



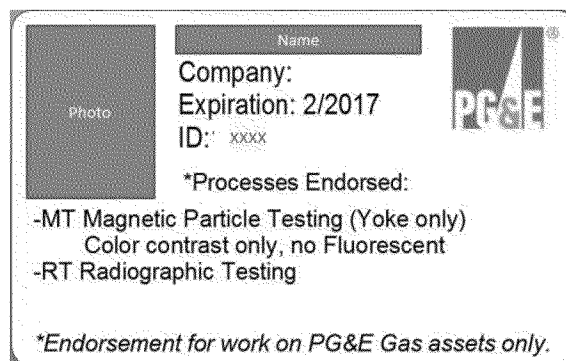
## Non Destructive Examination (NDE) Process Launch

### Purpose

The purpose of this communication is to announce that the Gas NDE Process will be implemented on April 7, 2014.

### Process Improvements

- Developed a specification to establish the minimum requirements for the qualification of personnel and performance of Non Destructive Examination (NDE) services on PG&E Gas Operation assets - "GO-TS-001".
- Executed facility and NDE program audits of all service providers to verify competency of each NDE service provider.
- Published Manual for PG&E Non Destructive Examination work – "Non Destructive Examination Control Manual - "TD-4190S".
- All Contractor NDE procedures were reviewed and approved.
- Standardized NDE report forms were developed and checklist updated on As-Built checklist
- Proficiency testing administered to contractor NDE technicians - examinations consisted of specific and practical testing.
- A PG&E endorsement card was issued to all contractor technicians that successfully completed proficiency testing. All contractor technicians require both a valid contractor certification and PG&E endorsement to perform NDE services on PG&E work. Sample proficiency card is shown below.



PG&E Endorsement Card



- Performance of in the field oversight of NDE technicians was carried out to ensure that inspections were performed safely and at quality.
- PG&E has mandated that all NDE contractors implement a quality program that reviews performance of their technicians and provided PG&E a summary of results
- Contractors have completed Operator Qualification training utilizing Veriforce to obtain OQ's for contractor NDE personnel.
- Developed specific Radiography procedures for the inspection of Pressure Control Fittings (PCF).
- Over 100 Gas Operations employees attended NDE training course
- Creating an NDE organization within Gas Operations and Gas T&D responsible for NDE services for Gas Operations.

## Approved Vendors

NDE Service Provider Evaluation Status							
VENDOR	QUALIFICATIONS REVIEW	PROCEDURE REVIEW	NDE PROGRAM REVIEW	QA PROGRAM REVIEW	FACILITY AUDITS	PROFICIENCY TESTING	ENDORSEMENT CARDS ISSUED
JANX	✓	✓	✓	✓	✓	✓	✓
WIX	✓	✓	✓	✓	✓	✓	✓
Mistras Group	✓	✓	✓	✓	✓	✓	✓
MEARS Group	✓	✓	✓	✓	✓	✓	✓

## Gap Analysis Corrective Actions

The below table details the corrective actions taken by the NDE process team to close out all of the gaps identified by an independent industry expert who prepared the study title "Results from "Gap Analysis" Study of PG&E's Gas Operations Nondestructive Evaluation Services Program".

#	Gaps	Corrective Action	Status	Quarter
1	Establish one central group, responsible for NDE services, to improve consistency and quality of NDE services. ATS has qualified resources that should be leveraged.	NDE Process Team has developed a program for Gas Operations that will ensure consistency and quality. A centralized NDE group is currently being staffed in Gas Operations under T&D Construction. ATS is being leveraged as part of the team	●	Q1 2013



#	Gaps	Corrective Action	Status	Quarter
2	Perform periodic on-the-job oversight of all NDE services being provided to organizations within Gas Operations.	53 in the field job observations were performed in 2013. The current frequency is one per week. Completed 12 in 2014 YTD.	●	Q1 2013
3	Utilize third party NDT inspection companies to provide NDE oversight until a sufficient number of in-house qualified personnel can be established.	Gas Operations has contracted two independent NDE experts that are providing oversight of overall NDE Program.	●	Q1 2013
4	Design a robust vendor pre-qualification process that reviews the overall quality program, their capabilities, their limitations, and their qualifications process.	<p>A robust pre-qualification process has been developed. That includes the following:</p> <ul style="list-style-type: none"> <li>• Issued RFP with new technical specification</li> <li>• Reviewed contractor procedures for compliance with technical requirements.</li> <li>• Administered PG&amp;E specific and practical proficiency examinations.</li> <li>• PG&amp;E Endorsement Cards issued upon successful completion.</li> <li>• NDE personnel have been Operator Qualified through VeriForce.</li> </ul>	●	Q1 2014
5	Separate the Master Service Agreement in the procurement documents into two parts (general requirements and technical specification requirements)	<p>Separated the MSA into two separate standalone documents.</p> <p>Technical Specification was developed and provided to all involved vendors</p>	●	Q2 2013



#	Gaps	Corrective Action	Status	Quarter
6	Administer PG&E NDE qualification exams to the contractor's NDE personnel in addition to the NDE service providers own certification program.	Administered PG&E specific and practical proficiency examinations to NDE contractor personnel. PG&E Endorsement Cards have been issued upon successful completion.  OQ's will be issued through VeriForce for NDE personnel supporting Gas Operations		Q1 2014
7	Require that all NDT service providers recertify their NDE personnel only by examination(s) and not just by continuous satisfactory performance.	The new technical specification requires that all NDE personnel shall recertify by examination only via an ASNT Certified Level III in the NDT method to be performed.		Q2 2013
8	Perform process improvement on projects requiring multiple NDE vendors to look for opportunities to improve and streamline the overall process efficiencies. Examine what are minimum requirements of the NDE reports. – Does it add value? Can things be done more effectively or entirely eliminated?	PG&E engaged contractors and expanded their inspection capabilities. Specifically in the methods of Indication Removal and Acid Etching.		Q3 2013
9	Perform an internal process control review on how NDE records throughout Gas Operations are being maintained in an effort to standardize the process of record keeping. This should also include storage of X-Ray film images. It is highly recommended that if PG&E determines to store X-ray (film or digital) images that they be stored in an industry compliant DICOM format.	Standardized NDE forms were created and integrated into As-Built process. New process requires that inspection reports be submitted on a weekly basis to an NDE organization email for review.		Q4 2013



#	Gaps	Corrective Action	Status	Quarter
10	ATS should train non-traditional NDE service providers (i.e. MEARS, GEIS, etc.) to obtain limited NDE qualifications allowing them, with oversight, to perform other NDE tasks.	ATS has completed the prequalification of non-traditional NDE service providers. MEARS is now performing NDE tasks on a standalone basis. MEARS' techs have been proficiency tested by PG&E utilizing for the specific NDE task (Acid etching & Indication removal).		Q3 2013
11	Require NDE service vendors to provide personnel that are qualified in more than one NDE method (e.g. RT & MT, or UT & MT).	NDE Service providers are now required to provide personnel that are qualified in more than one NDE method.		Q2 2013

### What's next?

- Continue to develop an NDE organization in Gas Operations under T&D Construction.
- Complete onboarding of additional NDE vendors (Shaw Pipeline and Consolidated Engineering Labs).
- Proficiency testing of GE Inspections and additional MEARS techs to support Integrity management projects.
- Prepare additional NDE procedures for the Gas NDE Control Manual.
- Develop statistical approach for the continued evaluation of real time NDE job observations.
- Communicate Process changes to Gas Operations Organization