EFCOG Contractor Alert

Suspect/Counterfeit Items (S/CI) Program Issues

Purpose

The purpose of this EFCOG Contractor Alert is to notify EFCOG members, and other DOE contractors, of potential S/CI deficiencies that may exist in their current programs. EFCOG's Quality Engineering Task Group (ISM WG/QA Subgroup) was requested to review S/CI issues as a result of questions arising at one contractor's facility. The objective of the task was to ensure that lessons learned are communicated in a timely manner such that they can be used to validate the acceptability of S/CI programs during Management Assessments, Independent Assessments, or other Program Reviews. These activities are considered to be an important aspect of the Integrated Safety Management (ISM) and Quality Assurance Program (QAP) Feedback and Improvement functions.

Background

In the fourth quarter CY2005 a contractor's Trend Analysis Report indicated that eight S/CI occurrence reports had been generated that year. The contractor's management questioned the adequacy of actions taken to prevent recurrence. In the same quarter during a US Nuclear Regulatory Commission (NRC) monitoring visit of the same contractor, the NRC representative also questioned the reported S/CI trend and requested an explanation as to why the corrective actions had not eliminated or decreased the number of DOE occurrence reports. After explaining to management, and the NRC, that seven of the eight S/CI discoveries were bolts on the published S/CI bolt head-mark list, the question was asked: Why would known (legacy) S/CI's, that have been recognized by the DOE complex, have the same reporting rigor applied as new (first time identified) S/CI discoveries which have a much greater impact potential across the DOE complex if found to be counterfeit or fraudulent? It was explained that the contractor's interpretation of DOE Order 414.1C, "Quality Assurance," and the S/CI Guide DOE G 414.1-3 does not differentiate between known (legacy) or new (first time identified) S/CI's. The contractor's management determined that the potential for improvement of the DOE S/CI program does exist and requested that EFCOG lead an effort that would bench mark S/CI programs for identification of improvements and/or cost savings.

Upon EFCOG approval, this task was assigned to the ISM Working Group's Quality Engineering Task Group which established a small project team to address the issue. In 2QFY07, the project team approved a 10 question survey that was developed to obtain baseline information on implementation of the S/CI program in the contractor community. Questionnaires were sent to 18 DOE/NNSA sites with a total of 26 responses received from 23 contractors and 3 DOE representatives.

Discussion

Based on the results of the questionnaire, the set of recommendations in Attachment 1 was developed. EFCOG believes that implementation of these recommendations could improve the implementation effectiveness of the DOE S/CI program throughout the complex.

For background and reference, the contractor questionnaire is available at:

http://www.efcog.org/wg/ism_qa/EFCOG_Alerts.htm.

Additionally, available on the EFCOG Website, is an excellent "Suspect/Counterfeit Items Guide for Subcontractors/Suppliers" developed by one of the EFCOG member companies, and, flow charts showing

one recommended practice to address three different S/CI cases involving fasteners that a contractor may encounter.

Should you have any questions on the S/CI program or the recommendations contained within the Alert, please contact one of the EFCOG Subject Matter Experts identified below.

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Attachment I

Recommendation 1

Verify that contractor S/CI and ORPS reporting programs are consistent with applicable orders and guidance documents as defined by applicable contract documents. Questionnaire responses indicate that many DOE/NNSA contractor organizations are not consistently reporting S/CI discoveries as required by the DOE S/CI and ORPS reporting programs.

Technical Basis

The intent of DOE O 414.1C, Contractor Requirement Document (CRD) para. 4.b.(8), is to report S/CI's per DOE O 231.1A Change 1, *Environment, Safety, and Health Reporting*, and DOE O 221.1, *Reporting Fraud, Waste, and Abuse*. The responses to the questionnaire indicate that the Contractor S/CI coordinators are getting notified of S/CI discoveries. The survey indicated that DOE/NNSA line management office, the ES&H office, the Inspector General (IG) office and those identified under "other" may not be getting notified unless the S/CI is determined to be counterfeit by the contractor S/CI coordinator. In several of the questionnaire responses, it was the impression of the responding contractor that the local IG office was not as interested in being notified of known S/CI high-strength fasteners. Rather, their interest was more toward a focus on new (first time identified) suspect or counterfeit items.

Benchmark Criterion

Determine if your site S/CI and ORPS reporting procedures, as a minimum, require notifications to be made to those listed below for each S/CI discovery regardless of its significance to safety/non-safety systems or legacy implications:

(a)	The responsible DOE/NNSA line management offices;
(b)	The Office of Health, Safety and Security; and
(c)	The Office of Inspector General
(d)	Site specific internal reporting must include the contractor S/CI coordinator and consideration for other personnel such as QA, the DOE Facility Representative, the Facility Manager, DOE S/CI Coordinator, the Supplier, and the ORPS Coordinator.

Recommendation 2

Verify that contract documents to suppliers include provisions to prevent S/CI's from being sent to DOE/NNSA sites. Ensure provisions in the ORPS, NCR, and S/CI programs are adequate to notify suppliers upon discovery of S/CIs provided by their firms. To prevent recurrence of issues, consider training of suppliers who fail to prevent S/CI's from entering DOE/NNSA sites.

Technical Basis

DOE O 414.1C, Contractor Requirements Document (CRD) para. 4.b.(3), requires disposition of S/CI's installed in safety applications and other applications that create potential hazards, and, 4.b.(5) requires ensuring that S/CI's identified in non-safety applications during routine maintenance and/or inspection are reported, evaluated, and dispositioned to prevent further use in safety applications. Based on questionnaire responses, most sites report all S/CI's internally when discovered.

Benchmark Criterion

Determine if procurement implementing procedures require contract documents to address supplier's responsibilities associated with S/CI's. These provisions should provide enough information for the supplier to be able to identify potential S/CI's, or, contact a site representative who can assist in the

identification of an S/CI prior to shipment. Sites should also ensure that implementing procedures (e.g., S/CI, NCR, Procurement, ORPS) address requirements associated with contractor responsibilities for notifying suppliers when an S/CI has been received at their facility.

Recommendation 3

Verify that internal (contractor) ORPS reporting requirements provide clear instructions for updating related extent-of-condition discoveries to an existing ORPS report. DOE/NNSA contractors may need to add instructions into their ORPS reporting program procedures/practices that defines the process to update extent-of-condition information on existing and related ORPS reports.

Technical Basis

The intent of the related question was to ascertain the documents used within the complex to implement the reporting and disposition requirements for S/CI's as required by DOE O 414.1C, CRD, para. 4.b.(3 through 9). All but two responses utilized the requirements defined in DOE O 231.1A Change 1, *Environment, Safety, and Health Reporting*. When reviewing the requirements of O 414.1C para. 4. b. (3 through 7) one would realize that these requirements for disposition and reporting are more applicable to the dispositions required in a non-conformance report for a hardware issue i. e., repair, rework, use-as-is, scrap, or return to vendor, not in the requirements for reporting and notifying DOE of an occurrence. DOE G 414.1-3 does recognize and encourages the use of the site nonconformance processes. This question also asked if S/CI discoveries can be bunched when reporting. This question was based on concerns of waiting to report S/CI's until there was enough to do a "roll-up report" for a specified period of time. It was communicated that this practice is not allowed and the question was to determine the effectiveness of that communication. Based on the responses two practices exist (1) no bunching or (2) bunching is allowed based upon certain circumstances such as legacy S/CI's.

Benchmark Criterion

To eliminate the appearance of "roll-up S/CI Reporting", determine if there are adequate instructions in the site ORPS reporting program for updating the extent-of-condition information on existing and related S/CI ORPS reports. In addition, the program should have requirements that prevent roll-up reporting unless approved by DOE HQ/HSS. The following recommendation is from HQ ORPS Reporting Management:

> "Specific S/CI campaigns such as known S/CI's already reported on an ORPS report and are the result of an extent of condition review can have the related NCR(s) reported on a "Campaign ORPS Report" monthly until the related S/CI's are all documented on an ORPS report. This type of reporting is not considered a Roll-up. Three points that need to be emphasized when reporting S/CI's in this manner are:
> (1) the campaign summary approach should only apply to fasteners [i.e., SCI shackles, rigging, valves, truck parts, etc. must be reported separately];
> (2) the summary report would only apply for significance category 4 reportable items [e.g., reporting criteria 4C (2)]; and
> (3) reporting still needs to be timely, [i.e., a new report should be submitted each month, as needed, during the campaign.]"

Recommendation 4

Verify that the site's "S/CI and foreign origin" policies/procedures are clearly written and understood by appropriate personnel. Ensure that the wording in the procurement documents is clear relative to who a supplier should contact if they have any questions. In May 2006, the S/CI Awareness Training Manual was revised (Appendix C) to clarify that items of certain foreign origin (China, Mexico, Taiwan) are not automatically S/CI's as indicated in some 2005 ORPS Reports, and, may require further analysis (i.e., review of purchase order documents to determine if, or which,

standards/specifications were cited) to determine if the supplier/manufacturer provided what was ordered – irregardless of where the item(s) were manufactured.

Some questionnaire responses indicated that the Buy American Act (BAA) and Federal Acquisition Requirements (FAR), was being referenced in procurement documents as a source for notifying not to send items of foreign origin or S/CI's to the site. The BAA and FAR requirements were not intended to prevent items of foreign origin, or S/CI's, from being sent to DOE sites. DOE/NNSA sites need to ensure contractor S/CI coordinators are trained on, understand, and can communicate, the difference between "suspect" items and "S/CI," and, which is reportable under DOE O 231.1A. Contractor S?CI Coordinators need to be involved in defining site procurement quality and supplier qualification implementing procedures to ensure that S/CIs are adequately addressed and are consistent with O 414.1C, CRD, para. 4. b.(1) and (2).

Technical Basis

The intent of this question was to determine what methods are being used to prevent items of certain foreign origin, such as those defined in the DOE S/CI Awareness Training Handbook, from being supplied to DOE/NNSA sites. Based on the questionnaire responses most sites are relying on the BAA and FAR requirements within contract documents to notify the suppliers to ensure S/CI's of foreign origin are not supplied to the sites. The BAA and FAR requirements are appropriate to reference in procurement documents but will not prevent items of foreign origin or S/CI's from being sent to the site.

Benchmark Criterion

Determine if the site S/CI coordinators are trained on, and can communicate, the difference between "suspect" and "Suspect/Counterfeit" items and have input into defining the procurement quality and supplier qualification implementing procedures for your site. Ensure that personnel approving procurement documents for items of foreign origin verify that the wording in the procurement document can be clearly understood by the supplier and provides direction on who they should contact if they have any questions. Verify that contract language includes requirements to prevent the distribution of S/CI's. Include information in site procurement procedures that makes it clear when items of foreign origin can, and are acceptable, to be procured.

Recommendation 5

Ensure that S/CI coordinators have an active role in the writing of S/CI related ORPS reports to ensure useful and all pertinent information concerning the S/CI discovery is provided. This information must include the name and contact information of the site's S/CI Subject Matter Expert (SME).

Technical Basis

Training and informing managers, supervisors, and workers on S/CI processes and controls including prevention, detection, and disposition of S/CI's is a requirement of DOE O 414.1C, CRD, para. 4.a.(2) and (5). Based on the questionnaire responses the DOE/NNSA training programs appear to be very strong with respect to being knowledgeable of S/CI's and their detection. Responses to other questions in this survey indicate that training may need to be improved in the area of process control requirements for reporting, prevention and disposition of S/CI's.

Benchmark Criterion

Training, and/or guidance, in site implementing procedures needs to identify what specific information is to be provided in an S/CI ORPS Report. This guidance should ensure that the contact personnel listed in the ORPS system includes the site's S/CI Subject Matter Expert (SME). This will allow other sites, should they have similar issues, the ability to talk to someone regarding specific details on the subject. This information is also transferred to the ORPS User Defined Report. A review of the 2005 ORPS User

Defined Report indicated that information provided of this nature is not consistent. The SME's and the writers of ORPS Reports must ensure that useful information for others is provided. Key items to be

included in the ORPS Report would be: Bolt Grade (e.g., SAE Grade 5), Manufacturers symbol (if present or not), SME (name and phone number), if the item is known counterfeit or suspect, disposition (use-as-is, scrap, etc.), Origin (China, Taiwan, Mexico, etc.), catalog, part, equipment, or heat number, any USPTO information, and any other unique information. This could also include providing specific cause codes for S/CI reportable events.

Recommendation 6

Verify that when an S/CI is dispositioned "use-as-is," the technical justification is included in both the local Nonconformance Control program and in the DOE ORPS report. Ensure S/CI and ORPS Report Coordinators have been trained on how S/CI related "Use-as Is" technical justification information is to be included in ORPS reports.

Technical Basis

The intent of this question was to ascertain how DOE/NNSA sites are implementing DOE O 414.1C, CRD, para.4.a.(4) that requires Engineering evaluations and disposition of S/CI's installed in safety applications/systems or in applications that create potential hazards. Based on the questionnaire responses about half of the sites are exercising and documenting engineering (technical) evaluation of S/CI's that remain in place (use-as-is). This is also evident from responses contained in the 2005 S/CI related ORPS reports. One can see that the "use-as-is" disposition appears in ORPS reports but not the engineering technical justification (evaluation/disposition). This would normally be part of an NCR disposition versus an ORPS report. Review of question 3 above indicates that most (19 of 26) responders are using the NCR process as recommended by the S/CI guide. An area for consideration is that DOE O 414.1C CRD only requires Occurrence Reports to be generated. The DOE Guide recommends the use of NCRs. It may be an improvement for the order to require NCRs to be issued for S/CI's dispositioned "use-as-is" and include instructions for processing and reporting. This would allow oversight organizations to evaluate the technical justification and determine if it is in line with contract/program requirements.

Benchmark Criterion

Determine if instructions are provided in contractor implementing procedures; training and/or guidance documents that require the technical justification for "use-as-is" S/CI NCR's to be included in S/CI ORPS reports. This will allow other contractors to share how legacy and other non-safety S/CI's are being managed.

Recommendation 7

Verify that site S/CI Coordinators understand how to use the United States Patent Office (USPTO) list. Several 2005 S/CI Occurrence Reports indicated an item was S/CI because it was not listed in the USPTO. This is not necessarily the case. Ensure training on the use of the USPTO is consistent with DOE expectations.

Technical Basis

The intent of this question was to find out if DOE/NNSA sites were cognizant of any S/CI high strength fasteners not included on the DOE Headmark List. Two of the responses indicated that there may be a need for this information to be added to the DOE list. Both responses are associated with issues related to manufacturers of high strength fasteners and the methodology for determining (at the site) if the fasteners are acceptable. Currently if a high strength fastener is discovered with no manufacturer symbol, the fastener is considered an S/CI. Several of the 2005 ORPS reports state that fasteners had manufacturer's symbols but those symbols are not on the United States Patent Office (USPTO) headmark list and therefore are S/CI's. There is no reference in the DOE S/CI Order or Guide on the use of the USPTO list.

Benchmark Criterion

1. Determine if instructions are provided in site implementing procedures, training, and/or guidance documents to address concerns associated with high strength fasteners that do not have a manufacturer's symbol. Ensure these instructions provide an acceptable method to determine if a particular manufacturer's symbol is acceptable for use at your facility. Also ensure that training is provided to S/CI coordinators on the intent and use of the USPTO list.

2. Determine if instructions are provided in site implementing procedures, training and/or guidance documents to address legacy fasteners *without* manufacturer markings and installed prior to signing of Public Law 101-592, *Fastener Quality Act*, dated November 16, 1990. Prior to the law, manufacturers of high strength fasteners were not required to mark their product with a registered symbol (e.g., metallic screws, nuts, bolts, or studs having internal or external threads with a nominal diameter of 1/4 inch (6 mm) or greater; washers that are through-hardened or represented as meeting a consensus standard that calls for through-hardening, and that are grade identification marked or represented as meeting a consensus standard that requires grade identification marking).