TECH TIPS

FROM NASSCO

Tech Tips by NASSCO is a bi-monthly article on trends, best practices and industry advice from NASSCO's trenchless technology membership professionals.

PACP USER DEVELOPMENT

By NASSCO executive director, Ted DeBoda, P.E.

A competent Pipeline Assessment Certification Program (PACP)-certified CCTV operator does not become competent from initial PACP training. It comes from experience in finding things in the sewer that were not in the class, seeking out correct answers, and learning from mistakes. This requires the availability of an experienced resource to answer questions, as well as oversight to identify mistakes and make the corrections known to the operator. This oversight is the basis of an effective Quality Control (QC) program.

QUALITY CONTROL BASICS

The most successful businesses have realized the value of an effective QC program. The pipe assessment industry in the United Kingdom realized early that they needed a QC program in effect to help maximize the accuracy of CCTV data entered by certified operators in the field. An effective QC program must consist of the review of a random "sampling" of the sewer segments inspected by each operator. NASSCO provides guidelines for a PACP Quality Control program on the NASSCO website (http://www.nassco.org/training_edu/te_pacp.html) that has been used effectively to increase quality and tutor operators.

The NASSCO QC program is relatively simple. A percentage of each operator's inspections (inspections are defined as CCTV inspected line segments) are reviewed by a more experienced operator. Mistakes are then reviewed with the operator. Not only does the organization (company or municipality) produce a better product, but the operators learn from their mistakes, and move forward to produce better products in the future.

The first step is to decide how many inspections will be reviewed. NASSCO recommends a minimum of 5% for experienced operators, and 20% or more for less experienced operators. Once the percentage of inspections to be reviewed is decided upon, a random sampling of the operator's inspections are selected, and both the Header and Details Sections of each are reviewed.

Reviews should be done separately for the Header Section and the Details Section. The total number of fields checked, which includes fields completed plus fields that were not completed but should have been, needs to be counted in order to determine the percentage accuracy. This percentage is calculated by dividing the total number of fields that are correct (total fields checked minus number of mistakes) by the total number of fields checked.

QC IN ACTION

For example, assume that a Header Section has 32 fields checked, and there are two mistakes. The accuracy is determined as follows:

TOTAL NUMBER OF CORRECT FIELDS

	32 Fields Checked
-	2 Mistakes
=	30 Correct Fields

PERCENTAGE ACCURACY

	30 Correct Fields
÷	32 Fields Checked
=	.938, or 93.8%

The accuracy of both sections can be recorded on a spreadsheet and charted to track the operator's development and to document performance.

At this point, the most important step is for the reviewer to inform the operator of the errors found during the QC process. This meeting between the operator and the reviewer reduces the chances of errors in the future by bringing them to the operator's attention. This should also result in an increase in charted accuracy as the operators develop their skills.

Adherence to this QC process, along with an active mentoring and ongoing training program, will go a long way toward maintaining quality in PACP data. Like the old saying "give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime," our goal is to develop recently PACP-certified employees into highly competent and valuable operators. This is the key to sustainable success of the individual as well as the organization.

For more information, visit NASSCO's website at nassco.org.