

December 5, 2011

To: Dan Herrera  
Sharon Hendricks  
D'Val Westphal  
John Fleck

From: Greg Mello, Los Alamos Study Group

**Re: Brief remarks re CMRR-NF as an economic development engine, and alternatives:  
*it's time for our leaders to drop CMRR-NF and move on to practical, useful things.***

Dear Dan, Sharon, D'Val, and John –

Thanks again for our meeting last week.

In our meeting you asked me some serious questions about the economic future of New Mexico. I answered as well as I could in the time allowed, given our primary focus was on the Chemistry and Metallurgy Research Replacement (CMRR) project and its proposed Nuclear Facility (CMRR-NF) at Los Alamos National Laboratory (LANL).

In this memo, too, I will have to be very brief, even terse. But I heard your sincere concern loud and clear, and share it – hence this memo. The questions you posed go to the very heart of what this organization is about.

The *Journal's* engagement with economic development and related political issues is extremely important. The nature of your engagement is and will remain a powerful influence on which path this state takes and how fast it can go.

In general, however, the *Journal's* preconceived, ideologically-driven approaches to economic issues make it a powerful force against economic and social development in New Mexico. But that's a story for another day.

I directly addressed most of your wider questions in the following article and subsequent briefing for a number of liberal foundations, which I humbly but strongly commend to you.

- [Does Los Alamos National Lab Help or Hurt the New Mexico Economy?](#), pdf, July 2006
- [Weapons Labs and the Future of New Mexico: Problems, Prospects, Messages](#), pdf, May 2007

You might or not be surprised to know that we think liberal foundations are often at sea when it comes to economic development (and laboratory) issues also.

You asked me whether the Los Alamos Study Group wanted to close the labs. I said no; we want to make them smaller. A 2007 letter to congressional appropriators from us on this topic is illustrative.

With numerous exceptions DOE, along with its semi-autonomous sub-agency the National Nuclear Security Administration (NNSA), is a badly-run department with often-appalling technical judgment. In both these agencies, judgment is easily captivated by contractor interests, parochial political interests, and science fiction. Big programs are often proposed and run for years on the basis of what amounts to little more than fantasy, ideology, self-interest, and pride.

This is not surprising given that DOE contractors spend more than 94% of the agency's funds. DOE functions too much like an impresario, accountant, and apologist for its laboratory contractors.

At the same time DOE seems to find itself in the business of marketing technological fairy-tales to temporize the important energy decisions now facing a frightened nation. In this regard, DOE offers the services of its labs for a hefty price as so many "Santa Clauses," with uneven results. The truth is that many DOE programs, military and civilian, will never produce much in the way of useful results. Many people know this already. It would be helpful if DOE were less of a "rube agency," one less captivated by its own myths.

DOE's problems mostly stem from its nuclear origins and its biggest problems are still tied to military and civilian nuclear promotionalism, largely based in the labs. There, the two strains of nuclearism institutionally blend. DOE's nuclear labs, especially the weapons labs, are the agency's biggest "problem initiators" and "problem promoters." Their collective scale significantly exceeds their utility.

This realization was once more common than it is today. On February 8, 1992, House Science Committee Chairman George Brown (D-Riverside, CA) wrote Secretary of Energy James Watkins regarding the future of the DOE nuclear weapons laboratories. The problem, as he saw it, was that

...the end of the Cold War has left the DOE weapons labs scrambling to define new missions for themselves, yet they are all reaching for the same new missions....With the end of the Cold War, do we still need three nuclear weapons labs, each funded at approximately one billion dollars per year and each with employment of about 8,000 people?

His answer was no. Among other measures, Brown advocated shrinking budgets.

Reduce the DOE nuclear weapons research, development, and testing budget by 20 percent per year over the next four years...the annual nuclear weapons RDT&E budget of nearly two billion per year could be cut in half.

These cuts look about right to me [in 2007, after correcting for inflation] and this approach is still a good reference point for policy.<sup>1</sup>

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<sup>1</sup> From [Letter to congressional appropriators: how the Energy and Water budget could be balanced](#), Dec 3, 2007.

That was then. In late 2009 and throughout 2010, the New Mexico laboratories received unprecedented increases in actual and promised funding, especially at LANL but also in the Sandia National Laboratories (SNL) nuclear weapons program.<sup>2</sup> These increases are very likely a bubble that will soon pop.

Earlier this year the handwriting began to appear on the wall: NNSA nuclear weapons programs are unlikely to be funded at the dramatically increasing levels described in 2010.<sup>3</sup> Sentiment supporting these cuts is bipartisan, with the Republican-led House of Representatives leading the way (but not by much.)

In my opinion the DoD and uniformed military *expect*, and with varying attitudes also broadly *accept*, the reality of cutbacks in recent previous aspirations for DoD nuclear weapons programs. I could offer many citations for this but time is short and I hope you will simply credence my opinion.

The broader financial, economic, resource availability, climate, social, and political context in which decisions are made is deteriorating rapidly. From October 2007 on we have hosted several dozen public talks and discussions about what we have called our “converging crises.” These crises, which now are perhaps more accurately described as a single crisis, will seriously affect plans for CMRR-NF and are doing so already. This was a major theme in talks I gave in Santa Fe (about nuclear power) and in Los Alamos (about CMRR-NF) this past summer.<sup>4</sup>

Before discussing CMRR-NF in particular it is important to note that by definition, some business interests always want large construction projects, including nuclear weapons construction projects.

Some of this interest is based in realistic assessments of business opportunity; most of it is not. The business community here and elsewhere is frequently confused about the degree to which interests are held in common. For example, there is a world of difference between what is good for Bechtel, URS, Babcock and Wilcox, and the University of California, and what is good for most other businesses in New Mexico.<sup>5</sup>

Obviously local business interests should not weigh decisively in large national decisions. We rightly deride projects driven by parochial interests as “pork.”

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<sup>2</sup> [Obama Requests Nuclear Weapons Spending Surge](#), Study Group press release, Feb 1, 2010; [Huge "emergency" funding increase for nuke labs today](#), LASG press release, Oct 1, 2010.

<sup>3</sup> See [Bulletin #118: House Appropriations Committee slashes \\$100 million from huge proposed plutonium facility at Los Alamos](#), press release, Jun 15, 2011 and [Bulletin #128: Senate funders would \(re-\)start construction of \\$6 billion plutonium fortress](#) [while cutting back funding], Sep 8, 2011.

<sup>4</sup> Mello, [CMRR talk in Los Alamos](#), (pdf) Jul 19, 2011; see also [How shall we nurture humanity and the living Earth](#), abstract of talk, Jun 8, 2008. The nuclear power talk was videotaped but I do not have a polished set of slides to offer.

<sup>5</sup> In this connection, these three sketches of the government-contractor relationship in the National Nuclear Security Administration (NNSA) nuclear warhead complex may be useful:

- [Competition - or Collusion? Privatization and Crony Capitalism in the Nuclear Weapons Complex: Some Questions from New Mexico](#) (pdf), May 30, 2006
- [About the LANS partners](#) (updated Jan 18, 2006)
- [Weapons Master: a Brief Profile of the Lockheed Martin Corporation](#), Dec 16, 2005

We at the Study Group are terribly interested in economic development but it is important to remain objective and non-self-interested when it comes to nuclear weapons policy. We have never been a NIMBY group and we must caution ourselves equally against being blinded by the opposite sort of local self-interest. Local business and environmental interests are very legitimate, of course – there are no other kinds, ultimately. All interests are local somewhere, even if they are also in a sense local everywhere as in the case of anthropogenic climate change, mercury poisoning from power plants, etc.

Over the past few months the probability that CMRR-NF will never be built, despite an apparent unanimity of support in the federal government, has been increasing. Beneath the surface, there are growing doubts that it is justified, feasible, affordable, and prudent. The information and analyses we have provided have been taken very seriously in high places, and the Department of Justice’s assurances that our litigation would be quickly dismissed are now perceived as hollow. Our legal cases – both of them – are quite sound and we are pursuing them vigorously, despite the difficulty of litigation in general. In short, we are being very successful and it would be folly to place one’s economic development “eggs” in the CMRR-NF “basket.” As I will explain below, they would never hatch there anyway, even if CMRR-NF were built.

The *Albuquerque Journal* could play a much more positive role in bringing this project to a prompt end, saving us all a lot of work and expense. We would love to build up this state, but protecting it from even worse ravages has been taking up all our time. Our elected leaders in both parties have frankly been doing neither for the past few decades.

#### CMRR-NF as a job creator

CMRR-NF, even in the unlikely case that it is eventually built, would not provide any significant number of jobs in New Mexico. We can categorize these potential jobs as follows:

##### a. Design jobs (from 2012 to 2020)

As of October of 2010, 283 persons were working on CMRR-NF planning and design (federal and contractors) in various states, according to an affidavit submitted by defendants in our first court case. Let’s guess that about 150 of these people were in New Mexico, and this same number will continue to be employed, on average, throughout the project, until 2020. Many subcontractors on this project (e.g. seismic, structural) are located wholly or primarily elsewhere.

The NNSA contractors who prepared the CMRR-NF Supplemental Environmental Impact Statement (SEIS) said that 0.57 indirect jobs would be created in their defined region of influence” (ROI) for the project, namely Los Alamos, Rio Arriba, Sandoval, and Santa Fe counties, for every construction job created by the project.<sup>6</sup> This appears reasonable.

Higher-paying engineering jobs will create more indirect employment than construction jobs, although not much more. Also, additional indirect jobs will be created in counties outside the ROI, although not as many.

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<sup>6</sup> CMRR-NF SEIS, p. 4-55. ROI defined, p. 3-46.

Thus it would be reasonable, in the absence of better information, to guess that CMRR-NF is already creating indirect jobs at about a 1:1 ratio to the direct jobs it is creating in the state.

Assuming so, CMRR-NF will create annually until 2020 about 150 direct additional design and engineering jobs in this state, along with an additional 150 indirect jobs, or 300 jobs in all. These jobs would last for 9 more years if the project went ahead.

A range of 200 to 400 total jobs should encompass most of the uncertainty in this estimate.

b. Construction jobs (2012 to 2020)

The SEIS estimates these as 420 or 410 (with the deep or shallow construction options, respectively), and estimates an additional 240 indirect jobs would be created, for a total of 660 jobs in the case of the deep option.

An unknown fraction of these jobs will be given to out-of-state certified nuclear construction workers and specialized nuclear subcontractors, because this entire project and everything in it must be certified to “NQA-1” standards pursuant to the nuclear safety standards of 10 CFR 830. The cognizant LANL senior manager alluded to some of the ensuing practical challenges last year in a public meeting in Espanola:

These workers [from out-of-state] are going to need housing....A particular concern of mine is how are we going to house all these people.... These are people, these are trades, they want to have nice, clean accommodations, work here for six or seven years, and then go to the next big construction project. So housing is going to be a particular challenge.<sup>7</sup>

Several questioners at this forum asked about this. A Study Group board member, normally reliable, heard an estimate from LANL that about two-thirds of the construction workers employed in this project would be from out-of-state. We have not reviewed our entire video record of this meeting to verify this but it is clear that some large fraction of the construction workers involved would reside only temporarily in New Mexico.

This temporary quality to a large chunk of the work force would not affect the number of temporary indirect jobs created in the ROI (240).

The economic and social “boomtown” effects – some positive and others negative, especially and immediately in the social category – were not mentioned in the SEIS.

So, if the perceived economic value of this construction is to create construction “jobs” for New Mexicans, the number of such direct construction jobs is likely to be in the general range of 150-300 on average for 9 years, plus the 240 indirect jobs estimated in the SEIS.

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<sup>7</sup> Talk at LANL-sponsored “Construction Forum” concerning CMRR-NF and related pending Pajarito Corridor construction in Espanola by Ike Richardson, LANL Deputy Director, June 10, 2010.

The SEIS correctly says that as a result of this construction “...there would be little or no noticeable impact on the socioeconomic conditions of the ROI.”<sup>8</sup>

For reference, *Albuquerque Journal North* reporter Kiera Hay recently provided background on the scale and status of the local Santa Fe and New Mexico construction industry.<sup>9</sup>

To make a long story short, CMRR-NF construction, as expensive as it would be, would make essentially no difference to the statewide construction industry and would not come close to compensating for the effects of the current and continuing economic downturn even in the nearby Santa Fe construction market.

c. Operating jobs (2021-closure)

According to NNSA, there would be no operational jobs created. “Workers assigned to the Modified CMRR-NF [i.e. today’s CMRR-NF] and RLUOB [Radiological Laboratory, Utility, and Office Building, the other CMRR building] would be drawn from existing LANL facilities, including the CMR [Chemistry and Metallurgy Research building.”<sup>10</sup> NNSA has said this many times.

Thus, “...CMRR-NF operations would cause no change to socioeconomic conditions in the LANL four-county ROI.”<sup>11</sup>

Elsewhere, LANL has estimated maintenance costs for CMRR at 2.5% of capital cost, i.e. at least \$100 million/year.<sup>12</sup> Program costs for the work taking place inside the building

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<sup>8</sup> CMRR-NF SEIS, p. 4-55.

<sup>9</sup> Kiera Hay, “Construction Jobs Fall 10%,” Nov 6, 2011:

The bad news just seems to keep coming for Santa Fe’s construction industry. Recent statistics show that economic sector lost 10 percent of its jobs over the past year...Santa Fe lost 300 industry jobs during the 12 months ending in September...As of last month, there were 2,800 construction jobs in Santa Fe. The average hourly wage was \$18.23, according to the state Department of Workforce Solutions...The Bureau of Labor Statistics’ May 2008 occupational employment report showed 3,810 construction jobs in the Santa Fe area. The same report two years later, in May 2010, showed a drop to 2,750 jobs – a 28 percent reduction, and about the same number of construction jobs shown in the most recent reports....The analysis from the Associated General Contractors of America reported that Albuquerque lost 2,700 jobs, or 12 percent of its construction jobs, from September 2010 to September 2011, placing it 329 out of 337 cities in the health of its construction employment sector....The state lost 4,100 construction jobs during the 12 months ending in September.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> “In FY14 [sic – now 2023 or 2024], the CMRR facility is planned to become operational. The CMRR maintenance budget is projected at approximately 2.5% of RPV [Replacement Plant Value] [that is, \$4.1 to \$6.2 billion for both buildings, giving an estimated \$103 to 155 million/year for maintenance] to sustain its condition. One of the challenges for the Laboratory and NNSA is to provide the funds necessary to meet this new maintenance funding demand.” In FY07, total LANL maintenance spending was \$88 M, of which \$6 M was for the existing CMR building. LANL, “Ten-Year Site Plan, FY2008-FY20017,” LA-CP-07-0039, January 9, 2007, pp. 114-115. Study Group files.

would be in addition to this. Neither of these generates new jobs because under today's spending caps they will be a redirection, not an increase, in LANL spending.

d. Total jobs for New Mexicans

Putting these NNSA and LANL estimates together, with the above additions (for designers) and subtractions (for out-of-state workers), I get an estimate of 590 to 940 jobs (average: 765) for New Mexicans on average over a nine-year period, and no jobs after that.

According to NNSA and LANL, construction of the CMRR-NF would create essentially no economic development, not even temporarily.

In my opinion and many other people's, based on all prior experience, the best estimate for the final cost of this project is higher than the high end of current estimates. We are using a round number of \$6 billion around here, which is no more than a guess based on NNSA's \$4 to \$6 billion guess. This gives a cost to taxpayers of almost \$900,000 per job-year for these few temporary New Mexico jobs.

Of course, this spending will create other jobs elsewhere, bringing the total U.S. jobs created per billion spent down toward (but not as low as) the defense industry generally – which is still very inefficient as a job creator compared to other spending or even to across-the-board tax cuts. (This is discussed further below.)

e. Structural employment benefits of CMRR-NF to New Mexico.

There are none. CMRR-NF will provide no useful commercial goods, services, education, or training, and the structure is not useful to the civilian economy. It will attract no private capital. It will not create, or serve as part of, any commercial business cluster. As soon as it is operated, it will become polluted. It generates nuclear waste, which is not an asset but a liability to the state.

Plutonium has no commercial uses in the United States; nor are there any such uses elsewhere which are not a) *required* and b) *heavily subsidized* by the state elsewhere. The Department of Energy's (DOE's) lavishly-subsidized mixed-oxide (MOX) reactor fuel program has no commercial buyers.

There will be negative structural effects from this project, such as loss of perceived residential and business amenity, congestion effects during construction, residential and public services impacts of the temporary workforce, and so on. Some of the effects would be temporary and some would be permanent.

f. If not to many jobs for New Mexicans, where would all the design and construction money go?

- i. As noted, about probably between 1/3 and 2/3 of the construction jobs will go to temporary nuclear workers.

- ii. Some, perhaps many, design jobs are located out of state.
- iii. Nearly all the equipment installed in CMRR-NF will come from out of state, as will many of the materials and supplies.
- iv. Engineer salaries in the U.S. design community are approximately twice those for average American jobs. Technical staff members at LANL make over three times what the average American worker makes and enjoy very generous benefit packages. This means fewer jobs are created for the same amount of money.
- v. This “cost-plus” project funds profits (booked and otherwise) at every step in corporate contracting chain, not merely the fee incentives offered to LANS, the overall manager of the project. To some extent, this project is being used to fund waste, overhead, and a variety of expenses grouped under the “Other Project Costs” moniker, as well as projects funded by LANL from hefty internal “taxes” paid on all incoming funds. House Energy and Water Development Subcommittee Chairman Rodney Freylinghuysen (R-NJ) alluded to “slush funds” in a sentence referring to this project. This was not a random remark.<sup>13</sup>

Counting on such a project to create economic development is like counting on a skunk to pull a plow. It doesn't have the horsepower, won't go in the right direction, will be very unpleasant, and will drive away nearly all other help. It would be an economic development catastrophe.

Friends, I am out of time. I would like to discuss a) defense jobs more generally; and b) practical economic development for this state. I have a great deal of prior work at my fingertips but no time.

The PERI folks have just put out a second update to their excellent 2007 study of defense spending as a job creator.<sup>14</sup> I urge you to take a look at that as well as the underlying study, which cites a long string of similar prior studies by others running back some decades. Popular articles summarize the issues.<sup>15</sup>

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<sup>13</sup> In his opening remarks of June 15, 2011, Freylinghuysen said the proposed bill would cut out from the Administration's request for nuclear warheads

...hundreds of millions of dollars for construction projects that are not ready to move forward, capabilities that are secondary to the primary mission of keeping our stockpile ready, and yes, slush funds that the Administration has historically used to address its needs. The recommendation before you eliminates these weaknesses and it is responsible.

Ninety percent of the construction cuts proposed were to CMRR-NF.

<sup>14</sup> “The U.S. Employment Effects of Military and Domestic Spending Priorities: 2011 Update,” Pollin, Robert, Garrett-Peltier, Heidi, 11/28/2011, <http://www.peri.umass.edu/236/hash/0b0ce6af7ff999b11745825d80aca0b8/publication/489/>.

<sup>15</sup> “Defense Spending: The Worst Way to Make Jobs,” <http://www.truth-out.org/defense-spending-worst-way-make-jobs/1315404218>; “Butter Beats Guns At Creating Jobs, Profs Say,” <http://defense.aol.com/2011/11/29/defense-spending-does-poor-job-of-creating-jobs/>.

Obviously, non-military federal spending is much more important to the New Mexico economy than is military and DOE spending. In 2010, military spending in New Mexico totaled \$3,236,069,248; DOE spending totaled \$4,183,624,000, of which \$2,624,919,000 was for nuclear weapons activities. Thus (military plus nuclear weapons) spending in NM was \$5,860,988,248 for 2010. Total direct federal expenditures in NM for 2010 were \$27,958,984,359. So (military plus nuclear weapons) spending in NM is just about 21% of total NM federal spending. Non-defense federal spending is almost five times as great as defense spending in New Mexico.<sup>16</sup>

This concludes my comments at this time.

Thank you for your attention and best wishes,

Greg Mello

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<sup>16</sup> Figures all from the Census Bureau, "Consolidated Federal Funds Report," <https://harvester.census.gov/cffr/asp/Geography.asp>, and DOE, "State Tables," FY2012 Congressional Budget Request, available at <http://www.mbe.doe.gov/crorg/prodCR.cfm>.