CATALYTIC, INC.

QUALITY ASSURANCE PROGRAM

FOR

INDUSTRIAL RADIOGRAPHY

IN COMPLIANCE WITH

10CFR PART 71

APPROVED BY: _____ DATE: 4-30-81
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EFFECTIVE PAGE LIST

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1.0 PURPOSE AND SCOPE

1.1 This program is intended to assure that the requirements of 10CFR71* are met as they apply to Catalytic, Inc.'s industrial radiographic operations. This program applies to all Catalytic, Inc. operations governed by License No. 37-12931-02 issued to Catalytic, Inc. by the U. S. Nuclear Regulatory Commission.

1.2 This program applies to procurement, maintenance and repair, handling, storage, shipping, inspection and testing, records, and audits of activities relating to Type B shipping containers used for radiographic sources.

1.3 Design and fabrication of shipping containers shall not be conducted under this program.

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*10CFR71: Nuclear Regulatory Commission Rules and Regulations, Title 10, Chapter I, Code of Federal Regulations - Energy, Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions".

2.0 ORGANIZATION

2.1 The final responsibility for the Quality Assurance (QA) Program for Part 71 requirements rests with Catalytic, Inc. The QA Program is implemented by the Organization shown in Figure 1.

2.2 The Radiation Safety Officer reports to the Vice President and Chief Engineer. He is responsible for indoctrination, training and certification of radiography personnel in the radiation safety aspects of this program. He is also responsible for auditing the radiation safety aspects of the program.

2.3 The Radiographic Auditor reports to the Radiation Safety Officer. He is responsible for performing on-site audits of the performance of radiographic operations as directed by the RSO.

2.4 The Director - Quality Assurance has been delegated overall responsibility and authority for the Catalytic Quality Assurance Program by the Senior Vice President and General Manager - Operations Division. The Director - Quality Assurance and his staff shall have unlimited access to all departments, jobsites and other areas involving the radiographic program and shall receive the cooperation of all personnel in carrying out their responsibilities.

2.4 (Continued)

The Director - Quality Assurance is assigned the responsibility, authority and organizational freedom to establish and execute such quality assurance methods and systems as are required to insure that the radiographic program is conducted in full compliance with applicable manuals, procedures and instructions.

The Supervisor - Quality Assurance Audits reports to the Director - Quality Assurance. He schedules periodic audits of field QA activities to evaluate the effectiveness of the QA program. He also assures that auditors are independent of the function being audited.

The Director - Quality Assurance assures development of training plans and instructions for quality related work as necessary to implement this program. He assures that all personnel performing quality related work are qualified in the area of their activities.

He provides for an annual management review of the effectiveness of the Quality Assurance program.

2.5 The Manager - Field Quality Assurance, Corporate Level III Non-Destructive Examiner reports to the Director - Quality Assurance. He is responsible for the Corporate NDE program. He develops, maintains and distributes all NDE procedures for NDE methods.

2.5 (Continued)

He provides technical direction to NDE personnel, including training in NDE methods and qualifying and certifying NDE Level I and Level II personnel.

2.6 The Radiographic Supervisor reports to the Manager - Field Quality Assurance through onsite supervision. He is responsible for handling, storing, shipping, inspection, test and operating status of radiographic equipment and record keeping for all radiographic operations.

2.7 The Radiographer reports to the Radiographic Supervisor. He is responsible for handling, storing, shipping, inspection, test and operating status of radiographic equipment and record keeping for all radiographic operations.

3.0 QUALITY ASSURANCE PROGRAM

3.1 The management of the Catalytic, Inc. radiography program establishes and implements this QA program.

3.2 Training for all quality assurance functions is required and shall be performed as described in Catalytic written procedures before the activity is performed.

3.3 Quality Assurance program revisions will be made according to written procedures and shall be approved by the Director - Quality Assurance, by the Radiation Safety Officer and by the Corporate Level III Non-Destructive Examiner.

3.4 The QA program will ensure that all defined QC procedures, engineering procedures, and specific provisions of the package design approval are satisfied as described in Catalytic's Operating and Emergency Procedures. The QA program will emphasize control of the characteristics of the package that are critical to safety.

3.5 The Radiation Safety Officer shall assure that all radioactive material packages used by Catalytic personnel are designed and manufactured under a QA program approved by the Nuclear Regulatory Commission for all packages designed or fabricated after January 1, 1979. This requirement will be satisfied by receiving a certification to this effect from the manufacturer.

4.0 DOCUMENT CONTROL

4.1 All documents related to a specific shipping package shall be controlled through the use of written procedures. All instructions, procedures and drawings shall be properly identified, controlled, distributed, and maintained to assure that the latest revision is in use and that superseded documents are destroyed or marked void.

4.2 The Radiation Safety Officer shall insure that all QA functions are conducted according to the latest changes to these documents.

5.0 HANDLING, STORAGE AND SHIPPING

5.1 All handling, storing and shipping of packages for special form material shall be conducted according to approved written procedures and shall be documented as required.

5.2 Shipments shall not be made unless all tests, certifications, acceptances, and final inspections have been completed.

5.3 Only those radiography personnel authorized by the Radiation Safety Officer shall perform the critical handling, storage, and shipping operations.

6.0 INSPECTION, TESTS, AND OPERATING STATUS

6.1 Inspection, test, and determination of operational status of packages for special form material shall be performed according to written procedures.

6.2 These activities shall be performed by personnel trained in the proper procedures and techniques and authorized by the Radiation Safety Officer.

6.3 The results of inspections, tests and status checks shall be documented as required by the applicable procedure.

6.4 Any exposure device, shipping container, or package for special form material found to be defective as a result of an inspection, test, or check of operational status shall be immediately removed from service and conspicuously tagged or marked and secured to avoid inadvertent use.

7.0 QUALITY ASSURANCE RECORDS

7.1 Written records shall be maintained to furnish evidence of compliance with operating procedures and instructions and this program.

7.2 Records shall be maintained in a legible, orderly and retrievable manner by the Radiation Safety Officer or other assigned and responsible radiographic personnel.

7.3 Records shall include the following:

Package approval (including references and drawings)
Procurement documents
Inspections
Tests
Operating logs
Audit results
Personnel training and qualification
Monitoring of work performance
Records of shipment
Operating procedures
Equipment descriptions
Other procedures as described or referenced in this program.

7.4 The Radiation Safety Officer or his designee shall be responsible for maintaining these records and for establishing the location and duration of retention for record storage.

8.0 AUDITS

8.1 The Radiation Safety Officer or his designee shall be responsible for performing audits to assure compliance with this program.

8.2 The Director - Quality Assurance shall be responsible for providing an annual management review of this Quality Assurance Program.

8.3 Audits shall be conducted according to a schedule established by the Radiation Safety Officer and shall include announced, unannounced, specific and randomly selected evaluations of radiographic operations, shipping and receiving of radiographic sources, and associated activities. These activities will be audited for compliance with Catalytic Operating and Emergency Procedures and other directives and instructions established by the Radiation Safety Officer.

8.4 Audits shall be performed by suitably qualified personnel having no direct responsibility for the activity being audited.

8.5 A written check list shall be prepared and used during the performance of each audit.

8.6 The results of all audits shall be distributed to appropriate levels of management and operating personnel.

8.7 Audit reports identifying unsatisfactory results shall be distributed using a Letter of Transmittal showing the full distribution of the report.

8.3 Audit reports shall identify the person responsible for resolution of unsatisfactory conditions and shall specify a time period for response.

8.9 Audits shall be conducted on at least an annual basis, or as established by other applicable Catalytic, Inc. procedures. Audit frequency will be dependent on the safety significance of the activity.

8.10 Audit records, including distribution, reply, and resolution of unsatisfactory items shall be maintained by the Radiation Safety Officer.

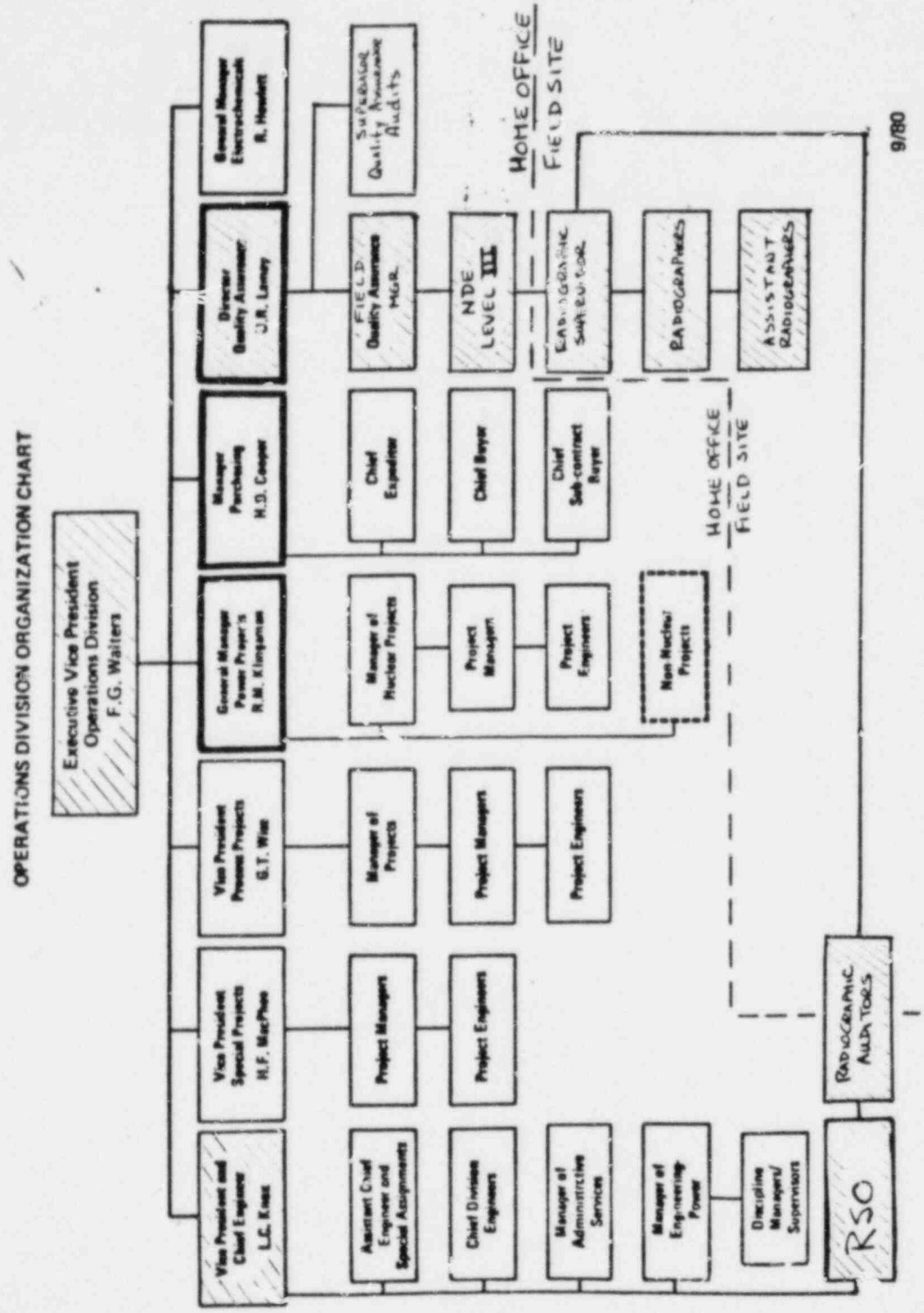

Figure 1
Quality Assurance Organization for Radiographic Operations (shaded)

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