

A REGULATORY MANAGEMENT SYSTEM FOR LICENSING  
A LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITY

Mary Whitman and Leonard Slosky  
Office of the Governor  
State of Colorado

ABSTRACT

The State of Colorado has developed a computerized regulatory management system for licensing a low-level radioactive waste disposal facility. The purpose of this system is to identify all of the principal permits and licenses required and the information needs and decision points of each, so that the federal, state and local governmental agencies may operate in the most efficient and effective manner possible. Colorado sees this system as a valuable tool to ensure that a low-level waste disposal facility is licensed with the maximum degree of efficiency and thoroughness while providing an open atmosphere of communication between the applicant and regulatory agencies. It is also designed to provide ample opportunity for the public to participate in the permitting process. It is a system which can be used to the benefit of all interested parties.

BACKGROUND

Faced in the late 1970's with the prospect of licensing several major energy projects, the State of Colorado developed the Joint Review Process. The purpose of this program was to coordinate the regulatory and permitting functions of local, state and federal agencies in order to reduce redundancies, avoid conflicting regulations and ensure permitting thoroughness. Another major purpose was to facilitate public participation in the early stages of the permitting process in order to encourage a more responsive attitude toward legitimate public concerns.

Currently, Colorado is faced with the responsibility of hosting a low-level waste disposal facility to serve the Rocky Mountain Compact region. The State sees the Joint Review Process as a useful tool both to ensure the timely and complete licensing of such a facility and to involve the public in the permitting process.

In the past, the Joint Review Process has been managed by manually listing all of the permits required by a particular facility, including all action and decision points, such as public hearings and application reviews. Prior to the establishment of the Joint Review Process, if a schedule on one permit slipped, its effect on other permitting actions was largely unknown. Under the Joint Review Process, the effects of one permit schedule's slippage could be traced through other permits and the Joint Review Process master plan revised accordingly. However, this system could be cumbersome and was subject to error if all of the implications of one activity on other permit activities were not recognized and recorded.

Through a grant from the U.S. Department of Energy, Colorado is computerizing the Joint Review Process to improve its usefulness. With the computerized system, changes in any schedule will automatically be recorded and their impact on other permitting schedules instantly recognized and noted. The computerized Joint Review Process will also allow the manipulation of the permitting schedule,

enabling government agencies, the project proponent and the public to determine the flexibility of the various permitting schedules to determine with a greater degree of certainty the completion date for licensing and the operational date for the facility.

PURPOSE OF COMPUTERIZED REGULATORY MANAGEMENT SYSTEM

Neither the manual Joint Review Process nor its computerized version are absolutely necessary for the development and operation of a low-level waste disposal facility. The facility proponent could proceed on the many individual permitting tracks, keeping each separate. Likewise, the various regulatory and decision-making governmental agencies could review each application separately, never communicating with one another and not considering how all of the pieces of the puzzle fit together and how their decisions affect other requirements.

Similarly, the governmental agencies and project proponent could continue to play the old game of guessing what one another's needs and constraints are, rather than clearly delineating their requirements and positions. And likewise, the public could be left in the dark throughout the entire initial stages of the permitting processes, only to be afforded a peek through public meetings after decisions had already been set in concrete and could not or would not be changed.

Such an approach is detrimental to all interested parties. The project proponent is forced to spend additional time and money through resubmissions of applications which agencies reject for incompleteness because insufficient communications took place between the parties before the applications were submitted. The project proponent may also be forced to spend additional time and money on different applications to meet duplicatory or conflicting agency requirements.

An uncoordinated approach also costs governmental agencies limited resources which could be more efficiently spent through coordination of their responsibilities. While no agency may abdicate its

responsibility to another, permitting activities could be coordinated to enable joint review and evaluation of similar applications which must be submitted to more than one agency.

The traditional regulatory approach may also limit real public input into the facility permitting process and result in significant delays through legal actions. Through the Joint Review Process, the public can be brought into the regulatory process early, when suggestions and concerns can be more easily addressed and before large investments of prestige and money make change less plausible. Early public involvement is certainly no guarantee that no legal action will be taken against the proposed facility by opponents, but it is more likely to provide a defensible record of soliciting public input and acting on legitimate concerns and identifying illegitimate ones.

#### REQUIRED PERMITS

Discussions regarding the licensing of a low-level radioactive waste disposal facility generally revolve around only the application of the U.S. Nuclear Regulatory Commission's (NRC) 10 CFR 61 regulations. Clearly, this is the major requirement and meeting those regulations will result in the issuance of a radioactive materials license from either NRC or, in the case of Colorado which is an Agreement State, from the Colorado Department of Health. However, receipt of this license does not clear the way for development and operation of a low-level waste disposal facility.

Following is a brief explanation of the major regulatory documents which may be required before a low-level waste disposal facility could begin operations. The list is not all-inclusive, since minor permits, such as to allow road construction through federal lands may be required.

Radioactive Materials License: The primary state license will be the radioactive materials license, issued by the Colorado Department of Health, Radiation Control Division. The issuance of this license will depend on the Department's assessment that the project proponent can comply with the State's regulations, which must be compatible with NRC's 10 CFR 61.

Air Emissions Permit: It is possible that an air emissions permit may be required for a low-level waste disposal site, not because of radiation emissions, which would be covered by the radioactive materials license, but because of dust caused during the site's construction and possibly during its operation when new trenches are dug. This permit would be issued by the Colorado Health Department's Air Pollution Control Division.

Subsurface Disposal Permit: Before disposal of any radioactive waste, the State's Water Quality Act requires the issuance of a subsurface disposal permit. This permit is issued by the Health Department's Water Quality Control Division.

Certificate of Designation: As in many states, counties play a crucial role in the siting of certain facilities. This is true in Colorado, where the Health Department is prohibited from issuing a radioactive materials license for a low-level waste disposal facility until the county in which the facility is located issues a certificate of designation. This certificate is

simply the county's designation of the proposed facility's location as appropriate for that type of operation. However, because of the preeminence it holds over issuance of the radioactive materials license, it is critical to the licensing process.

Special Use Permit: In Colorado, land use planning takes place at the county level and can vary between counties. Generally, however, in counties with land use planning requirements, projects to be undertaken within those counties' borders must be issued a special use permit by the county commission. Through the special use permit, the county may make specific requirements to protect the area and community.

Environmental Impact Statement: Although not a permit or license, an Environmental Impact Statement (EIS) plays a crucial role in the licensing of many facilities, and a low-level waste disposal facility may be no exception. Considering the large percentage of federal land in Colorado, it is very likely that such land could be chosen for a low-level waste disposal facility. Clearly, use of federal land for such a purpose would be considered a major federal action necessitating the preparation of an Environmental Impact Statement.

#### REGULATORY COORDINATION

The first step in organizing the regulatory process for a low-level waste disposal facility would be to identify all important dates and decision points for each permit, license or other agency action. After this was done, the interrelationship between the dates and decision points of each agency action must be identified. For example, since the county certificate of designation must be issued before the radioactive materials license, any slippage in the Board of County Commissioners' schedule could impact the date of issuance of the radioactive materials license.

This example also illustrates the usefulness of a computerized Joint Review Process as opposed to a manual one. Under a manual system, a slippage in the county's schedule would obviously indicate the need to change the date by which the certificate of designation would be issued. However, it would not be immediately obvious that the county's schedule change would also change the date for issuance of the radioactive materials license by the Colorado Department of Health. Under a computerized system, the project would not be reliant on the good memory of the person responsible for maintaining the Joint Review Process schedule, but rather would be programmed into the computer and automatically accounted for.

#### SYSTEMS LOGIC AND DESIGN

To computerize the Joint Review Process, it has been necessary to identify every scheduling component, durations of activities and milestones of each agency action and to identify any interrelationships between those components. This is necessarily a very extensive and detailed list which must account for all activities affecting the completion of an agency action.

Because of the detail needed, it is likely that several revisions may be necessary to add minor activities that were initially overlooked but which impact the regulatory schedule. However, once the

data base has been refined, the resultant scheduling capability of the system will allow accurate, up-to-the-minute monitoring of the regulatory schedule.

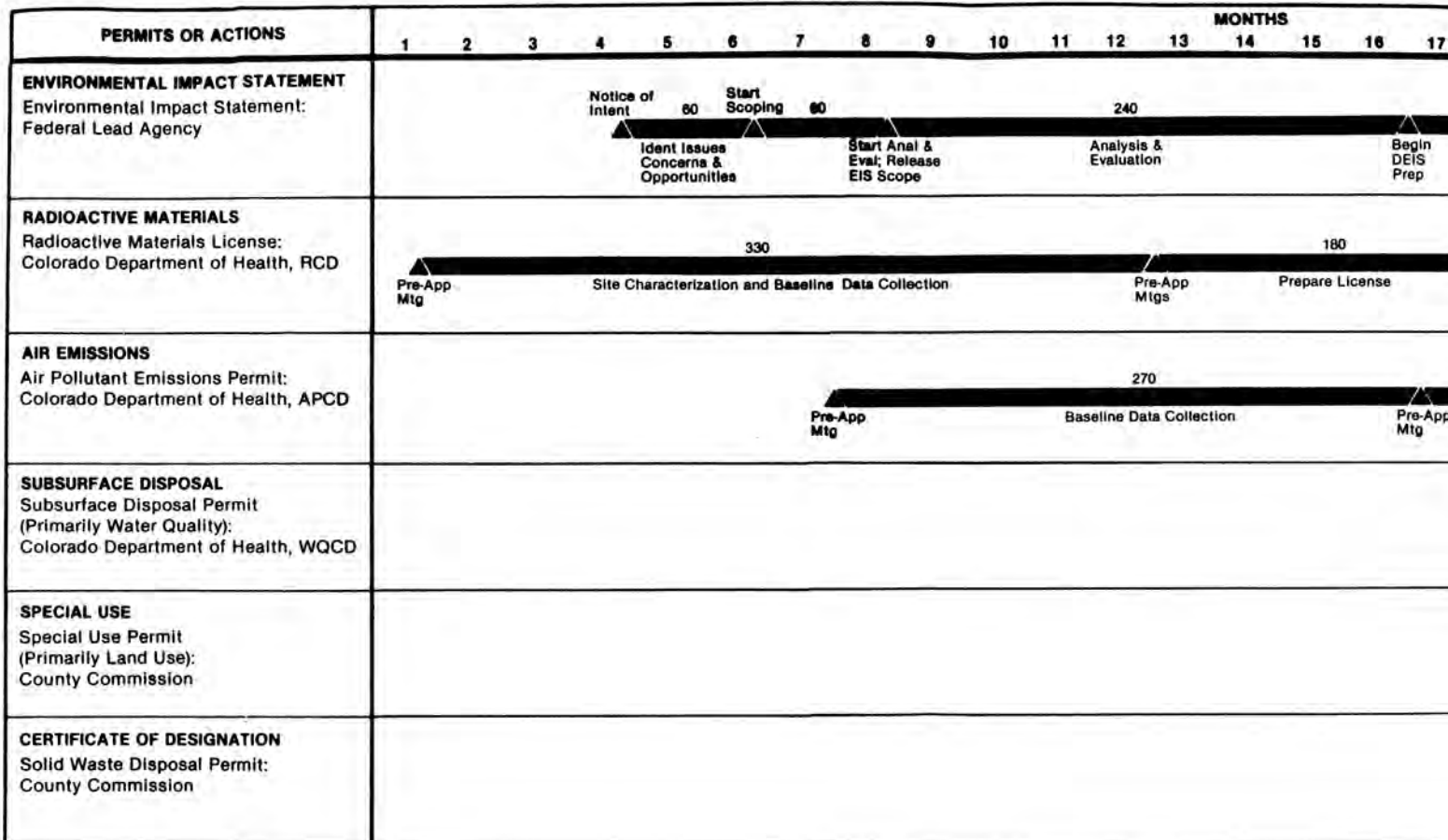
An example of the schedule components required to computerize the Joint Review Process is shown in Figure 1 for the radioactive materials license. Schedule components have been identified, time frames for each assigned and responsible parties shown. What Figure 1 does not indicate but which would be factored into the system is the

interrelationship between the radioactive materials license schedule components and those of other agency actions.

With such detailed schedule components for each major agency action, efficient and timely management of regulatory activities relating to the licensing of a low-level waste disposal facility will be possible. Figure 2 is a flow diagram combining all of the major agency actions necessary to approve a low-level waste disposal facility.

Figure 1  
Schedule Components for a Radioactive Materials License

<u>Component</u>	<u>Duration (days)</u>	<u>Responsibility</u>
Pre-application meeting	1	Joint Review Process Office
Proponent prepares application	88	Proponent
Application submitted	1	Proponent
Public notice of application receipt	1	Radiation Control Division
Technical Review Group convened	5	Radiation Control Division
Completeness reviewed	30	Radiation Control Division
TRG comments to Radiation Control Division	25	Technical Review Group
Deficiencies identified	3	Radiation Control Division
Notification of completeness	140	Radiation Control Division
Proponent prepares additional information	22	Proponent
Information reviewed for completeness	30	Radiation Control Division
Technical Review Group review & comment	66	Technical Review Group
Initial technical review	66	Radiation Control Division
Questions to proponent	22	Radiation Control Division
Proponent responds	22	Proponent
Additional questions to proponent	22	Radiation Control Division
Proponent responds	22	Proponent
Identify resolved significant issues	0	Radiation Control Division
Identify unresolved significant issues	0	Radiation Control Division
Preliminary issues analysis	22	Radiation Control Division
Prepare Draft Preliminary Executive Licensing Review Summary	22	Radiation Control Division
Technical Review Group review & comment	22	Technical Review Group
Review Draft Preliminary Executive Licensing Review Summary	22	Radiation Control Division
Revise & print Draft Prelim. Exec. Lic. Review Summary	22	Radiation Control Division
Public notice/hearing on Prelim. Exec. Lic. Review Sum. review	1	Radiation Control Division
Decision on party status	46	Radiation Control Division
Discovery complete	10	Parties
Prehearing conference	1	Radiation Control Division
Joint public hearing with County	2	Radiation Control Division
Findings of fact and conclusions of law	15	Parties
Proponent responds	8	Proponent
Prepare Final Executive Licensing Review Summary	33	Radiation Control Division
Tech. Review Group reviews Executive Licensing Review Summary	22	Technical Review Group
Review Executive Licensing Review Summary	22	Radiation Control Division
Issue Executive Licensing Review Summary	22	Radiation Control Division



**ABBREVIATIONS**

APCD—Colorado Air Pollution Control Division  
 BCC—Board of County Commissioners  
 BLM—Bureau of Land Management  
 DEIS—Draft Environmental Impact Statement  
 Dr—Dratt

FEIS—Final Environmental Impact Statement  
 Jt—Joint  
 PC—Planning Commission  
 PCom—Public Comment  
 PH—Public Hearing

PN—Public Notice  
 RCD—Colorado Radiation Control Division  
 WQCD—Colorado Water Quality Control Division

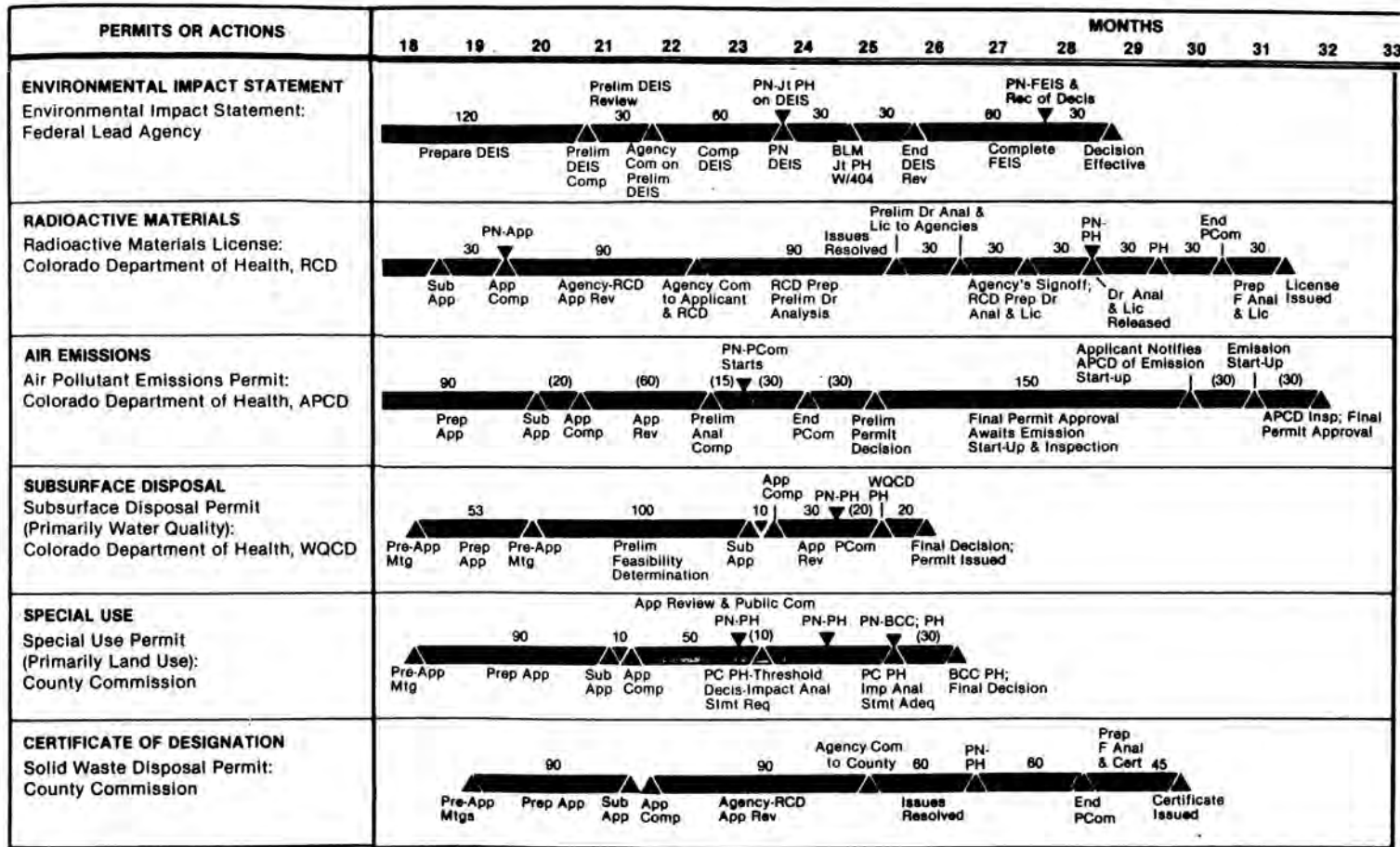


Figure 2 (continued)

**ABBREVIATIONS**

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