

Date Fri, 18 Feb 2000 074946 -0500

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Subject: Blue Alert- Noncompliance with Department Of Transportation (DOT) Requirements

TITLE- Blue Alert- Noncompliance with Department Of Transportation (DOT) Shipping Hazardous Materials

IDENTIFIER L-2000-OR-BJCY12-0201 DATE February 11, 2000

LESSON LEARNED STATEMENT- Organizations completing shipping documentation and shipping hazardous materials should implement administrative controls that ensure personnel have the knowledge to complete shipping documentation compliantly, adequate time is allowed for document reviews, and software is reviewed, tested, and updated to ensure it performs intended functions. These controls include appropriate training, formal planning, and application of software quality assurance. Oversight of the work should consider appropriate reviews and actions based on results from the reviews.

DISCUSSION OF ACTIVITIES- A subcontractor shipped approximately 400 packages containing over 8,000 items considered laboratory waste to an off-site commercial facility. An internal assessment of this activity by the contractor identified the following violations and potential nonconformances of the DOT Hazardous Material Regulations

- 1) Use of improper shipping names
- 2) Misidentification of materials
- 3) Reportable quantities
- 4) Commingling of hazard classes in the same package
- 5) Use of improper waste codes on the manifests
- 6) Improper technical descriptions

The violations and potential nonconformances did not present a nonaccident immediate danger or exposure to the public health or environment.

ANALYSIS- The root and direct cause were determined to be inadequate administrative controls to ensure compliance with regulatory requirements. The subcontractor conducted an investigation of this event by reviewing all discrepancies from shipping documents applicable to this event and cited inadequate training and software problems as primary causes for the discrepancies. Training and software quality assurance are controls established and implemented by management to ensure adequate job quality and work control. In the case, training and software quality assurance were not adequate. The training failed to address all necessary aspects of completing shipping documentation. The subcontractor cited inadequate training for segregation tables and subcontractor's DOT exemptions; segregation requirements for subsidiary hazards; and listing of constituents for shipping names with a not otherwise specified (NOS) description (includes proper packing group assignment). Software quality assurance problems were also cited. A default setting for checking the hazardous material column on continuation sheets of the manifest was not activated and shipping name tables included obsolete shipping names. Testing of the software prior to implementation would have identified these problems. Typographical errors were also identified by the subcontractor. Typographical errors

occurred when drum numbers and shipping names were transposed to the manifest and when waste codes were inadvertently not transferred to the manifest. These errors were attributed to lack of familiarity with software, lack of data entry person on the job site, and inadequate review period. A contributing cause was determined to be inadequate oversight of the subcontractor. The contractor's oversight of this activity was insufficient. During this project, container contents lists generated by the subcontractor were reviewed and commented on by the contractor. The contractor had returned a number of comments on the lists primarily of a regulatory interpretive nature. When the subcontractor received comments from the contractor, the subcontractor generated revised containers contents lists that were to be used to complete the shipping manifests. The contractor performed a spot check of the shipping manifests prior to shipping and identified no problems. The contractor, based on reported concerns associated with the shipment, assessed the shipping manifests after shipment had been made and identified violations and potential nonconformances with DOT shipping requirements. While discrepancies were noted from the contractor's daily oversight of the subcontractor's identification and segregation activities, the subcontractor's quick response to the comments and corrective action resulted in the contractor allowing work to continue. In lieu of continually commenting on and correcting the subcontractor, the contractor would have been better advised to contact the subcontractor and declare the work to be unacceptable, or request that the subcontractor increase their QA/QC checks. The majority of the final individual container contents lists were acceptable. The contractor's review of the final shipping manifests lacked the depth to identify deficiencies and the fact that the manifest did not correspond to the container contents lists. The contractor has described contractor oversight requirements and subcontractor requirements concerning transportation as a special condition to be met for any subcontract where transportation is part of the scope of work. This special condition has been included in the contractor's Standard Proforma Procurement Documents. These documents are the standard documents used to compile a request for proposal. Key conditions described in the transportation special conditions concerning contractor oversight are

- * Subcontractor notifies contractor a minimum of seven days prior to shipping.
- * Contractor reserves the right to audit subcontractor's performance.
- * When noncompliances are identified by the contractor, the subcontractor will submit a corrective action plan within
five days.
- * When noncompliances are identified during a review or audit, the review will be immediately stopped and the documents returned to the subcontractor for correction.
- * The contractor reserves the right after three reviews or audits that identify noncompliance to assume the subcontractor's transportation roles and responsibilities.
- * Contractor approves subcontractor's transportation plan.

RECOMMENDED ACTIONS- The subcontractor completed the following actions prior to initiating waste pickup to address failures associated with packaging, labeling, marking, and shipping documentation

1) Train appropriate personnel on segregation tables and exemptions, segregation requirements for subsidiary hazards, and listing constituents for shipping names with a NOS description (includes proper packing group assignment).

- 2) Conduct an informal refresher course on DOT exemptions, proper segregation, and use of technical constituents when using generic shipping descriptions.
- 3) Activate default setting for checking hazardous materials column on manifests' continuation sheets.
- 4) Update shipping names into the software.
- 5) Increase staffing and time management on future projects to allow for a more substantial review period and to assign a data entry person.
- 6) Train appropriate personnel to operational processes.

The contractor reviewed lessons learned concerning subcontractor oversight from this event and establish special conditions requirements in subcontracts to ensure that the scope of work, expectations of work performance, and the manner in which work will be reviewed and approved. The process for work review and approval has been included in the contractual vehicle between the contractor and subcontractor. The contractor fully understands its liability associated with these shipments and has applied the appropriate level of oversight to minimize recurrence of problems cited in this event. The corrective actions taken establish a clear process for overseeing subcontractor's performing activities for the shipment of hazardous materials.

PRIORITY DESCRIPTOR Blue/Information

FUNCTIONAL CATEGORY(S) (DOE) Packaging and Transportation, Quality

BJC TREND CODE(S) (USER-DEFINED) SC - Subcontracting, TR - Transportation Safety, QA - Quality Assurance

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KEYWORDS Noncompliance. DOT, Department of Transportation, subcontractor

REFERENCES Occurrence Report Number ORO-BJC-Y12WASTE-1999-0001

HAZARDS Hazardous Materials

WORK ACTIVITY Material/Material Handling, Other

FOLLOW-UP ACTION- Information in this report is accurate to the best of our knowledge. As means of measuring the effectiveness of this report please notify Joanne E. Schutt at 865-483-0554, e-mail at schuttj@pwtor.com of any action taken as a result of this report or of any technical inaccuracies you find. Your feedback is important and appreciated.