existing inspection techniques (Reference ISE Report page # 51)

RESPONSE

The response to the ISE Panel recommendation regards buried piping, IPEC has completed the following actions:

1. Excavation and visual inspection of underground CST condensate piping
2. Determination of wall thickness at locations exhibiting degraded pipe coating
3. Soil sampling
4. Development of long term inspection plans for IPEC buried pipe.

These items are addressed below.

1. Excavation and visual inspection of underground condensate piping

IPEC performed excavations and inspections of the piping from the Unit 2 Condensate Storage Tank (CST) to the Auxiliary Feedwater Pump Building (AFPB) in October/November 2008. There are three underground pipe lines that run in parallel from the CST (El. 80 ft) to the AFPB (El. 15 ft):

- 12 inch Line 1505, Aux Feedwater Pumps suction line from the CST
- 8 inch Line 1509, CST condensate fill line
- 10 inch overflow line, to manhole #5

Lines 1505 and 1509 are carbon steel, schedule 40. These lines were deemed not to require cathodic protection during original plant design due to favorable soil resistivity and drainage characteristics. As a defensive against localized corrosion attack, however, Lines 1505 and 1509 are externally coated with coal tar enamel and have a coal tar enamel saturated felt overwrap. The overflow line (corrugated carbon steel pipe) has a coal tar enamel internal and external coating. These pipes are sloped from the CST elevation to the AFPB, and are each approximately 320-330 feet in length. The design drawings indicate a minimum of 5 feet of ground cover over the pipe. Actual excavation at the lower location, however, required going down to a depth of approx. 20 feet to uncover the piping.

The Lines 1505 and 1509 are safety related.

These lines were selected for inspection from among the buried piping at IPEC that is ranked as high priority based on the assessment of the piping's safety significance, potential radiological impact of a piping

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failure and impact on plant operations, and of the piping's corrosion risk. Specifically, the IP2 condensate system is a candidate to have tritiated water due to its interface with the feedwater system, and due to residual contamination associated with the steam generator tube rupture that occurred in 2000. Attachment 1 provides an overview of the assessment and ranking methodology.

These three underground piping lines were excavated at two locations. The first location was in the horizontal run of pipe near the base of the CST, hereafter referred to as the upper location. The second was at the approximate one-third point along it's sloped length, hereafter referred to as the lower location. Refer to Attachment 2.

At the upper location there were five areas of degraded external pipe coating. (Ref. Condition Report IP2-CR-2008-04754) These areas had only minimal surface corrosion.

Based on visual inspection of the upper location, except for these areas of the degraded coating, the pipe and coating appeared to be sound, with no additional areas of coating discoloration, separation, blistering, peeling, bubbling, etc.

At the lower location, there was one localized pipe coating failure, and what appeared to be coating damage to the overflow line (scraping of the coating on the upper crests on the corrugated pipe) suffered during the excavation itself. The localized coating failure was a linear circumferential discontinuity in the coating approx. 4-5 inches in length at the top of the 8" diameter pipe, with a small amount of corrosion product emanating from it. Based on the generally good appearance of the piping and the small amount of corrosion product, the coatings engineer did not recommend removing the coating for a ultrasonic determination of the pipe wall thickness.

2. Determination of wall thickness at locations with degraded pipe coating

At the locations of degraded pipe coating, the coating was removed to the bare metal to permit determination of the wall thickness using ultrasonic methods (UT).

The results of the UT's showed that the wall thicknesses were within the manufacturing tolerance of the nominal thickness. Based on these UT results, and of the visual inspections and results, it was determined that additional inspections were not required given the overall good condition of the inspected locations.

3. Soil sampling

Samples were periodically taken as the excavation progressed. The soil analysis did not indicate any extraordinary activity (only naturally occurring isotopes).

Detailed soil analysis was also performed to characterize the corrosive parameters of the soil. These results will be captured, and evaluated for possible impact on corrosion risk assessments performed to date.

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Limited soil resistivity measurements were taken by a Cathodic Protection contractor at the CST excavation areas, which resulted in average area readings slightly lower (more corrosive than had been assumed in the initial corrosion risk assessment for the inspected piping). However, as this piping is already part of the high impact and high inspection priority grouping, there is no impact on the schedule for future inspections of these lines, or on the associated re-inspection interval.

4. Development of long term inspection plans

As part of the IPEC Buried Piping and Tank Inspection and Monitoring Program, preliminary long term inspection plan schedules have been developed. Attachments 3 & 4.

While these schedules are subject to revision due to supplemental data collection and supplemental above ground surveys, schedule and resource optimization against system work windows, they capture the scope of the buried pipe inspection plan.

Attachments

1. Buried Piping impact assessment, corrosion risk ranking & inspection prioritization methodology
2. IP2 CST Underground Piping Excavations (Oct/Nov. 2008)

3a. Long Term Inspection Schedules - IP2
3b. Long Term Inspection Schedules - IP3

References:

Ultrasonic Testing Reports

1. IP2-UT-08-085 - 12" Line 1505-1 (Upper Excavation)
2. IP2-UT-08-086 - 12" Line 1505-2 (Upper Excavation)
3. IP2-UT-08-087 - 8" Line 1509-1 (Upper Excavation)
4. IP2-UT-08-088 - 8" Line 1509-2 (Upper Excavation)
5. IP2-UT-08-089 - 8" Line 1509-3 (Upper Excavation)
6. IP2-UT-08-091 - 10" Overflow Line (Upper Excavation)

Chemistry Soil Sampling

1. Sample # 19-Sep-2008-01018 9/19/08 @ 1300 hrs
2. Sample # 26-Sep-2008-01015 9/26/08 @ 1430 hrs
3. Sample # 10-Oct-2008-01018 10/10/08 @ 1200 hrs
4. Sample # 03-Nov-2008-01018 11/3/08 @ 1430 hrs

Condition Report

1. IP2-CR-2008-04754 - CST Buried Piping Degraded Pipe Coating

IPEC00161428

LO-IP3LO-2008-00151 CA#19, Attachment 1
IPEC BURIED PIPING IMPACT ASSESSMENT, CORROSION RISK RANKING AND INSPECTION PRIORITIZATION METHODOLOGY

The IPEC Buried Piping and Tank Inspection and Monitoring Program is being developed iaw EN-DC-343. The following is a summary of the methodology to develop inspection priorities and inspection intervals.

Once all buried piping systems are identified, they are assessed as having High, Medium or Low Impact, based on the consequences of a failure of the piping in the following areas:

- Safety (High = Nuclear Safety Related; Medium = Augmented Quality/Category M; Low = non-safety related)
- Public risk (High = potential radiological consequence; Medium = environment discharge or hazardous fluid; Low = non-contaminated, non-hazardous fluids)
- Economic impact of equipment failure on plant operation (High = >$1M; Medium = $100K - $1M; Low = <$100K.)

Table 1 presents the details for performing the impact assessment.

Using the impact assessment results, the High Impact systems are Corrosion Risk assessed with consideration of the following four (4) factors:

1. soil resistivity
2. drainage
3. material
4. coatings/cathodic protection.

Tables 2 and 3 present the details for performing the corrosion risk assessments. Corrosion risk assessments will be performed sequentially for the High, Medium and Low Impact systems.

In conjunction with the corrosion risk assessments, the inspection priorities for performing the initial inspections and subsequent inspection intervals are determined for each buried piping system in accordance with the Impact and Corrosion Risk assessments. Table 4 provides the guidance for scheduling these inspections.

Buried pipe inspection parameters will include:

- External pipe coating and wrap condition
- Pipe wall thickness degradation
- Cathodic protection effectiveness (if applicable)

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Table 1 – Impact Assessment

	High	Medium	Low
Safety (class per EN-DC-167)	Safety Related	Augmented QP and Fire Protection	Non-Safety Related
Public Risk	Radioactive Contamination e.g. Tritium	Chemical/Oil Treated System gases	Untreated Water, SW, Demin. Water
Economics (Cost of buried equipment failure to plant)	> $1M or potential shutdown	$100K - $1M	< $100K

Notes:

1. Any buried section with at least one High Impact gets an overall High Impact rating.
2. Any buried section with no High Impact rating but at least one Medium Impact rating gets an overall rating of Medium Impact.
3. Any buried section with all Low Impact ratings is to be rated as Low Impact.

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Table 2 - Corrosion Risk Assessment

Soil Resistivity, Ω-cm (Note 1)	Corrosivity Rating	Soil Resistivity Risk Weight
> 20,000	Essential Non-Corrosive	1
10,001 – 20,000	Mildly Corrosive	2
5,001 – 10,000	Moderately Corrosive	4
3,001 – 5,000	Corrosive	5
1,000 – 3,000	Highly Corrosive	8
< 1,000	Extremely Corrosive	10
Drainage		**Drainage Risk Weight**
Poor	Continually Wet	4.0
Fair	Generally Moist	2.0
Good	Generally Dry	1.0
Material		**Material Risk Weight**
Carbon and Low Alloy Steel		2.0
Cast and Ductile Iron		1.5
Stainless Steel		1.5
Copper Alloys		1.0
Concrete		0.5
Cathodic Protection	**Coating**	**CP/Coating Risk Weight**
No CP	No Coating	2.0
No CP	Degraded Coating	2.0
No CP	Sound Coating	1.0
Degraded CP	No Coating	1.0
Degraded CP	Degraded Coating	1.0
Degraded CP	Sound Coating	0.5
Sound CP	No Coating	0.5
Sound CP	Degraded Coating	0.5
Sound CP	Sound Coating	0.5

Note:
Soil resistivity measurements must be taken at least once per 10 years unless areas are excavated and backfilled or if soil conditions are known to have changed for any reason.

Table 3 – Corrosion Risk Tabulation

Corrosion Condition	Risk Weight Points
Soil Conditions	
Resistivity	1 -10
Drainage	1 - 4
Materials	
Material	0.5 - 2
Component Protection	
Cathodic Protection / Coating	0.5 - 2
Final Corrosion Risk Tabulation	
Multiply all weights together in steps 5.5 [2] (a) thru (d)	0.25 - 160

Corrosion Risk

High	61 – 160 points
Medium	30 – 60 points
Low	0 – 29 points

12/26/08

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Table 4 – Inspection Intervals vs. Inspection Priority

Impact – Corrosion Risk	Inspection Priority	Initial Inspection (years)	Inspection Interval (years)
High-High	High	5	8
High-Medium	High	5	8
Medium-High	High	5	8
High-Low	Medium	8	10
Medium-Medium	Medium	8	10
Low-High	Medium	8	10
Medium-Low	Low	10	15
Low-Medium	Low	10	15
Low-Low	Low	10	15

Notes:

1. High priority initial inspections shall be scheduled within 5 years. Subsequent high priority inspections shall be scheduled within 8 years thereafter.

2. Medium priority initial inspections shall be scheduled within 8 years. Subsequent medium priority inspections shall be scheduled within 10 years thereafter.

3. Low priority initial inspections shall be scheduled within 10 years. Subsequent low priority inspections shall be scheduled within 15 years thereafter.

4. Regardless of the above inspection schedule (Ref. EN-DC-343), compliance with IPEC LRA commitments prevail.

5. Once initial inspections are performed and conditions become known, a re-prioritization may maintain, decrease or increase a component future inspection priority.

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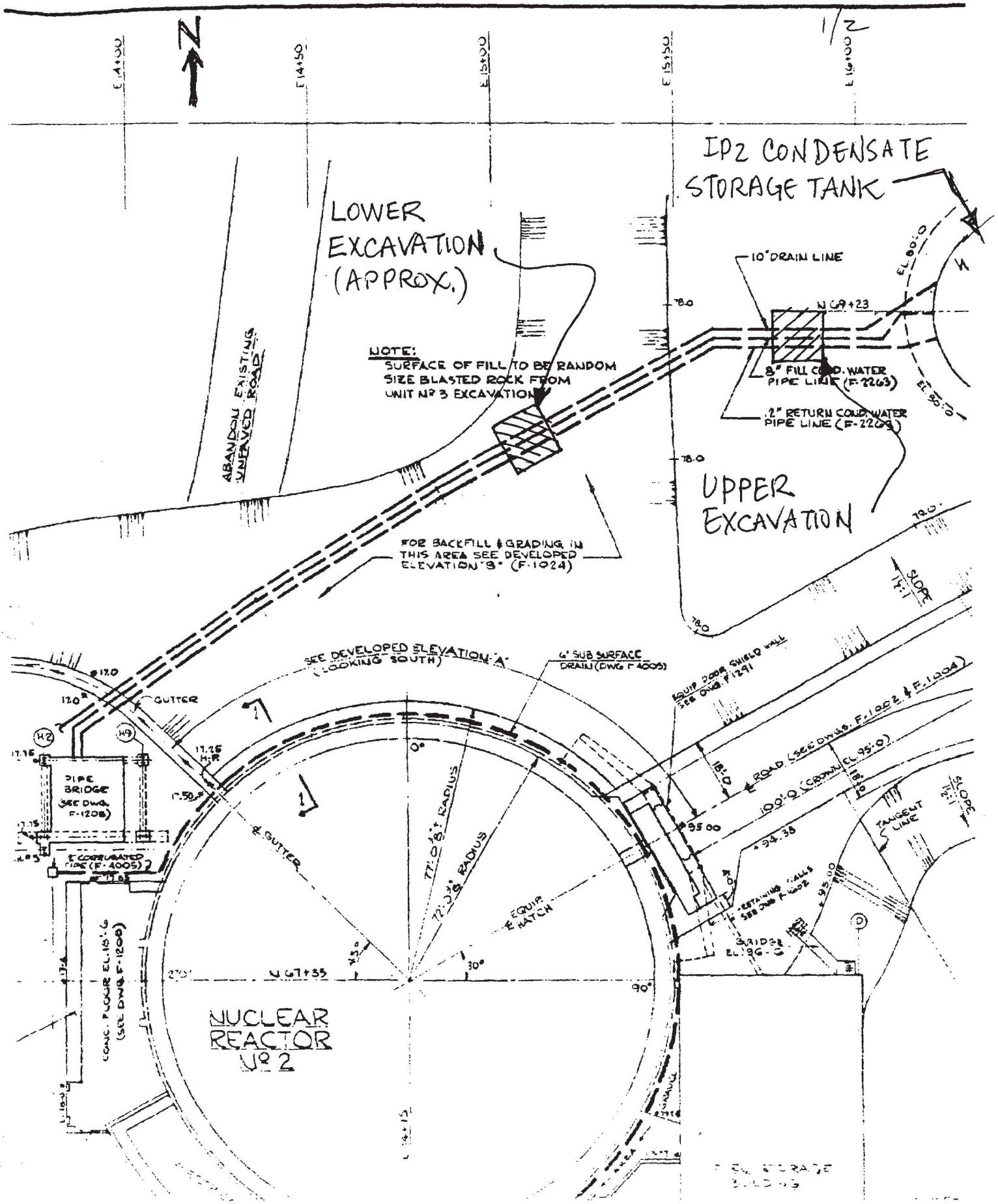
LO-IPSLO-2000-131 CA-14 ATTACH 2

1/2



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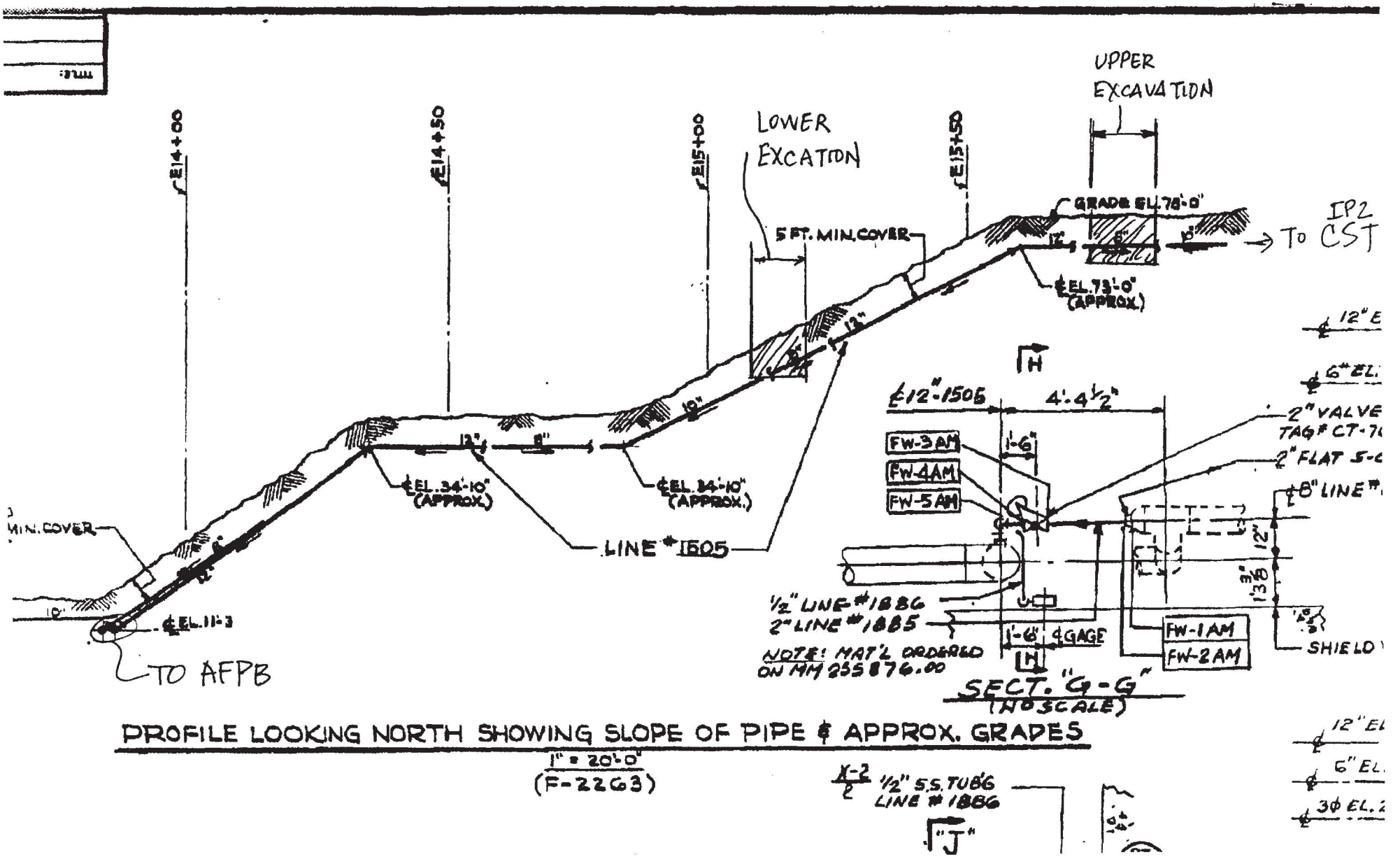
LO-IP3LO-2008-15 CA-19
ATTACH 2
2/2

LINES INSPECTED
12" LINE 1505
8" LINE 1509
10" OVERFLOW LINE (CORRUGATED METAL PIPE)



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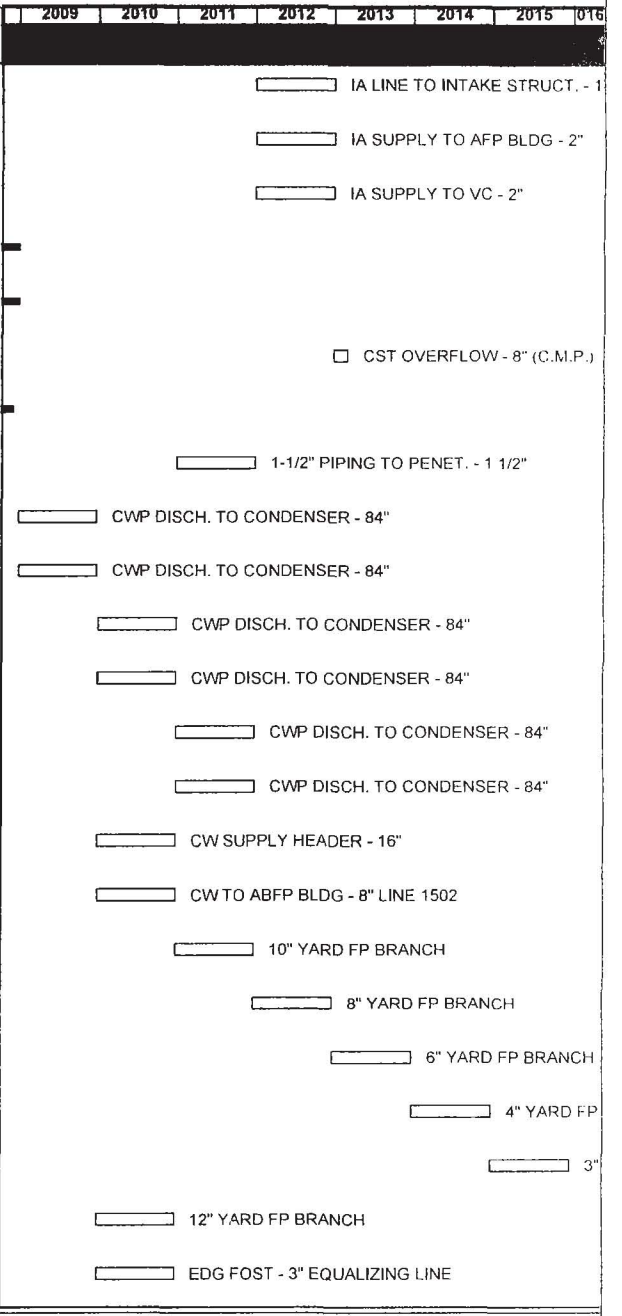
IPEC00161436

IP2 Buried Piping and Tanks Inspection and

Run date/time 12-08-08 14:58

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resource	Original Duration	Remaining Duration	RISK-A...	Priority
BP-21A-1	IA LINE TO INTAKE STRUCT. - 1 1/2"	01-01-12 00:00*	12-30-12 01:00	Not Started		8737h	8737h		
BP-21A-2	IA SUPPLY TO AFP BLDG - 2"	01-01-12 00:00*	12-30-12 01:00	Not Started		8737h	8737h		
BP-21A-3	IA SUPPLY TO VC - 2"	01-01-12 00:00*	12-30-12 01:00	Not Started		8737h	8737h		
BP-2AFW-1	CST TO AFWP SUCTION, 12" LINE 1505	10-01-08 00:00 A	12-31-08 01:00 A	Completed		2185h	0h		
BP-2AFW-2	CST INLET - 8" LINE 1509	10-01-08 00:00 A	12-31-08 01:00 A	Completed		2185h	0h		
BP-2AFW-3	CST OVERFLOW - 8" (C.M.P.)	01-01-13 00:00*	03-02-13 01:00	Not Started		1441h	1441h		
BP-2AFW-4	CST OVERFLOW - 10" (C.M.P.)	10-01-08 00:00 A	11-30-08 01:00 A	Completed		1441h	0h		
BP-2CPP-1	1-1/2" PIPING TO PENET. - 1 1/2"	01-01-11 00:00*	12-31-11 01:00	Not Started		8737h	8737h		
BP-2CW-1	CWP DISCH. TO CONDENSER - 84"	01-01-09 00:00*	12-31-09 01:00	Not Started		8737h	8737h		
BP-2CW-2	CWP DISCH. TO CONDENSER - 84"	01-01-09 00:00*	12-31-09 01:00	Not Started		8737h	8737h		
BP-2CW-3	CWP DISCH. TO CONDENSER - 84"	01-01-10 00:00*	12-31-10 01:00	Not Started		8737h	8737h		
BP-2CW-4	CWP DISCH. TO CONDENSER - 84"	01-01-10 00:00*	12-31-10 01:00	Not Started		8737h	8737h		
BP-2CW-5	CWP DISCH. TO CONDENSER - 84"	01-01-11 00:00*	12-31-11 01:00	Not Started		8737h	8737h		
BP-2CW-6	CWP DISCH. TO CONDENSER - 84"	01-01-11 00:00*	12-31-11 01:00	Not Started		8737h	8737h		
BP-2CWM-1	CW SUPPLY HEADER - 16"	01-01-10 08:00*	12-31-10 13:30	Not Started		2086h	2086h		
BP-2CWM-2	CW TO ABFP BLDG - 8" LINE 1502	01-01-10 08:00*	12-31-10 16:00	Not Started		2088h	2088h		
BP-2CWM-FP-2	10" YARD FP BRANCH	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-2CYM-FP-3	8" YARD FP BRANCH	01-01-12 00:00	12-31-12 01:00	Not Started		8761h	8761h		
BP-2CYM-FP-4	6" YARD FP BRANCH	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-2CYM-FP-5	4" YARD FP BRANCH	01-01-14 00:00	12-31-14 01:00	Not Started		8737h	8737h		
BP-2CYM-FP-6	3" YARD FP BRANCH	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-2CYW-FP-1	12" YARD FP BRANCH	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-2EDGFO-1	EDG FOST - 3" EQUALIZING LINE	01-01-10 00:00*	12-31-10 00:00	Not Started		8736h	8736h		



Engineering Design Change & Projects

IPEC00161436

IPEC00161437

016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040

[redacted]

1/2"

BRANCH

YARD FP BRANCH

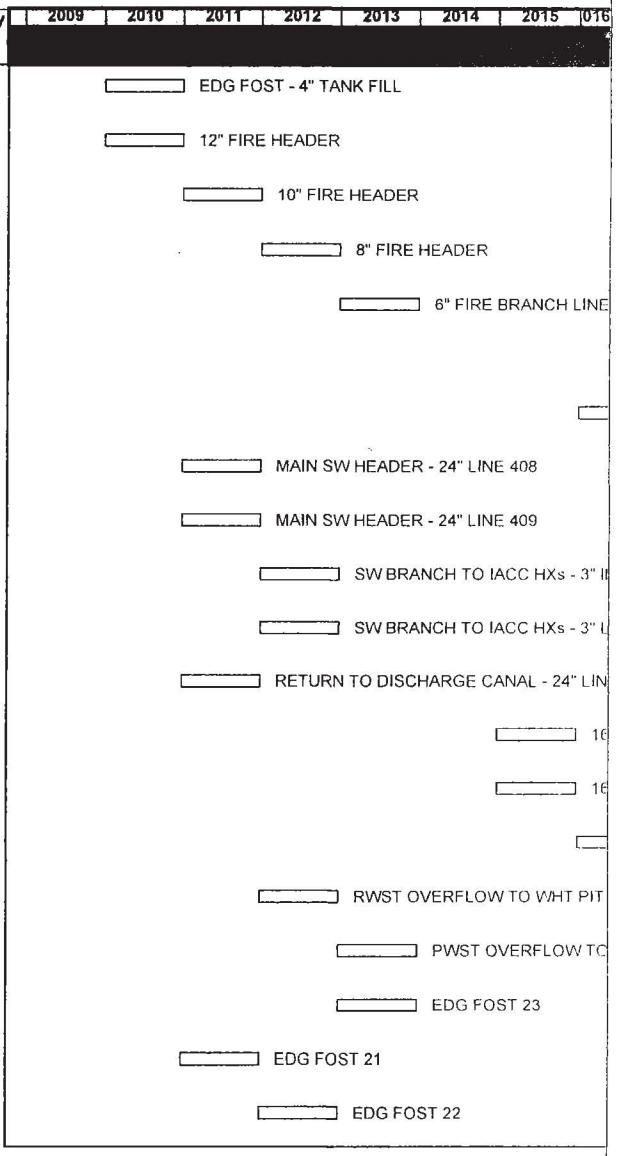
IPEC00161437

IPEC00161438

IP2 Buried Piping and Tanks Inspection and

Run date/time 12-08-08 14:58

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resource	Original Duration	Remaining Duration	RISK-A...	Priority
BP-2EDGFO-2	EDG FOST - 4" TANK FILL	01-01-10 00:00*	12-31-10 01:00	Not Started		8737h	8737h		
BP-2FP-1	12" FIRE HEADER	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-2FP-2	10" FIRE HEADER	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-2FP-3	8" FIRE HEADER	01-01-12 00:00	12-31-12 01:00	Not Started		8761h	8761h		
BP-2FP-4	6" FIRE BRANCH LINE	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-2SA-1	3" SA FROM TB TO AFP BLDG	01-01-18 00:00	12-31-18 01:00	Not Started		8737h	8737h		
BP-2SG-DGFO	SECURITY GENERATOR DG FUEL OIL	01-01-16 00:00	12-31-16 01:00	Not Started		8761h	8761h		
BP-2SW-1	MAIN SW HEADER - 24" LINE 408	01-01-11 00:00*	12-31-11 01:00	Not Started		8737h	8737h		
BP-2SW-2	MAIN SW HEADER - 24" LINE 409	01-01-11 00:00*	12-31-11 01:00	Not Started		8737h	8737h		
BP-2SW-3	SW BRANCH TO IACC HXs - 3" IINE 1704	01-01-12 00:00*	12-30-12 01:00	Not Started		8737h	8737h		
BP-2SW-4	SW BRANCH TO IACC HXs - 3" LINE 1705	01-01-12 00:00*	12-30-12 01:00	Not Started		8737h	8737h		
BP-2SW-5	RETURN TO DISCHARGE CANAL - 24" LINE 405	01-01-11 00:00*	12-31-11 01:00	Not Started		8737h	8737h		
BP-2SW-TB-1	16" SW LINE 1975	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-2SW-TB-2	16" SW LINE 1976	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-2SW-TB-3	10" SW LINE 410	01-01-16 00:00	12-31-16 01:00	Not Started		8761h	8761h		
BP-2WD-1	RWST OVERFLOW TO WHT PIT, 6" LINE 299	01-01-12 00:00*	12-30-12 01:00	Not Started		8737h	8737h		
BP-2WD-2	PWST OVERFLOW TO LINE 199 - 3"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BT-2EDG-FOST 23	EDG FOST 23	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BT-2EDG-FOST21	EDG FOST 21	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BT-2EDG-FOST22	EDG FOST 22	01-01-12 00:00	12-31-12 01:00	Not Started		8761h	8761h		



Engineering Design Change & Projects

IPEC00161438

IPEC00161439

IP2 Buried Piping and Tanks Inspection and

Run date/t. 12-08-08 14:5

016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040

3" SA FROM TB TO AFP BLDG

SECURITY GENERATOR DG FUEL OIL

NE 1704

INE 1705

E 405

" SW LINE 1975

" SW LINE 1976

10" SW LINE 410

6" LINE 299

LINE 199 - 3"

Engineering Design Change & Projects

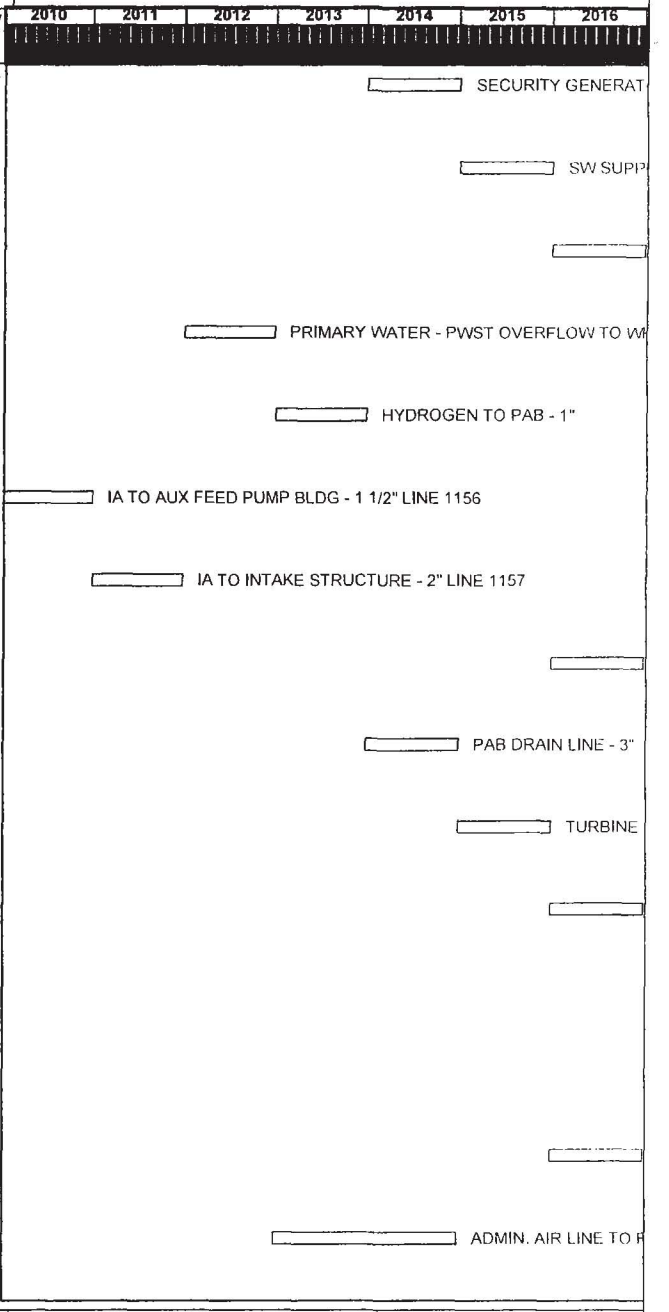
IPEC00161439

IPEC00161440

IP3 Buried Piping and Tanks Inspection and

Run date/time 12-09-08 07:46

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resou...	Original Duration	Remaining Duration	RISK-A...	Priority
BP-3SGDG-FO-1	SECURITY GENERATOR DG FULE OIL LINE - N/A"	01-01-14 00:00	12-31-14 01:00	Not Started		8737h	8737h		-4
BP-3SW-IACC-1	SW SUPPLY TO IACCWHXs - 3"	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-3SW-IACC-2	SW RETURN FROM IACCW HXs - 3"	01-01-16 00:00	12-31-16 01:00	Not Started		8761h	8761h		
BP-3PW-1	PRIMARY WATER - PWST OVERFLOW TO WHT PIT SUMP - 3"	01-01-12 00:00	12-31-12 01:00	Not Started		8761h	8761h		
BP-3HY-PAB	HYDROGEN TO PAB - 1"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3IA-AFBP-1	IA TO AUX FEED PUMP BLDG - 1 1/2" LINE 1156	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3IA-IS-1	IA TO INTAKE STRUCTURE - 2" LINE 1157	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3DDRN-PAB-1	PAB DRAIN LINE - 4"	01-01-16 00:00	12-31-16 01:00	Not Started		8761h	8761h		
BP-3DRN-PAB-2	PAB DRAIN LINE - 3"	01-01-14 00:00	12-31-14 01:00	Not Started		8737h	8737h		
BP-3DRN-TB-1	TURBINE BLDG DRAIN LINE - 4"	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-3DRN-DG-AFP-ET-1	DG, AFW ELECT TUNNEL DRAIN LINE - 4'	01-01-16 00:00	12-31-16 01:00	Not Started		8761h	8761h		
BP-3DRN-ET-1	ELECT TUNNEL DRAIN LINE - 6"	01-14-17 00:00	12-31-17 01:00	Not Started		8425h	8425h		
BP-3DRN-ET-2	ELECT TUNNEL DRAIN LINE - 8"	01-01-18 00:00	12-31-18 01:00	Not Started		8737h	8737h		
BP-3STP-1	SANITARY WASTE SEWAGE FROM LIFT STATION - 8"	01-01-16 00:00	12-31-16 01:00	Not Started		8761h	8761h		
BP-3AA-HSB/FPH-1	ADMIN. AIR LINE TO FIRE PUMP HOUSE 1 1/2"	01-01-13 00:00	12-31-14 01:00	Not Started		17497h	17497h		



Engineering Design Change & Projects

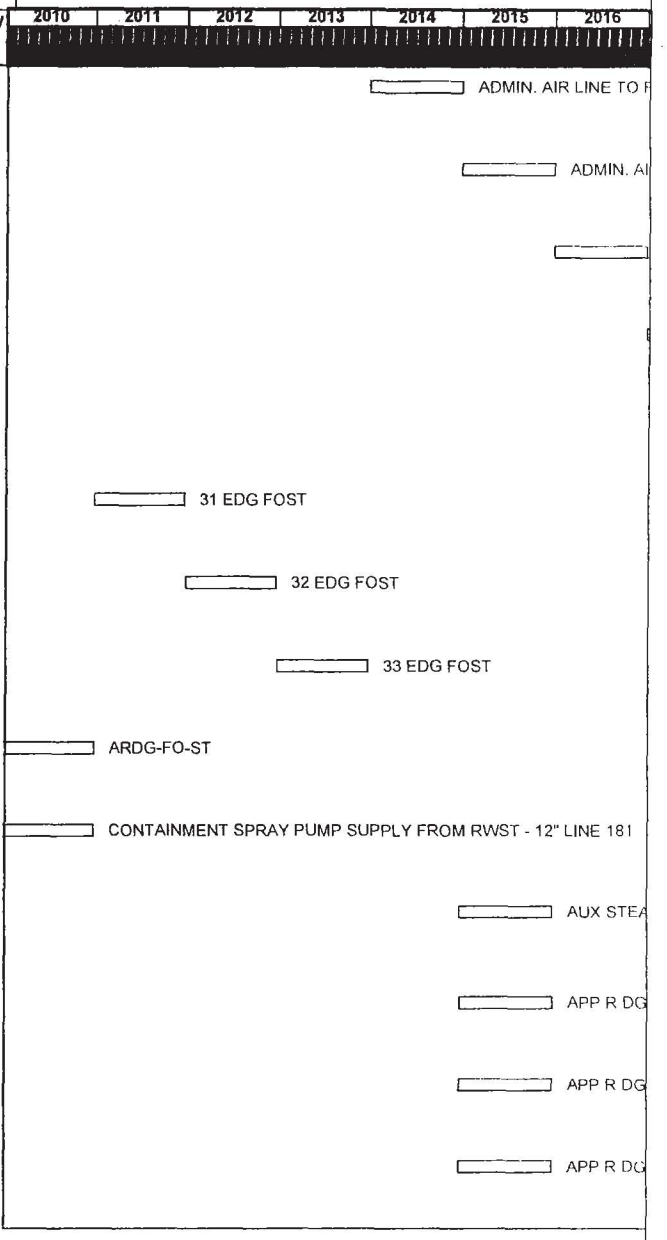
IPEC00161440

IPEC00161441

IP3 Buried Piping and Tanks Inspection and

Run date/time 12-09-08 07:46

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resou...	Original Duration	Remaining Duration	RISK-A...	Priority
BP-3AA-HSB/FPH-2	ADMIN. AIR LINE TO FIRE PUMP HOUSE - 1"	01-01-14 00:00	12-31-14 01:00	Not Started		8737h	8737h		
BP-3AA-RMS-1	ADMIN. AIR TO RAD. MACHINE SHOP - 1 1/2"	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-3AA-SA-TB-1	STATION AIR FROM TURB BLDG - 3"	01-01-16 00:00	12-31-16 01:00	Not Started		8761h	8761h		
BP-3DM-RAMS-1	DEMINERALIZED WATER TO RAMS BLDG - 2"	01-01-17 00:00	12-31-17 01:00	Not Started		8737h	8737h		
BP-3PWC-1	POTABLE WATER COLD - 2"	01-01-18 00:00	12-31-18 01:00	Not Started		8737h	8737h		
BT-3EDG31-1	31 EDG FOST	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BT-3EDG32-1	32 EDG FOST	01-01-12 00:00	12-31-12 01:00	Not Started		8761h	8761h		
BT-3EDG33-1	33 EDG FOST	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BT-3ARDG-FOST-1	ARDG-FO-ST	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3	CONTAINMENT SPRAY PUMP SUPPLY FROM RWST - 12" LINE 181	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3-7CW132-1	AUX STEAM SECTION BETWEEN UNITS 1 & 3 (REPLACED IN 2007 W/WATER SHEDDING INSULATION) - 8"	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-3-ARDG-FO-1	APP R DG FOST FILL LINE	01-01-15 00:00*	12-31-15 01:00	Not Started		8737h	8737h		
BP-3-ARDG-FO-2	APP R DG FOST SUPPLY TO DG	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-3-ARDG-FO-3	APP R DG FOST RET/VENT TO TANK	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		



Engineering Design Change & Projects

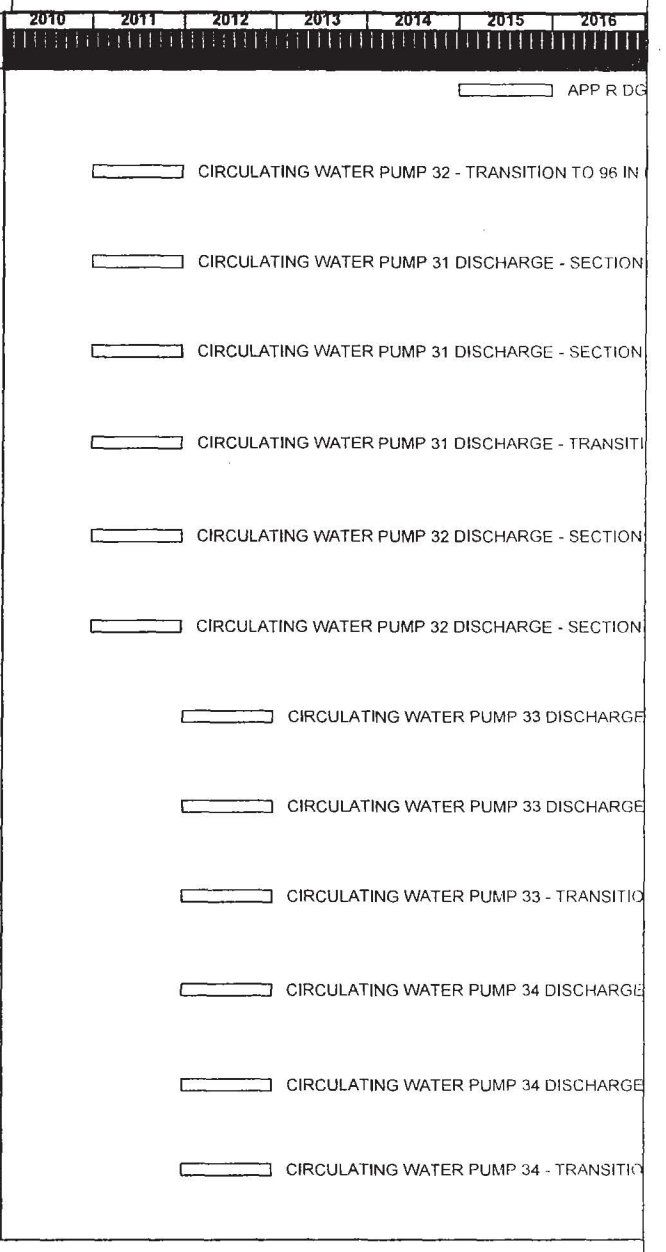
IPEC00161441

IPEC00161442

IP3 Buried Piping and Tanks Inspection and

Run date/ti 12-09-08 07:46

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resou...	Original Duration	Remaining Duration	RISK-A...	Priority
BP-3-ARDG-FO-4	APP R DG FOST TANK VENT	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		
BP-3-CW-32-3	CIRCULATING WATER PUMP 32 - TRANSITION TO 96 IN DIA & MITERED ELBOW INTO CONDENSER NECK - 96"	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3CW-31-1	CIRCULATING WATER PUMP 31 DISCHARGE - SECTION UPSTREAM OF DISCHARGE CANAL - 84"	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3CW-31-2	CIRCULATING WATER PUMP 31 DISCHARGE - SECTION DOWNSTREAM OF DISCHARGE CANAL - 84"	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3CW-31-3	CIRCULATING WATER PUMP 31 DISCHARGE - TRANSITION TO 96 IN DIA & MITERED ELBOW INTO CONDENSER NECK - 96"	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3CW-32-1	CIRCULATING WATER PUMP 32 DISCHARGE - SECTION UPSTREAM OF DISCHARGE CANAL - 84"	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3CW-32-2	CIRCULATING WATER PUMP 32 DISCHARGE - SECTION DOWNSTREAM OF DISCHARGE CANAL - 84"	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3CW-33-1	CIRCULATING WATER PUMP 33 DISCHARGE - SECTION UPSTREAM OF DISCHARGE CANAL - 84"	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3CW-33-2	CIRCULATING WATER PUMP 33 DISCHARGE - SECTION DOWNSTREAM OF DISCHARGE CANAL - 84"	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3CW-33-3	CIRCULATING WATER PUMP 33 - TRANSITION TO 96 IN DIA & MITERED ELBOW INTO CONDENSER NECK - 96"	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3CW-34-1	CIRCULATING WATER PUMP 34 DISCHARGE - SECTION UPSTREAM OF DISCHARGE CANAL - 84"	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3CW-34-2	CIRCULATING WATER PUMP 34 DISCHARGE - SECTION DOWNSTREAM OF DISCHARGE CANAL - 84"	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3CW-34-3	CIRCULATING WATER PUMP 34 - TRANSITION TO 96 IN DIA & MITERED ELBOW INTO CONDENSER NECK - 96"	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		



Engineering Design Change & Projects

IPEC00161442

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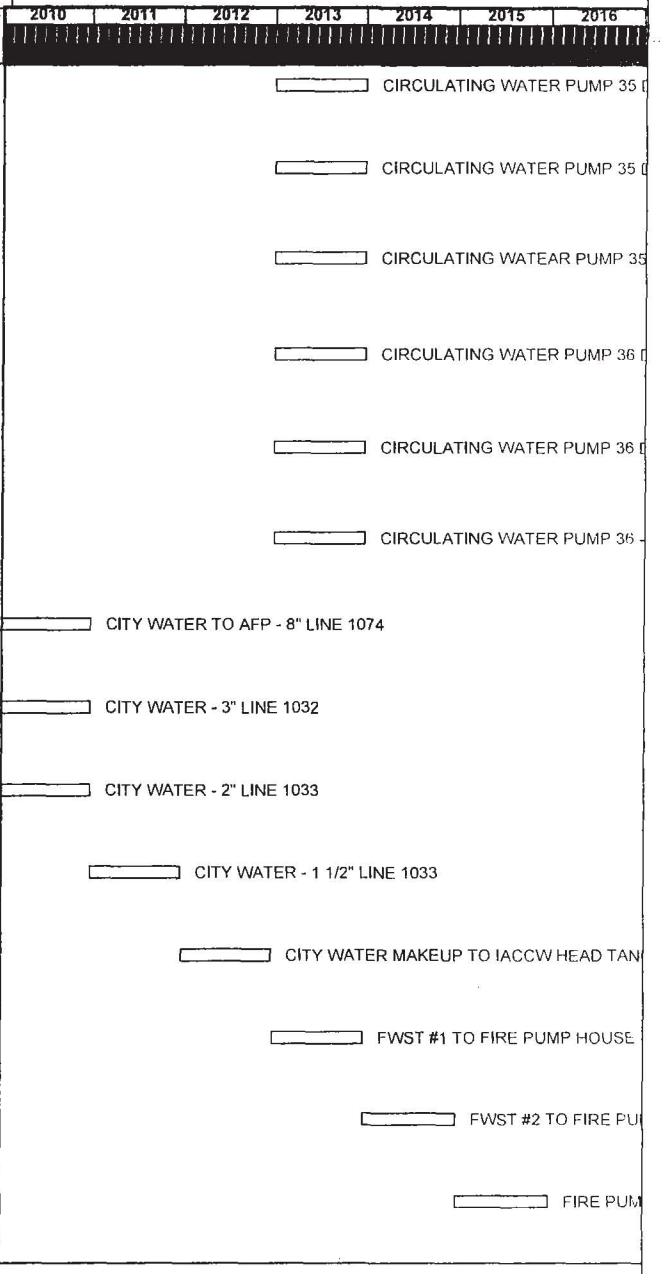
IP3 Buried Piping and Tanks Inspection and

Run date/time 12-09-08 07:46

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resou...	Original Duration	Remaining Duration	RISK-A...	Priority
BP-3CW-35-1	CIRCULATING WATER PUMP 35 DISCHARGE - SECTION UPSTREAM OF DISCHARGE CANAL - 84"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3CW-35-2	CIRCULATING WATER PUMP 35 DISCHARGE - SECTION DOWNSTREAM OF DISCHARGE CANAL - 84"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3CW-35-3	CIRCULATING WATEAR PUMP 35 - TRANSTION TO 96 IN DIA & MITERED ELBOW INTO CONDENSER NECK - 96"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3CW-36-1	CIRCULATING WATER PUMP 36 DISCHARGE - SECTION UPSTREAM OF DISCHARGE CANAL - 84"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3CW-36-2	CIRCULATING WATER PUMP 36 DISCHARGE - SECTION DOWNSTREAM OF DISCHARGE CANAL - 84"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3CW-36-3	CIRCULATING WATER PUMP 36 - TRANSITION TO 96 IN DIA & MITERED ELBOW INTO CONDENSER NECK - 96"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3CWM-1	CITY WATER TO AFP - 8" LINE 1074	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3CWM-1A	CITY WATER - 3" LINE 1032	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3CWM-2	CITY WATER - 2" LINE 1033	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3CWM-3	CITY WATER - 1 1/2" LINE 1033	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3CWM-4	CITY WATER MAKEUP TO IACCW HEAD TANK - 1" LINE 1203	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3CWM-5	FWST #1 TO FIRE PUMP HOUSE - 4"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3CWM-6	FWST #2 TO FIRE PUMP HOUSE - 4"	01-01-14 00:00	12-31-14 01:00	Not Started		8737h	8737h		
BP-3CWM-7	FIRE PUMP HOUSE TO AUX BLDG - 8"	01-01-15 00:00	12-31-15 01:00	Not Started		8737h	8737h		



Engineering Design Change & Projects

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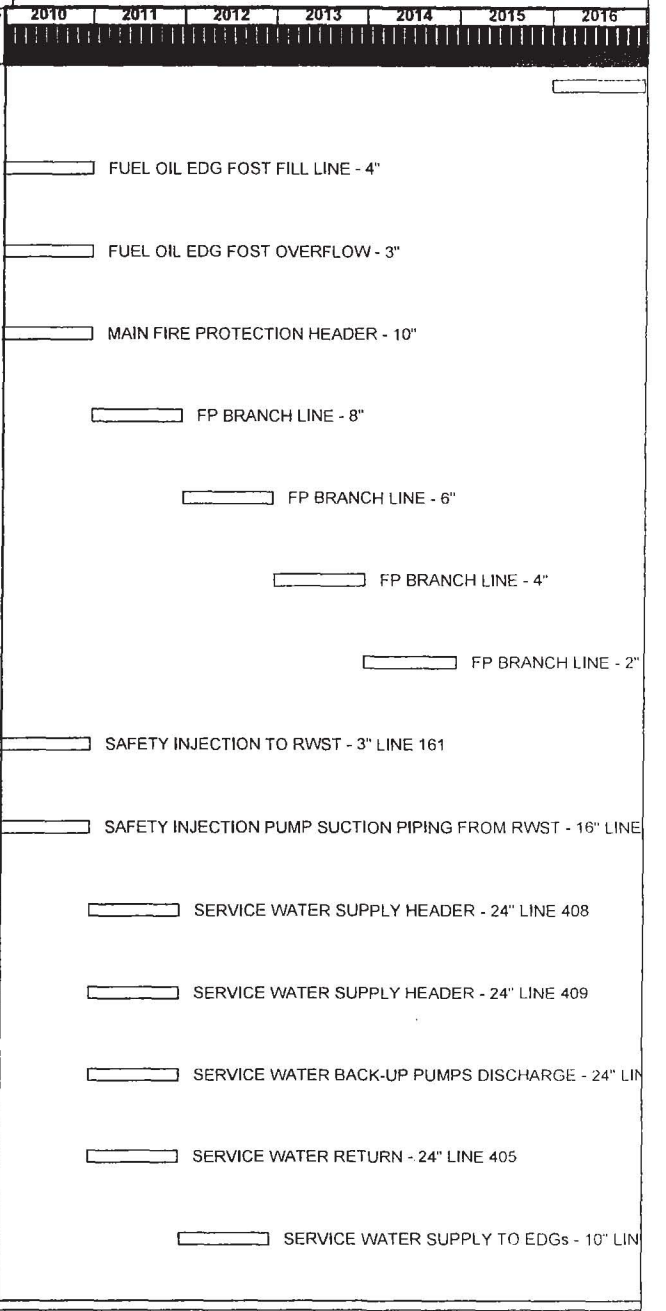
IP3 Buried Piping and Tanks Inspection and

Run date/time 12-09-08 07:46

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resou...	Original Duration	Remaining Duration	RISK-A...	Priority
BP-3CWM-8	CYM TO RAD MACH SHOP - 2"	01-01-16 00:00	12-30-16 01:00	Not Started		8737h	8737h		
BP-3EDGFO-1	FUEL OIL EDG FOST FILL LINE - 4"	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3EDGFO-2	FUEL OIL EDG FOST OVERFLOW - 3"	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3FP-1	MAIN FIRE PROTECTION HEADER - 10"	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3FP-2	FP BRANCH LINE - 8"	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3FP-3	FP BRANCH LINE - 6"	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3FP-4	FP BRANCH LINE - 4"	01-01-13 00:00	12-31-13 01:00	Not Started		8737h	8737h		
BP-3FP-5	FP BRANCH LINE - 2"	01-01-14 00:00	12-31-14 01:00	Not Started		8737h	8737h		
BP-3SI-1	SAFETY INJECTION TO RWST - 3" LINE 161	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3SI-2	SAFETY INJECTION PUMP SUCTION PIPING FROM RWST - 16" LINE 155	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		
BP-3SW-1	SERVICE WATER SUPPLY HEADER - 24" LINE 408	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3SW-2	SERVICE WATER SUPPLY HEADER - 24" LINE 409	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3SW-3	SERVICE WATER BACK-UP PUMPS DISCHARGE - 24" LINE 712	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3SW-4	SERVICE WATER RETURN - 24" LINE 405	01-01-11 00:00	12-31-11 01:00	Not Started		8737h	8737h		
BP-3SW-5	SERVICE WATER SUPPLY TO EDGs - 10" LINE 1093	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		



Engineering Design Change & Projects

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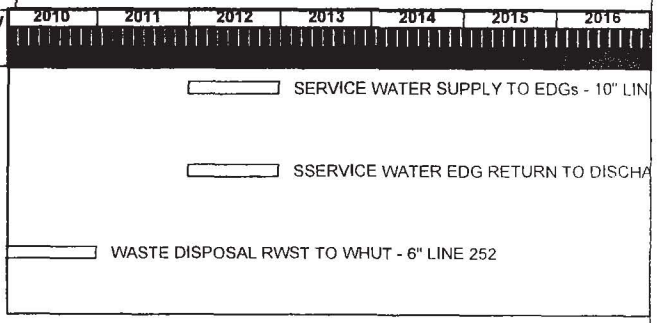
IP3 Buried Piping and Tanks Inspection and

Run date/time 12-09-08 07:46

Activity ID	Activity Description	Start	Finish	Activity Status	Primary Resou...	Original Duration	Remaining Duration	RISK-A...	Priority
BP-3SW-6	SERVICE WATER SUPPLY TO EDGs - 10" LINE 1099	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3SW-7	SSERVICE WATER EDG RETURN TO DISCHARGE - 10" LINE 1096	01-01-12 00:00	12-30-12 01:00	Not Started		8737h	8737h		
BP-3WD-1	WASTE DISPOSAL RWST TO WHUT - 6" LINE 252	01-01-10 00:00	12-31-10 01:00	Not Started		8737h	8737h		



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