



LONE STAR PIPE TRACKING SYSTEM



PIPE TRACKING SYSTEM PRESENTATION



■ ONSHORE/OFFSHORE PIPE TRACKING TECHNOLOGY

■ LONE STAR PIPE TRACKING SYSTEM
REAL TIME WEB BASED TRACKING SYSTEM

■ MAINLINE & DOUBLE JOINT PIPE TRACKING TECHNOLOGY

■ WWW.PTIGROUP.US



PIPE TRACKING SYSTEM PRESENTATION



Developed Pipe Tracking System 2001
Refined & Updated

Incorporated PTS from the Pipe Mill Manufacture to the
Installation Phase Subsea - Utilized World Wide On
Several Pipeline Projects

Real Time Pipe Web Tracking System –
.Net System

Onshore/Offshore Pipe Tracking
Traceability

Multi User System

QAQC Inspection Process Incorporated

User Friendly

Online Server Storage System & FTP Site
Back Up

PDF Files & Excel Reporting System

Email Updates When Reports Generated

PIPE MILL

COATING STAGE

WELDER & PROCEDURE QUALIFICATION – PROCESS

FABRICATION OF INSTALLATION AIDS – & PIPELINE SPOOLS

LOAD OUT STAGE

PIPELINE INSTALLATION STAGE

REFERENCE ATTACHED EXAMPLE REPORTS

1307-PTI-P230-F-SP-0001

Gorgon project pipe numbering system specification

1307-PTI-P230-F-SP-0002

Gorgon project pipe tracking configuration parameters

1307-PTI-000-F-SG-002

Specification for pipe tracking data transfer and backup operations

1307-PTI-000-F-SP-009

Pipe tracking technical specification for laying contractor

1307-PTI-000-F-SP-019

Pipe tracking pre-construction test for laying contractor

The Lone Star Tracking System is design to track pipe from the mill manufacture to the installation stage sub sea. During each phase, quality reports are generated throughout each initial process.

Upon completion of each shift, reports & data will be logged and sync to the online web PTS for As-built documentation traceability & storage purposes. Once received via web these reports will be stored in the client login section then, will be distributed via email (local email address & blackberry's) to all Project Personnel/Clients every shift until the project is complete.

This allows constant communication between onshore/offshore project personnel in order to review daily production reporting.

- HISTORICAL DATABASE – PIPELINE PROJECTS – PER CLIENT
- LOGISTIC TOOL FOR USE BY PROJECT TEAM
- CONTAINS INFORMATION FROM:



- DATA FILES WITH SPECIFIED CONTENT ARE TRANSMITTED BETWEEN THE CONTRACTORS AND CENTRAL
- BASED ON UNIQUE IDENTIFICATION OF EACH PIPE WITH
 - EXAMPLE: PIPE NO: 84542151 HT: 8715110 LENGTH: 42.12
- IDENTIFICATION OF SUPPLIER, WALL THICKNESS AND SEQUENTIAL NUMBER
- BASED ON ASCII-FILES WITH A SPECIFIED CONTENT FOR EACH CONTRACTOR

PIPE NUMBER

HEAT NUMBER

PLATE NUMBER

CERTIFICATE
NUMBER

LENGTH AND
WEIGHT

PLATE PRODUCER

MATERIAL TEST DATA

HYDRO TEST

CHEMICAL TEST

TENSILE TEST

IMPACT TEST

MANUFACTURING
TOLERANCES

BEND TEST

ALL MPQT TESTS

ORIGINAL PIPE MILL
CERTIFICATES

SCANNED CERTIFICATES
IMPLEMENTED IN LSPTS

- During this stage PTI will inspect and track pipe that will be sent to the following locations
- Installation Aids Fabrication
- Welder/Procedure Qualification
- Spool & Riser Fabrication
- A procedure and will be implemented during these stages to ensure that pipe traceability is met
- Pipe that is cut will have the pipe data transferred or a label printed out from our bar code system applied to the pipe on several locations on the pipe – reference web site system
- PTI recommends that we utilize an inspector to monitor these phase's to implement the PTS

- Pipe number
- Heat number
- Pipe length
- Pipe weight
- Coating types
- Pipe coated weight
(total weight pipe + coating)
- Pipe negative weight
(buoyancy weight)
- Internal coating
- Anode type
- Anode weight
- Plate producer
- Pipe movement information
- Buckle arrestor
- MTR's

LOAD OUT TEAM

1 QAQC Manager – In House Manage QAQC Project Operations

- Manages Pipe Tracking Team Onshore/Offshore
- Technical Support for the Pipe Tracking Technology
- Communicates with project team regarding pipe traceability
- Interacts with client & load out team regarding all aspects of pipe load outs
- Assist project management team as a quality advisor

1 Superintendent & 1 Load Out Manager

- Manage Load out Facility
- Coordinate Logistics of Pipe Haulers or Cargo Barges & Tugs
- Interacts with Engineering Team Offshore – Regarding pipe load outs & traceability
- Coordinates with Coating Contractor regarding pipe movement & load outs
- Communicates with project team on daily progress regarding progress
- Updates Construction Barge on pipe hauler/cargo barges load outs – vessel movement
- Schedules load outs with all key dock employees when a vessel comes in for pipe load out
- Coordinate Logistics of pipe haulers or cargo barges & Tugs for fuel, water, etc...

Inspectors – 2 – 1 per shift

- Inspects pipes
- Checks for defects in pipes
- Signs off on paper work regarding pipe inspection
- Validates pipe data

PIPE TRACKERS – 2 – 1 PER SHIFT

- Verify pipe data on pipes
- Checks pipe length
- Data check pipe inventory against mill tally list
- Quarantine pipe if pipe data does not match mill data
- Interacts with Client regarding pipe tracking reports

OFFSHORE TEAM

- **1 Pipe Tracking Manager**
 - Monitor Pipe Tracking Team
 - Communicates with offshore engineering team, qaqc team & client – pipe tracking reports
 - Communicate with onshore pipe tracking team regarding pipe traceability
 - Monitor's DVR system - installation of pipes as they fall into the ML
 - Generates daily production reports
 - Communicates with onshore/offshore
- **2 Pipe Trackers – 1 Per Shift**
 - Records pipe#, length and heat # on ML tally sheet
 - Verify pipe info against Master Tally List
 - Quarantine pipe if pipe data does meet client specs
 - Interacts with Client regarding pipe tracking reports
 - Communicate with QAQC team, Barge Forman, Welding Forman regarding pipe tracking

THE SYSTEM UTILIZES THE LATEST TECHNOLOGY IN THE MARKET

- Pocket PCs
- Tablet PCs
- Pipe Inventory Control Management
- DVR Video Record Monitoring
- Real Time Web Based Reporting
- Mobile Printing Capabilities
- Installation Aid Traceability
- Welding Traceability
- ROW Traceability
- Survey Positioning Data Transfer
- Vessel Status Reporting
- Non-Conformance & Over Short & Damage Reporting
- UT & NDT Traceability
- Pipeline Installation Reporting
- Load Out Operation Reporting
- Pipe Mill-Material Traceability Generation
- Pipe Inspection Technology
- As-Built Documentation

- The Lone Star System is designed to manage the pipe inventory from the beach load out phase to the installation phase – At any point we can relay important info regarding inventory, load outs, vessel & pipe movements and accept and reject pipe. The LSPTS report allows the client to have control of the project and control the pipe inventory. This information is available for review on the web in real time.
- Receive master tally list from client
- Dolphin Deep Tally Example Spreadsheet
- Import tally list into the Lone Star Pipe Tracking System
- Run a query on tally data to make sure the data contains no abnormalities
- Print out import summary report for client – Regarding outcome findings
- Import Summary Report
- If the reports contain data errors, duplicate pipe #'s – A search will be made in the yard and the pipes will be flagged and set aside along with a OS&D report until further notice
- Import Errors Report
- Run QAQC system audit check - Quick run through of the system

Set up system administration section with client logos, barge info, cargo barge/pipe hauler names, load out facility info, employee users and project information

Admin Screen – View website system

Once this phase is complete, all load out pocket pc's will be synced with the system and all of the LSPTS onshore data will be uploaded

Import – View website system

Now the system will be ready to track & inspect pipe

Line Pipe Screen – View website system

- LSPTS Screen Shots – Onshore Tracking
- Pocket pc screen
- Screen shot pocket
- During the beginning of this process a report is also made in the system that monitors vessel status time of the cargo barge/pipe hauler, when it arrives and when it leaves the L/O Base and quantity of pipe onboard – This report is sent to all barge & project team personnel
- Vessel Status Report
- Pipe Shipment Status Report
- During the load out stage the pipe trackers recall the pipe & the inspectors will inspect the pipe to make sure they meet the client specs as they are loaded onto the cargo barge. If a pipe does not meet client specs, the pipe will be rejected and sent back to the yard and all parties are notified.

Pipe Trackers & Inspectors

Will track and inspect the pipe during the load out phase. A procedure will be provided to the team to ensure that all areas of inspections are met as well as for the recording of the pipe trace-ability record keeping. Two Pipe tracking methods will be in place during the onshore tracking phase

Manual Tracking

A load-out tally sheet will be used during this stage. The pipe tracker will record each pipe as it is loaded onto the cargo barge. This process will continue until the cargo barge is fully loaded. The pipe data will also be double checked with a Master Tally list assuring that the data being recorded is accurate

- Electronic Pipe Tracking
 - A pocket pc will be used during this phase with the entire inventory imported into the system and recalled when the pipe is loaded onto the cargo barge. Also the Lone Star PTS has incorporated a pipe inspection feature to ensure that every pipe that gets loaded onto the barge meets the client inspection specs. This feature is prompted as soon as the tracker enters in the pipe data.
- Record the data from the pipe prior to loading on the “Load Out Tally Sheet”,
- Perform the statistical inspections,
- Check recorded data against master tally provided by the Lone Star PTS,
- Answer question regarding pipe when needed,
- Relay tally information to the Pipe Tracking Supervisor at convenient intervals to ensure timely report generation,
- Ensure the required anode quantities are loaded,
- Report to Pipe Tracking Supervisor,
- Please note that the data being recorded is verified by using a Master Tally list, that the client has provided to the Pipe Tracking Team. This will ensure that the data being recorded is accurate and will eliminate errors. Once a cargo barge is loaded the pipe trackers will verify their data with the Shaw Corr Rep’s information.
- The Shaw Corr Rep will call out each pipe # and double check that his data is the same as the pipe trackers. If there are any issues with the pipe data they can double check the pipe on the barge and make changes to the tally reports, if needed with Supervisor approval. Once this has taken place and is finished, a cargo barge manifest is printed out for that load out and the barge is sent on its way to the construction barge. Using this method will ensure that all the data being recorded is accurate and contains no errors.

LOADOUT INSPECTION PROCESS

- Our pipe inspectors use the latest inspection tools (see below) during each process to ensure that Client specifications are being met. If specifications are not met, NCR's and OS&D reports will be generated and the pipes will be flagged, as rejected, and set aside.
- OS&D Pipe Report
- OS&D Log Report
- The Lone Star Pipe Tracking System, Pocket PC, has integrated inspection capabilities that will maintain accurate NCR's and OS&D reporting. All parties involved will be notified and a close-out report generated once the matter is resolved.

LISTED BELOW ARE P.T.I.'S INSPECTION TOOL LIST

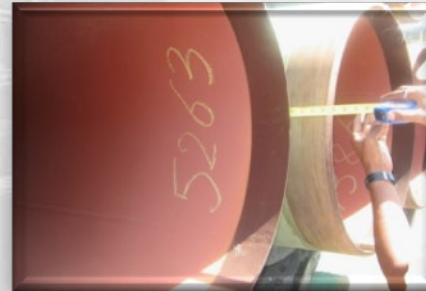
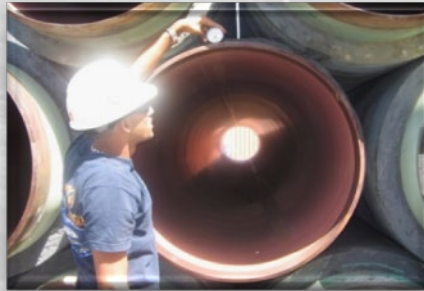
- Standard measuring tape
- Steel measuring tape, 50 ft. minimum length in 1/100' or laser for measuring lengths
- Gauss gauge, for magnetism checks
- External diameter tape
- 36 in. deep callipers
- 100 mm (6") callipers
- Go gauges
- Taut string or wire for straightness measurement
- Protractor

ONSHORE PIPE TRACKING PROCESS

- Onshore Inspection Pictures

- The Lone Star Pipe Tracking System, Pocket PC, has integrated inspection capabilities that will maintain accurate NCR's and OS&D reporting. All parties involved will be notified and a close-out report generated once the matter is resolved.

- Reference Web Based Pipe Tracking System



Once a load out is complete, the pocket pc's will be synced with the hub station and the internet and a manifest will be generated, then it is signed with the data exported on to a disc and is sent to the barge. The reports are also forward via internet to our PTS website for distribution to our clients and the barge – The website is also a storage server for as-built documentation – All documents are PDF'd and sent to our web server for retrieval

ONSHORE EXAMPLE SYSTEM REPORTS

DAILY PROGRESS REPORT

RETURN PIPES REPORT

LOAD OUT MANIFEST REPORT

ONSHORE OS&D LOG REPORT

PIPE SHIPMENT STATUS REPORT

ONSHORE DAILY PROGRESS REPORT

BUCKLE ARRESTOR INVENTORY REPORT

INSPECTED PIPES REPORT

ANODE INVENTORY REPORT

VESSEL STATUS INFO REPORT

- Listed below are the following reports sent daily to the barge personnel & project team
- Load out manifest, Vessel status report, Daily load out progress report – This keeps everyone in the loop and aware of what is happening at the load out base at all times.
- Daily communication is kept with the barge regarding pipe load outs, pipe inventory and the vessels movement status
- Load Out Daily Progress Report
- Vessel Status Report
- Pipe Inventory Report
- This process will continue until the pipeline reaches the target box location – Engineering team offshore will advise the number of load outs it will take to reach the desired footage
- The system will also keep track of the pipes returned back to base
- See pipe return report
- Return Pipes Report
- If a pipe is damaged during the transit period to the barge or rejected on the barge a OS&D report will be generated and sent back to the beach with the pipe
- The pipe will be inspected to see if it can be repaired or quarantine and set a side
- Examples of other onshore Lone Star Pipe Tracking Reports

- As laid number (sequence of pipe numbers)
- Pipe laid with anode or not
- PTS weld number (pipe number 1 + pipe number 2)
- Contractors weld number
- Weld and repair procedures (spts codes) used and weld repair position
- Lay barge (pts code)
- Laid length
- Cumulative length
- X-Ray reference number
- NDT reference number
- UT reference number
- MPI reference number
- VI reference number
- Laying origin point (pre-defined)
- Dates of installation and file update
- KP point in metres
- UTM northing coordinate (to be supplied by survey contractor and implicate in lay file)
- UTM easting coordinate (to be supplied by survey contractor and implicate in lay file)
- Lay depth in metres

- The cargo barge arrives along side the barge with the manifest & cd containing the pipe L/O data
- The offshore system will automatically get updated with the all data from the web based system or L/O imported manually and ready for the installation construction process
- The pipe tracker will be positioned at the bead stall ready to track the pipe as it falls into the ML
- Every shift a daily production report will be generated
- ML Installation Report – Reference Reports
- Hand written tally's will be used during the offshore tracking phase and filed on a per shift basis
- DVR – Video Record System will be installed on the ML & Pipe Loading Rack – This system records every shift through out the entire pipeline project

The Pipe Tracking system designed to be a stand-alone operating system. Online vs Non Online – It has a unique feature that will allow the user to add the data to the PTS via web by one click of the button.

The data retrieved from the hand written tally will be passed on to the Pipe Tracking Supervisor and he in return will enter the data into the system and generate a report for each shift.

If the Laptop system goes down – A back up excel version system is in place to keep the system running and has the same style of report generation as the other systems. A hand tally written method will also be in place during this stage.



AS-BUILT
DATA

UTM-
COORDINATES
OF EACH WELD

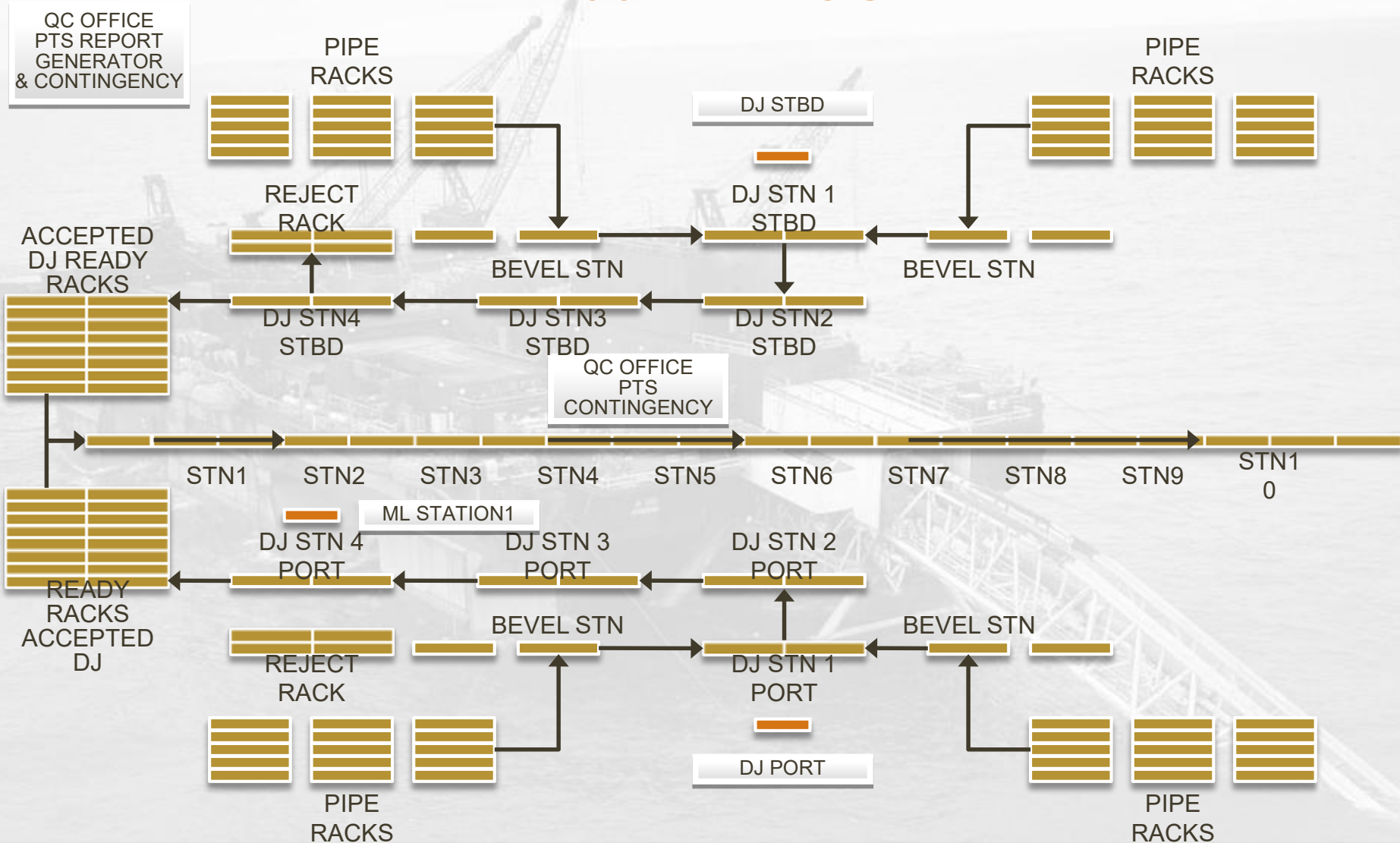
KP-POINT
OF EACH
WELD

AS-LAYED
NUMBER

LAY
DEPTH IN
METRE

PIPE TRACKING ON A DOUBLE JT BARGE

LB200 – LAYOUT



PIPE TRACKING ON THE WEB



- Engineering communication from onshore/offshore is important to this operation, please see attached emails
- Reference Example Reports
- Reference PTS System
- A final inventory report will be generated from onshore & offshore and submitted to the client for as-built dossier
- Daily ML shift reports will be generated and submitted via internet to our PTI website for distribution to our clients after every shift
- After each section is laid, a section spreadsheet will be generated for the Onshore Project team to review
- As-Built Report
- NGC Built Tally Report
- Once the pipeline has been laid all as-built documents will be handed over to the client for as-built dossier requirements
- Examples of other offshore pipeline tracking report generated by the Lone Star Pipe Tracking System
- OS&D Pipe Report
- OS&D Log Report
- Barge Inventory Report
- Import Summary Report
- Installation Report

OFFSHORE PIPELAY
REPORTS

ONSHORE LOADOUT
REPORTS

PIPE MILL REPORTS

COATING REPORTS

PIPE TRANSIT REPORTS –
SPOOL FAB & WELDER QUAL

REMAINING PIPE
INVENTORY REPORTS
ONSHORE/OFFSHORE



Anode Inventory Report

Client: Pemex **Date:** 11/21/2007
Project: Marsopa Pipeline Project **Contractor:** Horizon Offshore
Project Desc: 20" Pipeline **Project number:** Marsopa

Pipe/ Component No	Heat No.	Length	Anodes	Dia.	Coating ID	Type Coating	Thick.	Coat. Concr.	Coat. Gen. CO	Result	Comments
3	171470	12.79	<input type="checkbox"/>	20	30183	Concrete/Fbe	0.438	2.25	100	NA	
118	171387	12.35	<input type="checkbox"/>	20	30105	Concrete/Fbe	0.438	2.25	100	NA	
104	171379	12.18	<input type="checkbox"/>	20	30183	Concrete/Fbe	0.438	2.25	100	NA	
121	171385	12.05	<input type="checkbox"/>	20	30198	Concrete/Fbe	0.438	2.25	100	NA	
19	171377	12.48	<input type="checkbox"/>	20	30195	Concrete/Fbe	0.438	2.25	100	ACCEPTED	
48	171484	12.74	<input type="checkbox"/>	20	30183	Concrete/Fbe	0.438	2.25	100	NA	
36	171484	12.11	<input type="checkbox"/>	20	30181	Concrete/Fbe	0.438	2.25	100	NA	
117	171387	12.2	<input type="checkbox"/>	20	30191	Concrete/Fbe	0.438	2.25	100	NA	
102	171376	12.21	<input type="checkbox"/>	20	30183	Concrete/Fbe	0.438	2.25	100	NA	
20	171376	12.27	<input type="checkbox"/>	20	30182	Concrete/Fbe	0.438	2.25	100	NA	
41	171404	12.75	<input type="checkbox"/>	20	30183	Concrete/Fbe	0.438	2.25	100	ACCEPTED	

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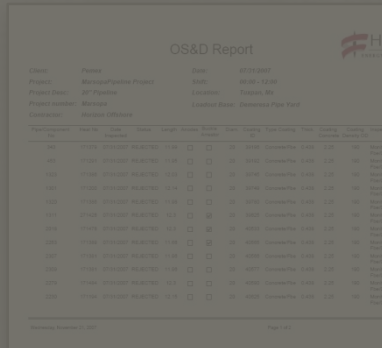
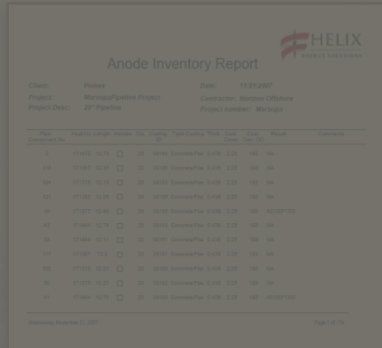
FIRST PAGE

Pipe/ Component No	Heat No.	Length	Anodes	Dia.	Coating ID	Type Coating	Thick.	Coat. Concr.	Coat. Gen. CO	Result	Comments
Signatures: <hr/> PTC Rep. <hr/> Client Rep.											
Total Coils: 3193 Total Footage: 39,891.95 Total Anodes: 144 Total Anodes Shipped: 2444 Left Anodes: 105											

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Main Line Installation Report

Client: Spectra Energy **Barge:** Lone Star Horizon
Project: Northeast Gateway Pipeline Project **Date:** 12/5/2007
Project Desc: 24" Pipeline **Shift:** 00:00 - 12:00
Project number: E-8751a **Contractor:** Horizon Offshore
Section Desc: DEMO

Joint No	Pipe Comp. No	Inst No	Weld No	Anod.	BA	Pipe Length	UT/NET No	Dia.	Date Welded	Repair Cabout	Weld Codes	Comments
0	101405	4567063		N	N	43.9	TH-UT-00	20	12/05/07	NA	GGHHTLU	INT HEAD - INSTALLED
1	1021	71751	1	N	N	43.1	TH-UT-001	24	12/05/07	NA	GGHHTLU	1ST PRODUCTION WELD
2	1030	71755	2	N	N	42.1	TH-UT-002	24	12/05/07	NA	GGHHTLU	
3	1058	62828	3	N	N	43.1	TH-UT-003	24	12/05/07	NA	GGHHTLU	
4	1071	62825	4	N	N	43.2	TH-UT-004	24	12/05/07	Repair	GGHHTLU	REPAIR WAS MADE ON THIS WELD - SEE AUT REPORT FOR RADD INFO
5	1113	71751	5	N	N	43.1	TH-UT-005	24	12/05/07	NA	GGHHTLU	END OF SHFT.

	Anodes Installed	BA Installed	Mainline Weld Count	Repairs	Accum Length	Total Length
Shift:	0	0	5	1	241.00	241.00
Overall:	0	0	5	1	241.00	241.00

Signatures: _____
Client Rep
QA/QC Rep
PTC Rep

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Daily Load Out Progress Report

Client: Pemex
Project: Marsopa Pipeline Project
Project Desc: 20" Pipeline
Project number: Marsopa
Date: 11/21/2007
Contractor: Horizon Offshore
Location: Tuxpan, Mx

Shift	Load Out #	Date	Vessel	Diameter	Coating	Plain Anode	BA	Total Pipes Loaded	Sub-Total Footage Mts	Fts	Rejected Pipe Total	Rejected Pipe Footage Mts	Fts	Total Pipes Returned
00:00 - 12:00														
	12	8/14/2007	JMC 42 Report # 12	20	Concrete/Fbe	100	11	3	204	730.3	2454	0	0	0
	11	8/13/2007	U 801 Report # 11	20	Concrete/Fbe	191	11	2	204	740	2407	1	3,021	12,07
	10	8/10/2007	JMC 50 Report # 10	20	Concrete/Fbe	189	12	3	204	740.3	2488	0	0	0
	9	8/8/2007	JMC 182 Report # 9	20	Concrete/Fbe	191	11	2	204	743.8	2480	0	0	0
	8	8/8/2007	JMC 47 Report # 8	20	Concrete/Fbe	190	11	3	204	741.0	2470	0	0	0
	7	8/8/2007	U 801 Report # 7	20	Concrete/Fbe	191	11	2	204	741.3	2471	0	0	0

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Shift	Load Out #	Date	Vessel	Diameter	Coating	Plain Anode	BA	Total Pipes Loaded	Sub-Total Footage Mts	Fts	Rejected Pipe Total	Rejected Pipe Footage Mts	Fts	Total Pipes Returned	
	6	8/6/2007	CBC 700 Report # 6	20	Concrete/Fbe	196	0	1	197	716.1	2387	0	0	0	
	5	7/28/2007	JMC 50 Report # 5	20	Concrete/Fbe	244	11	0	255	930.8	3103	20	106.16	360.52	
	5	7/28/2007	JMC 50 Report # 5	20	Concrete	244	11	0	255	930.8	3103	20	106.16	360.52	
	4	7/17/2007	JMC 182 Report # 4	20	Concrete/Fbe	141	12	0	153	552.7	1842	0	0	0	
	3	7/16/2007	U 801 Report # 3	20	Concrete/Fbe	193	11	0	204	738.8	2483	0	0	0	
	2	7/5/2007	CBC 700 Report # 2	20	Concrete/Fbe	194	13	0	207	752.3	2508	15	54.00	182.2	
	1	7/3/2007	JMC 47 Report # 01	20	Concrete/Fbe	190	14	0	204	742.0	2473	0	0	0	
12:00 - 24:00															
	2	7/5/2007	CBC 700 Report # 2	20	Concrete/Fbe	194	13	0	207	752.3	2508	15	54.00	182.2	
TOTAL						2738	152	16	2006	10560	35210	80	323.3	1078	6

Signatures:

PTC Rep.

Client Rep.

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OS&D Report



Client: Pemex
Project: Marsopa Pipeline Project
Project Desc: 20" Pipeline
Project number: Marsopa
Contractor: Horizon Offshore

Date: 07/31/2007
Shift: 00:00 - 12:00
Location: Tuxpan, Mx
Loadout Base: Demerisa Pipe Yard

Pipe/Component No	Heat No	Date Inspected	Status	Length	Anodes	Busks/Anodes	Diem.	Coating ID	Type Coating	Thick.	Coating Concrete Density	Coating Density CO	Inspection Comments
343	171376	07/31/2007	REJECTED	11.66	<input type="checkbox"/>	<input type="checkbox"/>	20	32456	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
453	171261	07/31/2007	REJECTED	11.66	<input type="checkbox"/>	<input type="checkbox"/>	20	30450	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
1328	171380	07/31/2007	REJECTED	12.03	<input type="checkbox"/>	<input type="checkbox"/>	20	30740	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
1301	171200	07/31/2007	REJECTED	12.14	<input type="checkbox"/>	<input type="checkbox"/>	20	30740	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
1320	171389	07/31/2007	REJECTED	11.99	<input type="checkbox"/>	<input type="checkbox"/>	20	32750	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
1344	271428	07/31/2007	REJECTED	12.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	30825	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2018	171478	07/31/2007	REJECTED	12.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	40658	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2258	171369	07/31/2007	REJECTED	11.69	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	42666	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2267	171391	07/31/2007	REJECTED	11.99	<input type="checkbox"/>	<input type="checkbox"/>	20	42698	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2360	171281	07/31/2007	REJECTED	11.66	<input type="checkbox"/>	<input type="checkbox"/>	20	40637	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2270	171481	07/31/2007	REJECTED	12.3	<input type="checkbox"/>	<input type="checkbox"/>	20	40660	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2239	171194	07/31/2007	REJECTED	12.19	<input type="checkbox"/>	<input type="checkbox"/>	20	40625	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam

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Pipe/Component No	Heat No	Date Inspected	Status	Length	Anodes	Busks/Anodes	Diem.	Coating ID	Type Coating	Thick.	Coating Concrete Density	Coating Density CO	Inspection Comments
2214	171167	07/31/2007	REJECTED	12.81	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	40637	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2588	271428	07/31/2007	REJECTED	12.28	<input type="checkbox"/>	<input type="checkbox"/>	20	40678	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2311	171301	07/31/2007	REJECTED	11.66	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	40690	Concrete/Fbe	0.430	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2386	171261	07/31/2007	REJECTED	12.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	40696	Concrete/Fbe	0.430	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2740	171261	07/31/2007	REJECTED	12.22	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	40696	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2710	171886	07/31/2007	REJECTED	11.60	<input type="checkbox"/>	<input type="checkbox"/>	20	40658	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2809	171463	07/31/2007	REJECTED	12.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	41028	Concrete/Fbe	0.430	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2746	271428	07/31/2007	REJECTED	12.61	<input type="checkbox"/>	<input checked="" type="checkbox"/>	20	41057	Concrete/Fbe	0.430	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2614	271407	07/31/2007	REJECTED	11.66	<input type="checkbox"/>	<input type="checkbox"/>	20	41058	Concrete/Fbe	0.488	1.75	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
2005	171105	07/31/2007	REJECTED	12.61	<input type="checkbox"/>	<input type="checkbox"/>	20	41400	Concrete/Fbe	0.488	1.70	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
1008	171162	07/31/2007	REJECTED	11.7	<input type="checkbox"/>	<input type="checkbox"/>	20	41448	Concrete/Fbe	0.488	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam
1596	171182	07/31/2007	REJECTED	11.7	<input type="checkbox"/>	<input type="checkbox"/>	20	41496	Concrete/Fbe	0.430	2.25	100	Monitor Joint - Rejected Fbe/Outback & Weld Seam

Total Count: 24
Total footage: 295KW

Signature:

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Pipe Shipment Status Report

Client: **Pompe** Date: **11/21/2007**
 Project: **Mexsopa Pipeline Project** Contractor: **Horizon Offshore**
 Project Desc: **20" Pipeline** Project number: **Mexsopa**

PIPE NO	ITEM NO	LENGTH	COATING	CONFORM	THICKNESS	RESULT	COMMENTS
1906	211322	11.94	1.75	0.100		ACCEPTED	
1909	171418	12.67	1.15	0.249		ACCEPTED	
1944	171208	12.22	2.28	0.485		ACCEPTED	
1943	211323	12.68	2.28	0.249		ACCEPTED	
1942	211325	12.45	1.78	0.485		ACCEPTED	
1911	211322	12.44	1.75	0.100		ACCEPTED	
1940	211328	12.29	1.19	0.249		ACCEPTED	
1939	211322	11.85	2.28	0.485		ACCEPTED	
1948	171208	12.24	2.28	0.249		ACCEPTED	
1907	211322	11.95	1.75	0.100		ACCEPTED	
1963	171294	12.02	2.05	0.320		ACCEPTED	
1958	211328	11.94	2.28	0.249		ACCEPTED	
1914	211328	11.14	2.28	0.249		ACCEPTED	
1955	211328	11.6	2.28	0.485		ACCEPTED	
1902	171201	12.09	2.05	0.100		ACCEPTED	
1901	171383	12.63	2.28	0.249		ACCEPTED	
1950	171381	12.65	2.28	0.485		ACCEPTED	
1925	171383	12.65	1.19	0.249		ACCEPTED	
1956	211322	11.67	2.28	0.485		ACCEPTED	
1966	171205	12.22	2.05	0.320		ACCEPTED	
1968	171483	12.78	2.28	0.249		ACCEPTED	
1963	171481	12.24	2.28	0.100		ACCEPTED	
1962	171481	12.24	2.28	0.485		ACCEPTED	
1961	171404	12.11	2.05	0.100		ACCEPTED	
1960	171287	12.22	1.19	0.249		ACCEPTED	
128	171387	12.28	2.28	0.485		ACCEPTED	
1989	171481	12.26	1.19	0.249		ACCEPTED	
1945	171220	12.24	2.28	0.485		ACCEPTED	
1907	171324	12.20	1.75	0.100		ACCEPTED	
1908	171383	12.69	2.28	0.249		ACCEPTED	

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PIPE NO	ITEM NO	LENGTH	COATING	CONFORM	THICKNESS	RESULT	COMMENTS
2005	171295	11.97	2.05	0.100		ACCEPTED	
2004	171296	11.99	2.28	0.249		ACCEPTED	
2003	171296	11.98	2.05	0.320		ACCEPTED	
2002	171208	11.98	1.78	0.485		ACCEPTED	
2000	171222	11.74	2.05	0.100		ACCEPTED	
218	211423	12.62	2.05	0.249		ACCEPTED	
2184	171425	11.91	2.28	0.249		ACCEPTED	
2186	171290	12.22	2.28	0.249		ACCEPTED	
2180	171425	12.78	1.78	0.485		ACCEPTED	
2196	171290	12.12	2.05	0.100		ACCEPTED	
2198	171290	12.18	2.28	0.249		ACCEPTED	
2194	171290	12.15	2.05	0.320		ACCEPTED	
2193	171290	12.18	2.28	0.249		ACCEPTED	
2192	171220	12.17	2.05	0.485		ACCEPTED	
2191	171290	12.12	2.05	0.320		ACCEPTED	
2189	171290	12.18	1.78	0.485		ACCEPTED	
2048	171318	11.48	2.05	0.249		ACCEPTED	
2190	171222	12.18	1.78	0.485		ACCEPTED	

Total Pipe Count: 2108 Total Accepted Pipe Shipment Footage: 26,125.14
 Total Pipe Inventory: 2107 Total Footage in Inventory (Feet): 8,348.81
 Total Pipe Accepted: 2103 Total Footage of Accepted Pipe: 26,596.27
 Total Pipe Rejected: 44 Total Footage of Rejected Pipe: 833.04
 Total Remaining Pipe: 707

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Barge Inventory Report

Client: Spectra Energy **Date:** 12/5/2007
Project: Northeast Gateway Pipeline Project **Contractor:** Horizon Offshore
Project Desc: 24" Pipeline **Location:** Boston, MA
Project number: E-8751a

Pipe No	Heat No	Length	Anode	Buckle Arrestor	Diameter	Type Coating	Coating ID	Thickness	Coating Concrete	Coating Density OD	Comments
159	72033	40	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	153	0.5	2.25	190	
1736	62029	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	1220	0.5	2.25	190	
33	72032	40	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	88	0.5	2.25	100	
593	71748	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	593	0.5	2.25	190	
419	62625	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	419	0.5	2.25	190	
605	71744	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	605	0.5	2.25	190	
774	71748	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	774	0.5	2.25	100	
705	71743	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	705	0.5	2.25	190	
500	71745	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	500	0.5	2.25	190	
598	71747	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	598	0.5	2.25	190	
184	72033	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	184	0.5	2.25	190	
892	71748	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	892	0.5	2.25	190	
840	71702	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	840	0.5	2.25	100	

Pipe No	Heat No	Length	Anode	Buckle Arrestor	Diameter	Type Coating	Coating ID	Thickness	Coating Concrete	Coating Density OD	Comments
1650	72012	38.9	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	1600	0.5	2.25	190	
989	71702	40.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	989	0.5	2.25	100	
256	71749	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	256	0.5	2.25	190	
847	71747	39.2	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	847	0.5	2.25	100	
1624	72014	39.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	1624	0.5	2.25	100	
1647	72012	39.9	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	1647	0.5	2.25	100	
1655	72012	38.9	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	1655	0.5	2.25	190	
200	71740	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	200	0.5	2.25	100	
231	71748	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	231	0.5	2.25	190	
1620	72012	38.9	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	1620	0.5	2.25	190	
519	71740	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	519	0.5	2.25	100	
233	71740	40	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	233	0.5	2.25	100	
1200	62029	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	1200	0.5	2.25	190	
817	71702	40.1	<input type="checkbox"/>	<input type="checkbox"/>	24	Concrete/FBE	817	0.5	2.25	100	

Total Pipe : 181
Total Anode : 18
Total Buckle Arrestor : 0
Total Footage : 7233

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Over Short and Damage Report Log

Client: Pemex **Date:** 11/21/2007
Project: Marsopa Pipeline Project **Contractor:** Horizon Offshore
Project Desc: 20" Pipeline **Location:** Tuxpan, Mx
Project number: Marsopa

OSD No	Date	Description	Disposition	Closure Date	Comments
1	7/28/2007	High Magnesium Reading	Joel Gusman	7/28/2007	15 Pipes Rejected
2	7/31/2007	Monitor Joint - Rejected	Joel Gusman	7/31/2007	27 Monitor Jts Rejected
3	7/31/2007	MONITOR JTS FBE & PIPE GOUGE	Joel Gusman	7/31/2007	2 Pipes Contain Pipe GOUGES
4	8/3/2007	Pipe 2315 - Rejected Again	Joel Gusman	8/3/2007	Please see results on OS&D Report # 4

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PTC Rep.

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Wednesday, November 21, 2007
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Anode Inventory Report

Client: Pemex Date: 11/21/2007
 Project: Marsopa Pipeline Project Location: Tuxpan, Mexico
 Project Desc: 20" Pipeline Project Number: Marsopa

ID	Material	Quantity	Unit	Location	Notes
1	ANODE	100	kg	...	...
2	ANODE	100	kg	...	...
3	ANODE	100	kg	...	...
4	ANODE	100	kg	...	...
5	ANODE	100	kg	...	...
6	ANODE	100	kg	...	...
7	ANODE	100	kg	...	...
8	ANODE	100	kg	...	...
9	ANODE	100	kg	...	...
10	ANODE	100	kg	...	...
11	ANODE	100	kg	...	...
12	ANODE	100	kg	...	...
13	ANODE	100	kg	...	...
14	ANODE	100	kg	...	...
15	ANODE	100	kg	...	...
16	ANODE	100	kg	...	...
17	ANODE	100	kg	...	...
18	ANODE	100	kg	...	...
19	ANODE	100	kg	...	...
20	ANODE	100	kg	...	...

OS&D Report

Client: Pemex Date: 11/21/2007
 Project: Marsopa Pipeline Project Location: Tuxpan, Mx
 Project Desc: 20" Pipeline Location Desc: Damaged Pipe 20"
 Contract No: Marsopa

ID	Material	Quantity	Unit	Location	Notes
1	OS&D	1	...	...	...
2	OS&D	1	...	...	...
3	OS&D	1	...	...	...
4	OS&D	1	...	...	...
5	OS&D	1	...	...	...
6	OS&D	1	...	...	...
7	OS&D	1	...	...	...
8	OS&D	1	...	...	...
9	OS&D	1	...	...	...
10	OS&D	1	...	...	...
11	OS&D	1	...	...	...
12	OS&D	1	...	...	...
13	OS&D	1	...	...	...
14	OS&D	1	...	...	...
15	OS&D	1	...	...	...
16	OS&D	1	...	...	...
17	OS&D	1	...	...	...
18	OS&D	1	...	...	...
19	OS&D	1	...	...	...
20	OS&D	1	...	...	...

Load Out Progress Report

Client: Pemex Date: 11/21/2007
 Project: Marsopa Pipeline Project Location: Tuxpan, Mexico
 Project Desc: 20" Pipeline Project Number: Marsopa

ID	Material	Quantity	Unit	Location	Notes
1	LOAD OUT	1	...	...	...
2	LOAD OUT	1	...	...	...
3	LOAD OUT	1	...	...	...
4	LOAD OUT	1	...	...	...
5	LOAD OUT	1	...	...	...
6	LOAD OUT	1	...	...	...
7	LOAD OUT	1	...	...	...
8	LOAD OUT	1	...	...	...
9	LOAD OUT	1	...	...	...
10	LOAD OUT	1	...	...	...
11	LOAD OUT	1	...	...	...
12	LOAD OUT	1	...	...	...
13	LOAD OUT	1	...	...	...
14	LOAD OUT	1	...	...	...
15	LOAD OUT	1	...	...	...
16	LOAD OUT	1	...	...	...
17	LOAD OUT	1	...	...	...
18	LOAD OUT	1	...	...	...
19	LOAD OUT	1	...	...	...
20	LOAD OUT	1	...	...	...

Over Short and Damage Report Log

Client: Pemex Date: 11/21/2007
 Project: Marsopa Pipeline Project Location: Tuxpan, Mx
 Project Desc: 20" Pipeline Location Desc: Damaged Pipe 20"
 Contract No: Marsopa

Description	Disposition	Closure Date	Comments
High Magnesium Reading	Joel Gusman	7/28/2007	15 Pipes Rejected
Monitor Joint - Rejected	Joel Gusman	7/31/2007	27 Monitor Jts Rejected
MONITOR JTS FBE & PIPE GOUGE	Joel Gusman	7/31/2007	2 Pipes Contain Pipe GOUGES
Pipe 2315 - Rejected Again	Joel Gusman	8/3/2007	Please see results on OS&D Report # 4

Signatures

PTC Rep.

Client Rep.

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