



A U.S. Department of Energy
Site-Specific Advisory Board

NNMCAB Members

Gerard Martínez, Chair
Santa Fe, NM

Angelica Gurulé, Vice-Chair
Española, NM

Cherylin Atcitty
Taos Pueblo, NM

Max Baca
Las Vegas, NM

Beth Beloff
Santa Fe, NM

Adam Duran
Pueblo of Pojoaque, NM

Elena Fernandez
Taos, NM

Jacquelyn Gutierrez
Santa Clara Pueblo, NM

Roger Life
Española, NM

Robert Hull
Los Alamos, NM

Joshua Madalena
Pueblo of Jemez, NM

Daniel Mayfield
Nambe, NM

Lawrence Medina
Ranchos de Taos, NM

Alex Puglisi
Santa Fe, NM

Angel Quintana
Pueblo of Pojoaque, NM

Stanley Riveles
Taos, NM

Ashley Sanderson
Santa Fe, NM

Steven Santistevan
Arroyo Seco, NM

Stephen Schmelling
Santa Fe, NM

Deborah Shaw
Santa Fe, NM

Irene Tse-Pe,
Pueblo de San Ildefonso, NM

Michael Valerio
Taos, NM

Jenessa Chacon
Student Representative

Jacob Griego
Student Representative

Janessa Trujillo
Student Representative

Lanz Sanchez
Student Representative

May 24, 2018

Mr. Doug Hintze, Manager
Environmental Management Los Alamos Field Office
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

Dear Mr. Hintze,

I am pleased to enclose Recommendation 2018-02 "Recommendation Regarding the Energy Communities Alliance Report on Waste Disposition," which was unanimously approved by the Northern New Mexico Citizens' Advisory Board during its meeting on May 23, 2018.

Please contact me if you have questions regarding this recommendation. We look forward to the response from the Department of Energy.

Sincerely,

Gerard Martínez y Valencia
Chair, NNMCAB

Enclosure: a/s

Cc w/encl:

U. S. Senator Tom Udall
U. S. Senator Martin Heinrich
U. S. Congressman Ben R. Lujan
Secretary Butch Tongate, NMED
David Borak, DFO (via e-mail)
M. Lee Bishop, DDFO (via e-mail)
David Rhodes, EM-LA (via e-mail)
Gil L. Vigil, Executive Director Eight Northern Indian Pueblos
Menice B. Santistevan, NNMCAB Executive Director
NNMCAB File

Northern New Mexico Citizens' Advisory Board
94 Cities of Gold Road
Santa Fe, NM 87506
Phone: 505-989-1662 Fax: 505-989-1752
1-800-218-5942

www.energy.gov/em/nmcb

NORTHERN NEW MEXICO CITIZENS' ADVISORY BOARD

Recommendation to the Department of Energy

No. 2018-02

Recommendation Regarding the Energy Community Alliance Report on Waste Disposition

Drafted by: Dr. Stanley Riveles

Background

The Energy Communities Alliance (ECA) sponsored the wide-ranging report “Waste Management: A New Approach to DOE’s Waste Management Must be Pursued.” The NNMCAB was invited to review its recommendations. These recommendations would, if implemented, bring about major changes in longstanding national policies regulating the categorization, treatment, and disposition of DOE legacy radioactive waste. The environmental management of such wastes would henceforth be based, not on origin, but on the radioactive characteristics of the waste and the resulting risks to human health and to the environment. (Presumptively, such changes could also impact the disposition of NNSA waste.)

Far-reaching in its potential impact on national policy, the report affects, but goes well beyond the purview of the NNMCAB. At the same time, the recommendations would have major implications for New Mexico, both positive and negative. Though not directly referenced in the report, LANL/EM practices would be significantly affected. However, the Waste Isolation Pilot Project (WIPP) gets a lot of attention. It would receive different (re-categorized) and larger volumes of waste. It is envisioned that WIPP would benefit from greater capital investment, resulting in more jobs and greater economic activity in the region. The larger waste (and more frequent) volumes brought to WIPP from locations throughout the U.S. could raise risks to both health and environment and further burden the transportation network in New Mexico.

The report underlines the urgency of pursuing a new approach. According to figures cited in the report, DOE’s overall environmental waste liability has more than doubled to \$372 billion over the past 20 years, of which EM’s portion has grown over \$90 billion from \$163 billion to \$257 billion. Reducing the lifecycle costs of these radioactive wastes and the burden on local communities requires a new decision approach based on risk management.

Comments and Observations

The systemic problems of the DOE/EM program identified by the ECA report are clear and compelling. The present classification waste based on origin, rather than risk goes back to the beginnings of the nuclear weapons program. The economics of the program are currently unsustainable—somewhat akin to making the minimum payment on a growing credit card balance. The current classification categories in DOE Order 435.1 (Radioactive Waste Management) do not align with NRC domestic or IAEA international standards. In principle, transition to a risk management approach would result in less “over-classification” of waste and reduce the volume of wastes subject to higher levels of handling. According to the ECA report, costs would be significantly reduced—estimated at \$2.5 million per day.

The ECA report itself is based on much prior research dealing with the same problem. The ECA is composed of representatives of local communities hosting DOE facilities and thus has a degree of local “buy-in.” Furthermore, the report ostensibly has the support of the Waste Management industry, as evidenced by remarks by industry leaders at the 2018 Waste Management Conference in Phoenix.

47 However, while the report presents a coherent and consistent argument on behalf of a new approach, it
48 would be difficult to determine the merits based on this policy study alone. The lack of empirical data is
49 a significant drawback. There are no charts or figures in the study. The “new” system of classifying
50 waste is not defined either in general terms or specific levels of radioactivity. Methods for determining
51 or calculating the conversion of existing to new classes of waste are not presented. Global figures for
52 total amounts of waste and total costs are presented narratively. But it is not possible to evaluate the
53 differential impact by DOE facility or State. The WIPP facility plays a prominent role in the proposed
54 solution as the recipient of significantly increased volumes and types of waste. But the specific amounts
55 are not explained. WIPP is also expected to receive increased capital expenditures for expansion, but
56 specific numbers are not provided. Information on the notional return on investment is not provided
57 (except the vague estimate of \$2.5 million per day mentioned above). On the whole, the merits are
58 asserted but not really evaluated or empirically justified.

59
60 The ECA Report sets forth policy changes to advance desirable and widely-accepted goals of cleaning
61 up nuclear wastes nationally and in New Mexico. At the same time, New Mexico plays an important
62 role in the solution. But given the empirical shortcomings, the report should be regarded, at this juncture,
63 as a worthwhile, but preliminary policy study. A pro or con recommendation on the merits of the
64 proposal is not possible at this time.

65
66
67

68 **Recommendations**

69
70
71
72
73
74

1. The NNM CAB recommends that DOE/EM undertake a comprehensive analysis of the ECA report, including technical, financial, environmental, safety, transportation, and other implications of implementing its recommendations. This is for the purpose of evaluating the impact of such changes.
2. The NNM CAB recommends that DOE/EM evaluates the site-specific impact of implementing the recommended changes in New Mexico, specifically including LANL and WIPP, including both potential risks and benefits.
3. In undertaking its evaluation, The NNM CAB recommends that DOE/EM address the types of questions developed by the NNM CAB set forth in the attachment.
4. The NNM CAB recommends that DOE/EM provide a realistic deadline for performing the analysis and brief its results on an ongoing basis to the NNM CAB and New Mexico environmental authorities for comment and input.

75
76
77
78

79
80
81

82
83
84
85

86 **Intent**

87
88
89
90

It is the intent of the NNM CAB to remain seized of this issue to order to promote completion of clean-up programs at LANL and effective use of WIPP and to assure the availability of adequate resources to pursue both goals.

91
92

93 **References**

94

- 95 1. *“Waste Disposition: A New Approach to DOE’s Waste Management Must Be Pursued,”* Energy
96 Communities Alliance, September 2017.

97 [https://static1.squarespace.com/static/55c4c892e4b0d1ec35bc5efb/t/59ce7384cd39c3b12b97f988](https://static1.squarespace.com/static/55c4c892e4b0d1ec35bc5efb/t/59ce7384cd39c3b12b97f988/1506702214356/ECA+Waste+Disposition+Report.pdf)
98 [/1506702214356/ECA+Waste+Disposition+Report.pdf](https://static1.squarespace.com/static/55c4c892e4b0d1ec35bc5efb/t/59ce7384cd39c3b12b97f988/1506702214356/ECA+Waste+Disposition+Report.pdf)

Attachment
Relevant Questions Concerning the ECA Report

99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142

Technical

- What would the “risk” based classification look like?
- Are there precedents for such a classification?
- Would it replace or complement existing DOE classification system?
- If risk is substituted for origin, what would be the technical definitions, based on what criteria?
- Do changes require new federal legislative action? If by regulation, could the changes be challenged in court?
- Would regulations regarding exposure to radioactivity for workers and the public need to be changed, if waste is recategorized?

Materials

- How much waste would be removed from the HLW category under new definition?
- How would volumetric changes be determined, on average or by individual containers?
- How much of new TRU & LLW derive from liquid waste?
- How would TRU and LLW currently comingled with HLW be separated?
- How much would be potentially directed to WIPP?
- Would container volumes currently stored at WIPP be recalculated.
- Provide charts/graphs showing quantities currently classified and quantities following classification.

WIPP

- What is current WIPP capacity limit? What would be new limit if container contents were recalculated?
- Is this a manual or algorithmic recalculation?
- What legal changes would be required? Do changes require action by NM legislature?
- What burdens does WIPP expansion impose on NM? Transportation and transportation safety, personal exposure, traffic, roads, environmental?
- How would those burdens be mitigated?
- If WIPP is expanded, what benefit does that provide to NM in terms of investment and jobs?

Cost/Benefit

- What is the economic impact of the changes?
- What is the return on investment?
- What is the cost/benefit impact for facilities in New Mexico, and how are they calculated?