

10486337

988

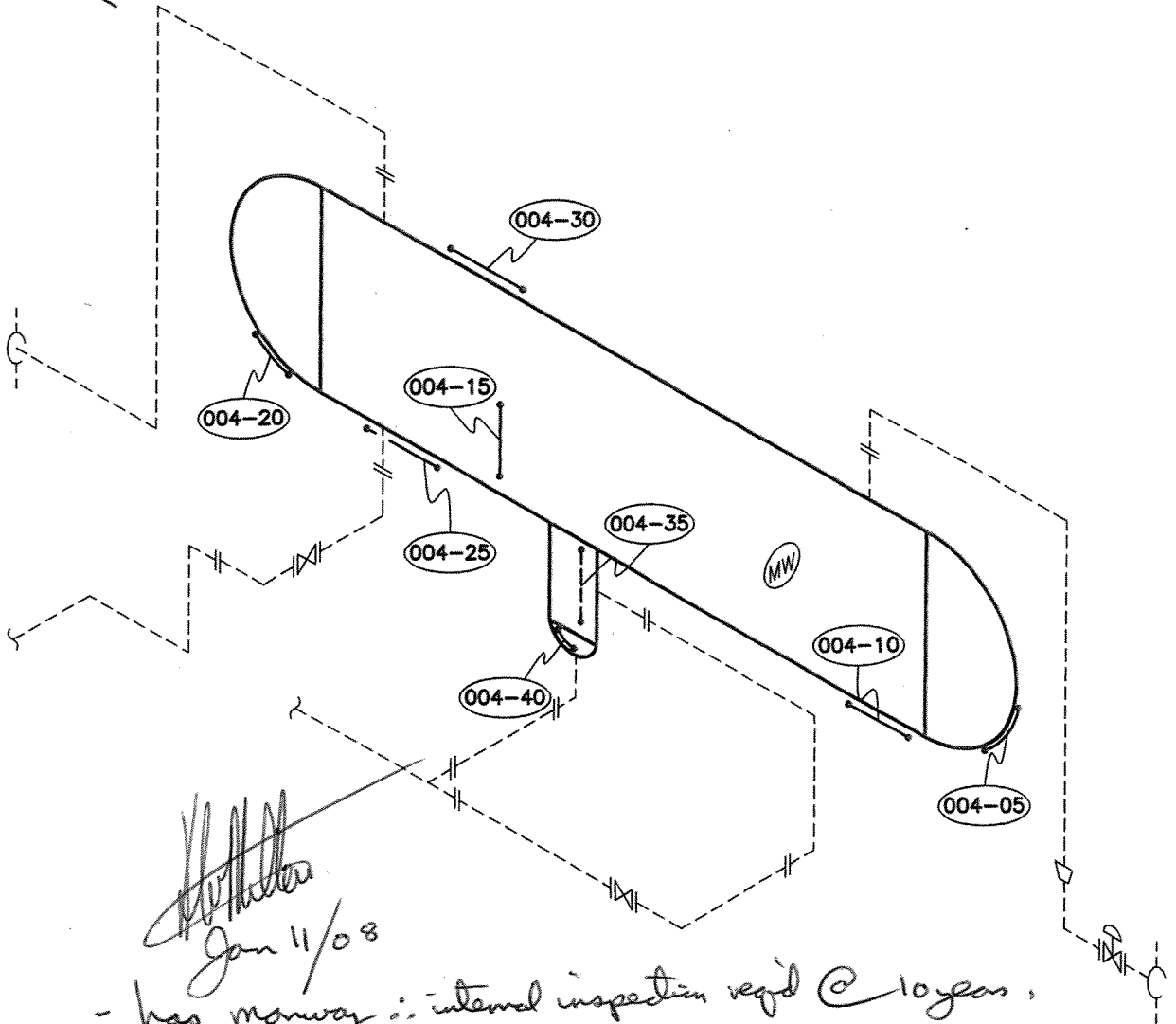
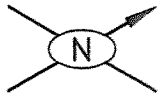
6617 2390

10697000

TEAM[®] Industrial Services

Inspection Services Canada

P&ID. # _____
REF. # _____



VESSEL DATA

P.E. No.	4292	Serial No.	C305A-HS1	Prov. Reg. No.	A3027949	C.R.N.	M6805.2
MFR.	RUSHTON/PENFABCO	Code/Div.	CA.062	Para	N/S	Code Stamp	UW
Yr. Blt.	1995	Manway	YES	Vessel Size	N/S	Service	SWEET
						PWHT	NO
						RT	RT-2
						Insulated	NO

Nominal Thickness & Material

Head:	N/S	Mat'l:	N/S	C.A.:	N/S
Head:					
Shell:	N/S		N/S		N/S
Shell:					
Chan Hd:					
Chan Sh:					
Boot Hd:					
Boot Sh:					

Natnl. Board# N/S

IMPERIAL OIL LTD.
BIGSTONE 04-16 COMPRESSOR STATION
LSD 04-16-060-22W5M

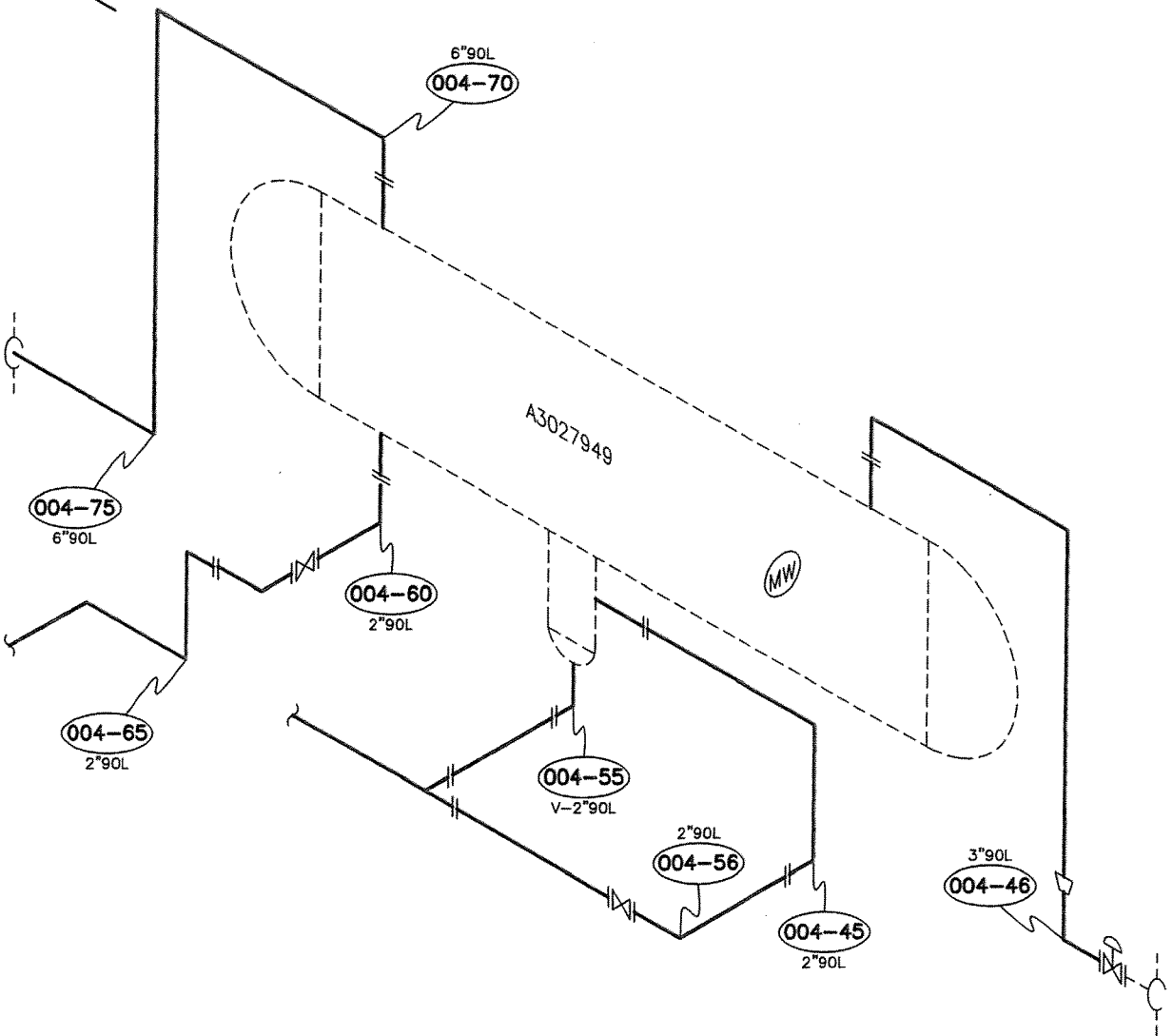
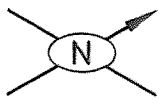
HORIZONTAL SEPARATOR

MAWP Shell Side 4964KPA @ Temp. 49°C
MAWP Tube Side @ Temp.

TECH.: S.J.	REV. DATE:	DWG DATE: 2007/10
CAD: A.Z.	REVISION:	DRAWING: 004

COMMENTS: _____

P&ID # _____
REF. # _____



PIPING DATA

THICKNESS MEASUREMENT LOCATION:	SIZE	PROC.	LINE #	SPEC.	SCH.	NOM. THK.	ASTM * CORR. ALLW. ** CALCULATED CORR. ALLW.	MIN. THK.	CAL. THK.	FLG. RATING
004-45/50/65	2"				80	0.217"	ASTM	0.191"		
004-46	3"				40	0.217"	ASTM	0.189"		
004-55	2"				80	0.437"	N/S	0.437"		
004-60	2"				160	0.343"	ASTM	0.301"		
004-70/75	6"				40	0.280"	ASTM	0.245"		

COMMENTS: _____

IMPERIAL OIL LTD.
BIGSTONE 04-16 COMPRESSOR STATION
LSD 04-16-060-22W5M

HORIZONTAL SEPARATOR PIPING

TECH.: S.J. REV. DATE: _____ DWG. DATE: 2007/10
CAD: A.Z. REVISION: _____ DRAWING: 004A

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: EAST BTM HEAD

TML: 004-05

Nominal:	1.000	C.A. as per	IOR	C.A. L.F.L.:	0.063	Con't Service:	YES
t Min.:	0.937		0.063	L.F.L.:	0.937	Insp. Intv.:	12
C.A. Calc.:	0.063		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	0.996	_____
	2	1.012	_____
	3	1.016	_____
	4	1.024	_____
	5	1.035	_____
	6	1.035	_____
	7	1.075	_____

Data Evaluation

Lowest Reading	:	0.996
Average - Low 3	:	1.008
Thk.Rem. Above LFL	:	0.059
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

Description: EAST BTM SHELL

TML: 004-10

Nominal:	1.000	C.A. as per	IOR	C.A. L.F.L.:	0.063	Con't Service:	YES
t Min.:	0.937		0.063	L.F.L.:	0.937	Insp. Intv.:	12
C.A. Calc.:	0.063		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	1.000	_____
	2	1.004	_____
	3	1.004	_____
	4	1.008	_____
	5	1.004	_____

Data Evaluation

Lowest Reading	:	1.000
Average - Low 3	:	1.003
Thk.Rem. Above LFL	:	0.063
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: MID SHELL

TML: 004-15

Nominal:	1.000	<u>C.A. as per</u>	IOR	C.A. L.F.L.:	0.063	Con't Service:	YES
t Min.:	0.937		0.063	L.F.L.:	0.937	Insp. Intv.:	12
C.A. Calc.:	0.063		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	1.024	_____
	2	1.020	_____
	3	1.020	_____
	4	1.020	_____
	5	1.020	_____
	6	1.020	_____

Data Evaluation

Lowest Reading	:	1.020
Average - Low 3	:	1.020
Thk.Rem. Above LFL	:	0.083
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: WEST BTM HEAD

TML: 004-20*

Nominal:	1.000	C.A. as per	IOR	C.A. L.F.L.:	0.063	Con't Service:	YES
t Min.:	0.937		0.063	L.F.L.:	0.937	Insp. Intv.:	12
C.A. Calc.:	0.063		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	0.984	_____
	2	0.984	_____
	3	1.000	_____
	4	1.008	_____
	5	1.008	_____
	6	1.020	_____
	7	1.028	_____
	8	1.047	_____

Data Evaluation

Lowest Reading	:	0.984
Average - Low 3	:	0.989
Thk.Rem. Above LFL	:	*0.047
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: BTM SHELL

TML: 004-25

Nominal:	1.000	C.A. as per IOR	C.A. L.F.L.:	0.063	Con't Service: YES
t Min.:	0.937	0.063	L.F.L.:	0.937	Insp. Intv. 12
C.A. Calc.:	0.063	07-03	Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2007-10

Data Readings	1	0.996	_____
	2	1.008	_____
	3	1.012	_____
	4	1.016	_____
	5	1.020	_____
	6	1.012	_____
	7	1.012	_____

Data Evaluation

Lowest Reading	:	0.996
Average - Low 3	:	1.005
Thk.Rem. Above LFL	:	0.059
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

Description: TOP SHELL E-W

TML: 004-30

Nominal:	1.000	C.A. as per IOR	C.A. L.F.L.:	0.063	Con't Service: YES
t Min.:	0.937	0.063	L.F.L.:	0.937	Insp. Intv. 12
C.A. Calc.:	0.063	07-03	Mths.To L.F.L.:		Add'l Assm't: YES

Survey Dates: 2007-10

Data Readings	1	1.012	_____
	2	1.012	_____
	3	1.012	_____
	4	1.016	_____
	5	1.020	_____
	6	1.020	_____

Data Evaluation

Lowest Reading	:	1.012
Average - Low 3	:	1.012
Thk.Rem. Above LFL	:	0.075
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: WATER BOOT SHELL

TML: 004-35

		<u>C.A. as per</u>					
Nominal:	0.587	IOR		C.A. L.F.L.:	0.063	Con't Service:	YES
t Min.:	0.524	0.063		L.F.L.:	0.524	Insp. Intv.	12
C.A. Calc.:	0.063	07-03		Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings			
1	0.594	_____	
2	0.591	_____	
3	0.591	_____	
4	0.591	_____	
5	0.594	_____	

Data Evaluation

Lowest Reading	:	0.591
Average - Low 3	:	0.591
Thk.Rem. Above LFL	:	0.067
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

Description: WATER BOOT HEAD

TML: 004-40

		<u>C.A. as per</u>					
Nominal:	0.646	IOR		C.A. L.F.L.:	0.063	Con't Service:	YES
t Min.:	0.583	0.063		L.F.L.:	0.583	Insp. Intv.	12
C.A. Calc.:	0.063	07-03		Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings			
1	0.740	_____	
2	0.713	_____	
3	0.638	_____	
4	0.657	_____	
5	0.669	_____	

Data Evaluation

Lowest Reading	:	0.638
Average - Low 3	:	0.655
Thk.Rem. Above LFL	:	0.055
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Comments:
 ASSUMED NOMINAL

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: 2"90L OUTLET

TML: 004-45

Nominal:	0.217	C.A. as per	IOR	C.A. L.F.L.:	0.090	Con't Service:	YES
t Min.:	0.127		0.063	L.F.L.:	0.127	Insp. Intv.:	12
C.A. Calc.:	0.090		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	0.213	_____
	2	0.217	_____
	3	0.213	_____
	4	0.217	_____
	5	0.220	_____

Data Evaluation

Lowest Reading	:	0.213
Average - Low 3	:	0.214
Thk.Rem. Above LFL	:	0.086
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Description: 3"90L OUTLET

TML: 004-46

Nominal:	0.217	C.A. as per	IOR	C.A. L.F.L.:	0.090	Con't Service:	YES
t Min.:	0.127		0.063	L.F.L.:	0.127	Insp. Intv.:	12
C.A. Calc.:	0.090		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	0.228	_____
	2	0.224	_____
	3	0.228	_____
	4	0.224	_____
	5	0.224	_____

Data Evaluation

Lowest Reading	:	0.224
Average - Low 3	:	0.224
Thk.Rem. Above LFL	:	0.097
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: VESSEL 2"90L DRAIN **TML: 004-55****

		C.A. as per				
Nominal:	0.437	IOR		C.A. L.F.L.:	0.118	Con't Service: YES Insp. Intv. 12 Add'l Assm't: YES
t Min.:	0.319	0.063		L.F.L.:	0.319	
C.A. Calc.:	0.118	07-03		Mths.To L.F.L.:		

Survey Dates: 2007-10

Data Readings			
	1	0.402	_____
	2	0.378	_____
	3	0.362	_____
	4	0.362	_____
	5	0.370	_____
	6	0.378	_____

Data Evaluation

Lowest Reading	:	0.362
Average - Low 3	:	0.365
Thk.Rem. Above LFL	:	**0.043
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Description: 2"90L DRAIN **TML: 004-60***

		C.A. as per				
Nominal:	0.343	IOR		C.A. L.F.L.:	0.106	Con't Service: YES Insp. Intv. 12 Add'l Assm't: YES
t Min.:	0.237	0.063		L.F.L.:	0.237	
C.A. Calc.:	0.106	07-03		Mths.To L.F.L.:		

Survey Dates: 2007-10

Data Readings			
	1	0.339	_____
	2	0.315	_____
	3	0.315	_____
	4	0.319	_____
	5	0.331	_____

Data Evaluation

Lowest Reading	:	0.315
Average - Low 3	:	0.316
Thk.Rem. Above LFL	:	*0.078
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: 2"90L DRAIN

TML: 004-65

Nominal:	0.217	<u>C.A. as per</u>	IOR	C.A. L.F.L.:	0.090	Con't Service:	YES
t Min.:	0.127		0.063	L.F.L.:	0.127	Insp. Intv.:	12
C.A. Calc.:	0.090		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	0.201	_____
	2	0.201	_____
	3	0.205	_____
	4	0.205	_____
	5	0.205	_____

Data Evaluation

Lowest Reading	:	0.201
Average - Low 3	:	0.202
Thk.Rem. Above LFL	:	0.074
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

Description: 6"90L INLET

TML: 004-70

Nominal:	0.280	<u>C.A. as per</u>	IOR	C.A. L.F.L.:	0.098	Con't Service:	YES
t Min.:	0.182		0.063	L.F.L.:	0.182	Insp. Intv.:	12
C.A. Calc.:	0.098		07-03	Mths.To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	0.291	_____
	2	0.291	_____
	3	0.291	_____
	4	0.287	_____
	5	0.295	_____
	6	0.299	_____
	7	0.299	_____

Data Evaluation

Lowest Reading	:	0.287
Average - Low 3	:	0.290
Thk.Rem. Above LFL	:	0.105
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	

IMPERIAL OIL LTD.
 BIGSTONE 04-16 COMPRESSOR STATION - (111)
 AREA #1 - (01)

AITEC (WESTERN) INC.

Item Desc.: HORIZONTAL SEPARATOR	Lsd: 04-16-060-22W5M
Prov. Reg.: A3027949	Equip. No.: 4292
	Ser. No.: C605A-HS1

Description: 6"90L INLET

TML: 004-75

Nominal:	0.280	C.A. as per	IOR	C.A. L.F.L.:	0.098	Con't Service:	YES
t Min.:	0.182		0.063	L.F.L.:	0.182	Insp. Intv.:	12
C.A. Calc.:	0.098		07-03	Mths. To L.F.L.:		Add'l Assm't:	YES

Survey Dates: 2007-10

Data Readings	1	0.280	_____
	2	0.283	_____
	3	0.283	_____
	4	0.287	_____
	5	0.291	_____
	6	0.299	_____
	7	0.303	_____

Data Evaluation

Lowest Reading	:	0.280
Average - Low 3	:	0.282
Thk.Rem. Above LFL	:	0.098
Indv. Short Term Rate (in/yr)	:	
Short Term Rate (in/yr)	:	
LongTerm Rate (in/yr)	:	