

10 CFR 830.120  
CRITERION 10,  
INDEPENDENT  
ASSESSMENT;  
WE'RE HERE TO HELP  
YOU!

by  
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# 10 CFR 830.120 CRITERION 10, INDEPENDENT ASSESSMENT; WE'RE HERE TO HELP YOU!

## INTRODUCTION

Each organization performing activities in the DOE Weapons Complex is required to have an independent assessment function. This is consistent from DOE Order 5700.6C<sup>1</sup>, *Quality Assurance* to 10 CFR 830.120<sup>2</sup>, sometimes referred to as the Price-Anderson rule.

DOE Order 5700.6C, Criterion 10 Independent Assessment requires, "Planned and periodic independent assessments shall be conducted to measure item quality and process effectiveness and to promote improvement. The organization performing independent assessments shall have sufficient authority and freedom from the line organization to carry out its responsibilities. Persons conducting independent assessments shall be technically qualified and knowledgeable in the areas assessed."

10 CFR 830.120, (c) Quality assurance criteria--(3) Assessment--(ii) Independent Assessment requires, "Independent assessments shall be planned and conducted to measure item and service quality, to measure the adequacy of work performance, and to promote improvement. The group performing independent assessments shall have sufficient authority and freedom from the line to carry out its responsibilities. Persons conducting independent assessments shall be technically qualified and knowledgeable in the areas assessed."

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At Rocky Flats Environmental Technology Site (RFETS) budget decline coupled with our prime driver taking on the impetus of federal regulation required a new approach to traditional oversight functions. A common perception held by independent oversight organizations everywhere is there are far more oversight requirements than oversight dollars. At Rocky Flats the Independent Oversight organization within Performance Assurance, the Assessments Program, not only clung to this belief, we documented the correctness and estimated the magnitude of it. The disparity is large and growing. Consequently, Performance Assurance at Rocky Flats utilizes a formal method of risk based resource allocation coupled with a new oversight technique to efficiently utilize limited resources.

### RESOURCE ALLOCATION

The Assessments Program reviewed DOE Orders determined to be applicable and of greatest significance to Rocky Flats, a total of 55 orders. Oversight requirements were extracted from these orders, entered into a data base and combined into logical assessment areas. Management added requirements known by the staff from other drivers such as the Inter Agency Agreement between DOE, EPA, and the Colorado Department of Public Health and Environment and the contract with the Nevada Test Site (NTS) outlining independent oversight requirements on Low Level Radioactive Waste packaging destined for shipment to the NTS.

Each oversight activity was risk ranked utilizing methodology developed by DOE's Office of Environmental Audit (EH-24) <sup>3</sup>. A numerical risk rank was assigned to each activity. The risk assigned to a particular activity was the summation of several weighted factors e.g.; Nature of the operation subject to the oversight, management controls in place, employee training, implementation of a self evaluation program, previous assessment results, performance indicators, and outside interest (media, DOE, other stakeholders).

Effort in staff hours to accomplish each activity were estimated based on organizational experience at Rocky Flats over the last 3 years (we have been tracking the time required for oversight activities). A table was generated listing required oversight activities in descending order of risk and the staff hours required to accomplish the oversight. The hours to perform oversight activities were summed to identify staff requirements to perform a given collection of activities. (See Figure 1). The final oversight schedule was negotiated through the budget process based on an acceptable level of risk. This form of budgeting identifies to the customer the oversight planned in return for budget allocated. Additionally, impacts of budget changes are readily identified by moving the cut off line up or down the risk ranked list of oversight activities.

This initial review by the Assessments Program identified oversight activities requiring a staff of 59. We knew that this list was only a starting point and by no means complete. The list would surely grow as more requirements documents were reviewed and more on site organizations identified requirements for independent oversight. At the time this initial list of required activities was assembled Assessments Program had a staff of 50 (See Figure 2). This has since been reduced to 43. As this is written, although specific organizational unit sizes have not been announced, Rocky Flats as a whole is facing a 40% staff reduction to be completed in August, 1995.

Consequently, a prioritized list of requirements has been a useful tool. Individuals do not have to agree with every specific ranking to appreciate and utilize the overall result. The customer (DOE) reviewing the prioritized/risk-ranked list of independent oversight activities always has the prerogative to change the listed priorities. What the customer cannot require is more activity than the budget will support. Additions to the activities list included above the cut off line require commensurate deletions or sufficient additional budget to fund the desired activities.

Given the large number of activities that cannot be fully assessed because of budget constraints, Performance Assurance endeavored to work smarter. We have modified our approach to independent oversight to better match the current state of site infrastructure programs.

#### FAST SCANS VS. FULL BLOWN ASSESSMENTS

Rather than performing a full blown assessment or audit requiring an expenditure of 430 staff hours on each programmatic function, we utilize an oversight function developed and tagged, "Fast scan," by our Director (after the navy's fast scan mode of radar). A fast scan assessment entails briefly examining an activity to determine if the desired product is delivered in an efficient and effective manner. A fast scan averages 60 staff hours of effort. Like a fast scan radar sweep, this approach does not provide a high resolution picture with lots of detail, but it does quickly alert senior management to potential problems. This allows a real time confirmation/refutation of senior management concerns about high risk activities. Barriers to performance and areas with less than satisfactory results become candidates for full performance based assessments.

The Fast Scan technique is appropriate and works today at Rocky Flats because infrastructure programs installed in the early 1990's have matured and stabilized. It is no longer necessary to perform an annual compliance review comparing infrastructure programs such as Conduct of Engineering or Occupational Safety against requirements. Rather, a quick review of changes to the program of interest implemented since the last oversight review and a performance based review of continuing program implementation are sufficient. The documentation and control of program changes is itself a maturing infrastructure program that did not exist at Rocky Flats prior to the 1990's.

The Assessments Program also relies on Self-Evaluation performed by line management as required by 10 CFR 830.120, (3) Assessment--(i) Management Assessment to monitor

compliance with requirements. This reliance is possible since the Assessments Program evaluates the Self Evaluation Programs of site organizations via the Fast Scan technique. The Assessments Program in its role of independent overseer examines the results of site activities to confirm satisfactory results are obtained or to identify and challenge unsatisfactory results. Detailed oversight of compliance with requirements involved in achieving desired results is generally left to the Self-Evaluation Program.

Audits are performed only when required by an outside driver such as the Nevada Test Site agreement for shipment/disposal of Low Level Radioactive Waste. The limited number of full programmatic assessments allowed by our budget are performed on only the most severe problem areas identified by fast scan assessments.

## CONCLUSION

Meeting increased requirements with declining budgets mandates not only the, "Work smarter," solution, but also that we extract what must be done from what should be done. The enclosed organization charts illustrate the shrinking resources. The organization in August, 1993 is shown in Figure 3, with a staff of 85. The November, 1994 Assessments Program organization is shown in Figure 2, a staff of 50 and as stated earlier, this has been reduced to 43 with further reductions being considered. Planning, estimating, and prioritizing the resource requirements for an entire year of activities allows the customer to make informed decisions allocating shrinking resources. Working smarter, recognizing the maturing infrastructure allows independent oversight to concentrate on Performance Based Assessments rather than Compliance Based Audits.

## REFERENCES

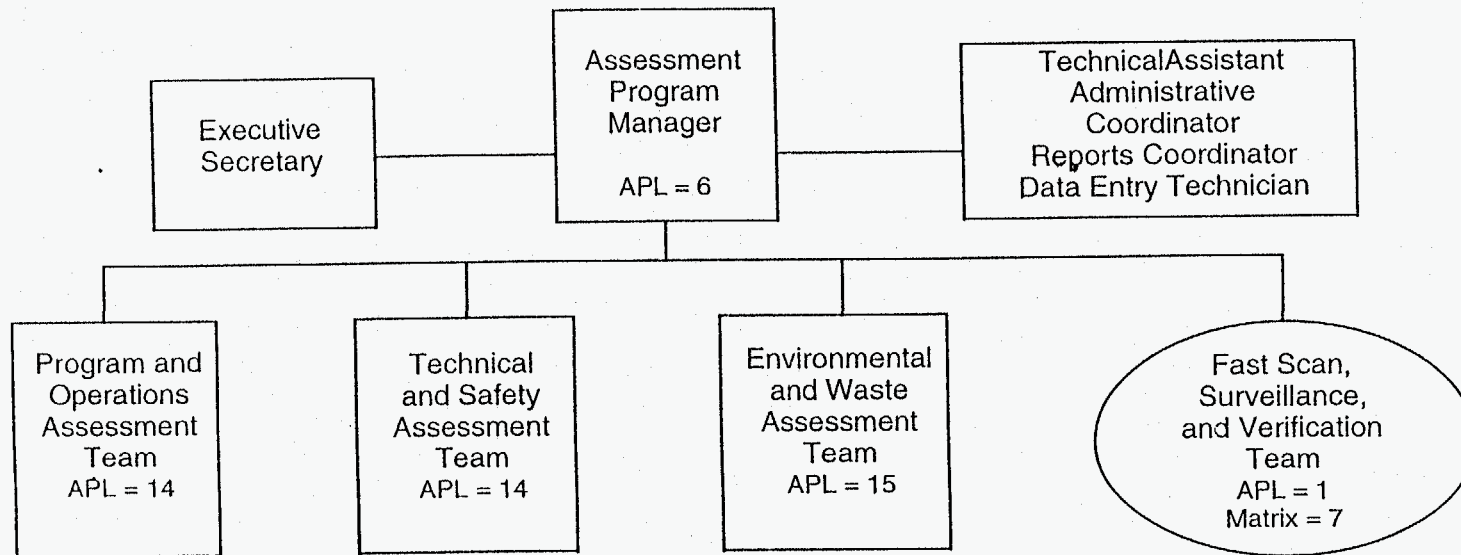
1. DEPARTMENT OF ENERGY ORDER 5700.6C, *QUALITY ASSURANCE*.
2. TITLE 10 CODE OF FEDERAL REGULATIONS, PART 830 *NUCLEAR SAFETY MANAGEMENT, SECTION 120 QUALITY ASSURANCE REQUIREMENTS*
3. DEPARTMENT OF ENERGY OFFICE OF ENVIRONMENTAL AUDIT (EH-24), *EH-24 SELECTING AUDIT LOCATIONS STANDARD OPERATING PROCEDURES (SOP)*

# AUDIT SELECTION CRITERIA AND THEIR PRIORITY RATINGS

| <u>TOTAL</u><br><u>SCORE</u> | <u>PROGRAM</u>            | <u>HOURS</u> | <u>CUMM</u><br><u>HOURS</u> |
|------------------------------|---------------------------|--------------|-----------------------------|
| 100                          | LL Wst Mgnt - NTS         | 400          | 400                         |
| 93                           | Electrical Safety         | 430          | 830                         |
| 90                           | Self-Evaluation Program   | 430          | 1260                        |
| 79                           | Independant QA Assessment | 430          | 1690                        |
| 70                           | Lesson Learned Program    | 430          | 2120                        |
| 63                           | Freeze Protection         | 430          | 2550                        |

Fig. 1.

# NOVEMBER 1994 ORGANIZATION

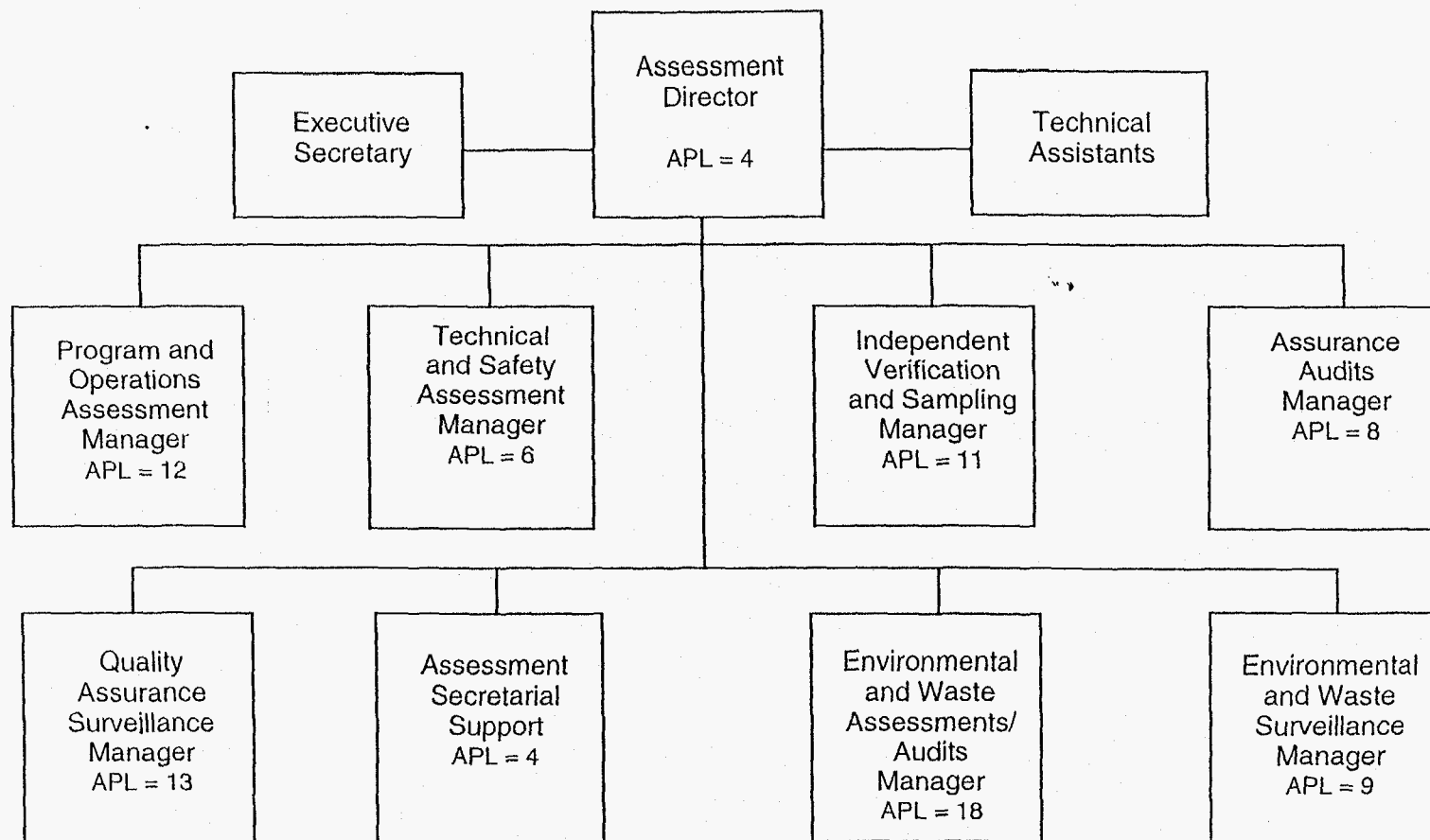


APL = AUTHORIZED PERSONNEL LEVEL

Authorized APL = 50

Fig. 2.

# AUGUST 1993 ORGANIZATION



APL = AUTHORIZED PERSONNEL LEVEL

Authorized APL = 85

Fig. 3.