

**FOR PUBLICATION**  
**UNITED STATES COURT OF APPEALS**  
**FOR THE NINTH CIRCUIT**

TRI-VALLEY CARES; MARYLIA  
KELLEY; JANIS KATE TURNER,  
*Plaintiffs-Appellants,*

v.

U.S. DEPARTMENT OF ENERGY;  
NATIONAL NUCLEAR SECURITY  
ADMINISTRATION; LAWRENCE  
LIVERMORE NATIONAL LABORATORY,  
*Defendants-Appellees.*

No. 10-17636

D.C. No.  
4:08-cv-01372-SBA

OPINION

Appeal from the United States District Court  
for the Northern District of California  
Saundra B. Armstrong, District Judge, Presiding

Argued and Submitted  
January 11, 2012—San Francisco, California

Filed February 7, 2012

Before: John T. Noonan, Jr., and Milan D. Smith, Jr.,  
Circuit Judges, and Jed S. Rakoff, Senior District Judge.\*

Opinion by Judge Milan D. Smith, Jr.

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\*The Honorable Jed S. Rakoff, Senior District Judge for the U.S. District Court for Southern New York, sitting by designation.

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TRI-VALLEY CAREs v. U.S. DOE

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**COUNSEL**

Scott Yundt (argued), Livermore, California, and Steven Sugarman, Cerrillos, New Mexico, for the plaintiff-appellant.

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Barclay T. Samford (argued), Ignacia S. Moreno, and Jennifer Scheller Neumann, United States Department of Justice, Environment and Natural Resources Division, Denver, Colorado, for the defendants-appellees.

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### OPINION

M. SMITH, Circuit Judge:

This case arises out of Plaintiffs-Appellants Tri-Valley CAREs', Marylia Turner's, and Janis Kate Turner's (collectively, Tri-Valley CAREs) second challenge to the sufficiency of the United States Department of Energy's (DOE) Environmental Assessment (EA) of a prospective "biosafety level-3" (BSL-3) facility at the Lawrence Livermore National Laboratory (LLNL). In an earlier round of litigation, we upheld all aspects of the DOE's original EA, except for its failure to consider the impact of a possible terrorist attack. Following our remand, on September 30, 2009, the district court entered summary judgment in the DOE's favor on the grounds that it had sufficiently revised its Final Revised Environmental Assessment (FREA) to adequately consider the environmental impact of an intentional terrorist attack on the BSL-3 facility at LLNL. On November 18, 2010, Tri-Valley CAREs timely appealed the district court's decision, petitioning us to require the DOE to prepare an Environmental Impact Statement (EIS), or, in the alternative, to revise its EA, in light of the allegations set forth in its original complaint, to determine whether an EIS is required.

We hold that the DOE took the requisite "hard look" at the environmental impact of an intentional terrorist attack in the manner required by the National Environmental Policy Act (NEPA) and *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Commission*, 635 F.3d 1109 (9th Cir. 2011). We further hold that the district court did not abuse its discretion

in denying Tri-Valley CAREs' motion to supplement the record. Accordingly, we affirm.

## **I. FACTUAL AND PROCEDURAL BACKGROUND**

### **A. The LLNL Biosafety Level-Three Facility**

On December 16, 2002, the National Nuclear Security Administration (NNSA), an agency within the DOE, authorized the construction of a BSL-3 laboratory at LLNL. Center for Disease Control (CDC) and National Institutes of Health (NIH) guidelines divide biosafety lab operations into four levels: BSL-1 (least hazardous) through BSL-4 (most hazardous). BSL-3 laboratories work with agents that may cause diseases in humans with serious or lethal consequences if untreated, and which have the potential of airborne transmission. Common agents found in BSL-3 facilities include West Nile virus, yellow fever virus, Mycobacterium tuberculosis, and SARS virus. There are more than 1,350 BSL-3 laboratories in the United States. Common examples of BSL-3 facilities include hospital surgical suites, laboratories associated with medical schools, and university research laboratories. At the time of construction, the LLNL BSL-3 facility was the only BSL-3 facility operating in the same facility as a nuclear laboratory.

The DOE decided to undertake the construction of an on-site BSL-3 facility at LLNL because limitations in its BSL-1 and 2 laboratories forced LLNL to conduct its BSL-3 research off-site. This off-site research was difficult and costly because LLNL lacked physical control, and shipping and handling increased the risk of cross-contamination and degradation.

For the new BSL-3 facility, LLNL selected a 1,500 square-foot, prefabricated building to be constructed next to existing BSL-2 facilities. The air-handling system comprised a double High Efficiency Particulate Air-Purifying (HEPA) air filtration system, as is consistent with CDC guidelines. Each

HEPA filter removes at least 99.97 percent of bioagents. The facility also has additional safeguards against pathogenic breach, including a ventilation system that would draw the contaminated air back into the facility, a backup power system that would enable employees to shut down portions of the contaminated part of the facility, and a “zone-tight” system that would prevent any air flow in the facility in the event of a total power loss.

### **B. The 2002 Original Environmental Assessment**

The DOE performed an EA for the proposed LLNL BSL-3 laboratory, pursuant to NEPA. The EA considered the environmental impacts of the BSL-3 laboratory on a wide range of issues, including human health, ecological resources, transportation, waste management, geology, soils and seismology, noise, and air quality. The EA also discussed how CDC and NIH guidelines govern the facility’s operations and mitigate the risk of infection and accidental release.

In evaluating the public risk potentially caused by the BSL-3 facility, the DOE relied upon three major sources of data: (1) statistics from hundreds of other CDC-registered BSL-3 laboratories; (2) the U.S. Army’s Biological Defense Research Program (BDRP) laboratories; and (3) LLNL’s BSL-1 and -2 laboratories. In addition to examining the normal operations of the aforementioned sources, the EA analyzed potential abnormal impacts on those sources, using a “catastrophic release” scenario, modeled upon a “Maximum Credible Event” (MCE), simulating the outer bounds of impact caused by a pathogen’s accidental release.

The DOE considered numerous possible methods of assessing the threat of release, but it chose a catastrophic release simulation (a centrifuge analysis), that the Army used to perform a NEPA analysis of its own biological research labs. The catastrophic release model used by the Army also was an MCE type of analysis, which simulated a reasonably foresee-

able event with a low likelihood of occurrence, but with high risk. In the Army's simulated catastrophic release model, a liter of *coxiella burnetii* (*C. burnetii*)<sup>1</sup> was hypothetically divided into six centrifuge tubes with loose caps and loose O-rings. When the centrifuge was activated, some of the tubes' contents would be aerosolized, resulting in the production of almost 10 billion airborne pathogens.

The Army then modeled a plume of the airborne pathogens as it moved through the lab and outside via the ventilation system. In order to produce conservative results, the Army simulated only one HEPA filter, operating at only 95 percent effectiveness. The Army concluded the chance of public exposure to an airborne pathogen, at a 50 percent rate of contracting the disease, was extremely remote.

Using the Army centrifuge model, the DOE concluded that the chances of exposure at the LLNL BSL-3 lab were even more remote than those modeled by the Army because the Army scenario assumed one HEPA filter that was 95 percent effective. The LLNL BSL-3 lab, the DOE reasoned, filters all room air through two HEPA filter banks, each of which is at least 99.97 percent effective. The Army scenario also assumed a lab in close physical proximity to the public, whereas the LLNL BSL-3 lab is one-half mile from the nearest public area. Finally, the Army assumed lower wind speeds than are prevalent at LLNL; higher wind speeds would decrease airborne concentrations more quickly. Based on this analysis, the DOE concluded that even if a catastrophic release were to occur, there would be no significant impact on public health or safety. This conclusion thus led the DOE to issue a Finding of No Significant Impact (FONSI).

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<sup>1</sup>*Coxiella burnetii* is the extremely resistant bacterial pathogen commonly found at BSL-3 labs that causes Q fever, a disease with both acute symptoms (high fever, headache, fatigue, myalgia, night sweats and/or chills, nausea, vomiting, chest pain) and chronic symptoms (pneumonia, granulomatous hepatitis, myocarditis, and central nervous system disease).

### **C. The First Round of Litigation**

In August 2003, Tri-Valley CAREs brought suit in the United States District Court for the Northern District of California, challenging the EA on numerous grounds under NEPA. *Tri-Valley Cares v. U.S. Department of Energy*, No. C 03-3926-SBA, 2004 WL 2043034 (N.D. Cal. Sep 10, 2004). On September 10, 2004, the district court granted summary judgment for the DOE on the ground that the DOE had satisfied the requirements of NEPA in preparing the original EA. *Id.*, at 2004 WL 2043034 at \*1. On appeal, we affirmed all aspects of the EA, except for the DOE's failure to consider the environmental impact of a terrorist attack. *Tri-Valley Cares v. Dep't of Energy*, 203 F. App'x 105, 107 (9th Cir. 2006). We thus affirmed in part and reversed in part, remanding for the sole purpose of the DOE's considering whether the threat of a terrorist act required the preparation of an EIS. *Id.* at 106-07.

### **D. The Draft Revised Environmental Assessment (DREA)**

On remand, the DOE prepared a DREA in March 2007, addressing the impacts associated with terrorist attacks to determine whether the threat of terrorist attack necessitated preparation of an EIS. The DREA was circulated for public comment from April 11, 2007 through May 11, 2007.

To analyze the threat that terrorist activity posed to the LLNL BSL-3 laboratory, the DOE was required to take a different approach than it did when analyzing the threat posed by accidents. Because there are an infinite number of possible modes of attack, the DOE considered three general types of terrorist threats: (1) a direct terrorist attack at the LLNL BSL-3 facility, resulting in loss of containment; (2) the theft and release of pathogenic material by an LLNL terrorist outsider; and (3) the theft and release of pathogenic material by an LLNL terrorist insider.

### *1. Direct Attack Resulting in Loss of Containment*

The DOE considered various possible modes of direct terrorist attack on the LLNL facility, including a suicidal plane crash or an explosive device delivered by vehicle or on foot. In considering the impact of this type of threat, the DOE used the centrifuge scenario to determine the bounded or outer limits of any release, and then analyzed factors which could mitigate such a release.

The DOE concluded that the outer bounds of dispersion in a terrorist attack would be the same as those of the catastrophic release scenario used in the original EA. The centrifuge model analysis supported a finding of no significance for terrorist threat based upon a direct attack on the LLNL BSL-3 facility.

To further validate its findings using the centrifuge model,<sup>2</sup> the DOE also considered several factors that would further limit the consequences of a direct terrorist attack. Specifically, (1) very limited quantities of biological agents are generally in use at LLNL BSL-3, (2) a fire resulting from an airplane crash or explosive device would likely kill many pathogens quickly; and (3) in the unlikely event of bioagent release, microorganisms would generally be rendered innocuous by exposure to generally occurring environmental conditions. The DOE concluded that these factors in the aggregate would substantially reduce the number of pathogens released and capable of human infection, as the result of a direct attack. It also concluded that the impact of a facility breach caused by a direct terrorist act would be no greater than the impacts

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<sup>2</sup>The DOE's conclusions in the DREA regarding the lack of any significant impact on public health, took into account the fact that all the bioagents used in the BSL-3 facility cause diseases for which treatment or inoculation is available. Further, LLNL briefed local health care providers, so if necessary, the consequences of any release could be mitigated by inoculation and treatment of exposed individuals.

addressed in the Army's catastrophic release scenario analyzed in the initial EA.

**2. *Theft and Release by an LLNL BSL-3 Terrorist Outsider***

The DREA next considered the threat of the theft and release of a pathogen by a LLNL BSL-3 terrorist outsider. It examined this possible form of attack by evaluating the types of pathogens available at the LLNL BSL-3 facility in comparison to the types of pathogens available from other sources, including other BSL-3 facilities and the natural environment. Comparatively speaking, the DOE reasoned that hundreds of other BSL-3 facilities in the United States regularly handle and store the same types of substances as the LLNL BSL-3 facility. Moreover, many substances are available from common environmental sources. Thus, a terrorist outsider seeking such materials could find them in many BSL-3 facilities nationwide, most of which lack the safeguards and security infrastructure of LLNL.

Unlike the majority of the 1,350 BSL-3 labs nationwide, most of which are academic or clinical facilities, LLNL BSL-3 is surrounded by a patrolled security fence with badge-identification required for entry; it has its own security force, including an armed emergency response force. Access to the BSL-3 facility is limited to employees registered with the CDC and trained and qualified under its guidelines. Access to individual lab rooms within the building is limited to staff members approved to work during specific shifts, and all lab rooms are equipped with motion sensors. Finally, within the lab, select agents are stored in locked freezers when not in use. Accordingly, the DOE reasoned that when considered against the thousands of other sources from which a terrorist outsider could obtain the same pathogenic materials, the addition of a single, highly-guarded BSL-3 facility at LLNL did not significantly alter the status quo.

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### ***3. Theft and Release by an LLNL BSL-3 Terrorist Insider***

Lastly, the DOE considered the potential impact of the theft and release of a pathogen by an LLNL BSL-3 terrorist insider. To evaluate this threat, the DOE did not use an empirical model, but rather, engaged in a two-step probabilistic analysis: (1) assessing the probability that an insider with access to BSL-3 pathogens would have the motive to commit such an attack; and (2) assessing the public threat assuming that an insider had the access and motive to release a pathogen.

With regard to the first prong of the DOE's insider theft and release analysis, the DOE found that the likelihood that an insider would have the motive to commit such an attack was very low, based upon the small number of persons with access to pathogens at the LLNL BSL-3 facility (fewer than ten) and the high number of screenings and protective programs and security procedures, unique to the LLNL BSL-3 facility. In addition to complying with nationwide DOJ risk assessment screenings, HHS authorization screenings, and CDC registration, LLNL BSL-3 requires its employees to also comply with its own monitoring and training system, "Select Agent Human Reliability Program."

Further, even assuming motive, the DOE found that the risk of effective theft and release by an LLNL BSL-3 terrorist insider was extremely low because an LLNL BSL-3 terrorist insider would need to further cultivate and prepare any covertly removed pathogen before release. The DOE specifically reasoned that this outcome further rendered the threat of insider theft and release highly improbable because direct removal of any significant quantity of a pathogen would be quickly noticed because (1) material inventories are regularly audited, and (2) the LLNL BSL-3 facility does not even contain large amounts of "ready-to-use" aerosolized pathogens, but instead stores them in small, frozen samples, in 2 ML vials.

**E. The 2008 Final Revised Environmental Assessment**

On January 25, 2008, after evaluating public comment, the DOE found that no significant environmental impact would result from a terrorist attack on the BSL-3 laboratory. Accordingly, it released a FREA and a FONSI on January 25, 2008. The FREA was substantially identical to the DREA, except for a few administrative updates and three substantive updates. One of the substantive updates addressed two anthrax shipping incidents in 2005, while the other two dealt with 2007 subcommittee hearings regarding BSL-3 safety procedures, following an incident at Texas A&M.

**F. The Current Litigation**

On March 10, 2008, Tri-Valley CAREs filed a new complaint alleging that the DOE had again failed to prepare an adequate EA and FONSI, failed to prepare an EIS, failed to supplement the REA, and failed to publicly circulate the FONSI. Following the district court's denial of a motion for preliminary injunction by Tri-Valley CAREs, each party moved for summary judgment. In its motion for summary judgment, Tri-Valley CAREs asserted that the DOE (1) failed to prepare an adequate FREA and Revised FONSI; (2) failed to conduct an EA in good faith; (3) failed to prepare an EIS; (4) failed to supplement the FREA; and (5) failed to publicly circulate the FONSI. Tri-Valley CAREs sought a judgment compelling the DOE to prepare an EIS, or alternatively, to prepare a revised EA and to reconsider whether an EIS is necessary.

Tri-Valley CAREs relied upon three primary arguments to support its motion: it claimed that (1) the DOE's reliance on the same centrifuge analysis used in the original EA to assess the dangers of a terrorist attack in the FREA violated NEPA; (2) the DOE's failure to disclose information related to a 2005 anthrax shipping incident in the March 2007 DREA violated NEPA; and (3) the DOE's failure to disclose information

regarding violations for “restricted experiments” conducted at the LLNL BSL-3 facility violated NEPA. On September 30, 2010, the district court granted summary judgment in the DOE’s favor on the ground that the DOE had properly conducted its analysis in revising the FREA, in compliance with this court’s original mandate.

Tri-Valley CAREs appeals, claiming: (1) that the DOE did not comply with our mandate in *Tri-Valley CAREs v. DOE*, 203 Fed. App’x 105 (9th Cir. 2006) (*Tri-Valley CAREs I*) by failing to take a “hard look” at the human health, safety and environmental risks associated with an intentional terrorist act; (2) that the DOE violated NEPA by failing to supplement its DREA and FREA with information regarding incidents in which the DOE violated protocols and policies at LLNL BSL-3’s biological facilities, depriving decision-makers and the public of a reasonable opportunity for input; and (3) that the district court erred in excluding Tri-Valley CARE’s extra record evidence proving that centrifuge scenarios are inadequate to measure risks from an intentional terrorist attack.

## II. STANDARD OF REVIEW AND JURISDICTION

We review a district court’s grant of summary judgment on NEPA claims *de novo*. *Northern Cheyenne Tribe v. Norton*, 503 F.3d 836, 845 (9th Cir. 2007). An agency’s action must be upheld unless it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A).

[W]e will reverse a decision as arbitrary and capricious only if the agency relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, or offered an explanation that runs counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

*Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008) (en banc) (citations and internal quotation marks omitted).

NEPA is a pragmatic device that “ ‘does not mandate particular results,’ but ‘simply provides the necessary process’ to ensure that federal agencies take a ‘hard look’ at the environmental consequences of their actions.” *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 814 (9th Cir. 1999) (per curiam) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)). We look to the evidence the agency has provided to support its conclusions, along with materials in the record, to make this determination. *Lands Council*, 537 F.3d at 993. Judicial review of agency decision-making under NEPA is limited to the question of whether the agency took a ‘hard look’ at the proposed action as required by a strict reading of NEPA’s procedural requirements. *Bering Strait Citizens for Responsible Dev. v. U.S. Army Corps of Eng’rs*, 524 F.3d 938, 947 (9th Cir. 2008) (citing *Churchill Cnty. v. Norton*, 276 F.3d 1060, 1072 (9th Cir. 2001)).

The district court’s decision to exclude extra-record evidence is reviewed for abuse of discretion. *Northwest Env’tl. Advocates v. Nat’l Marine Fisheries Serv.*, 460 F.3d 1125, 1133 (9th Cir. 2006).

We have jurisdiction under 28 U.S.C. § 1291.

### III. DISCUSSION

#### A. Environmental Claims

A court generally must be “at its most deferential” when reviewing scientific judgments and technical analyses within the agency’s expertise. *Northern Plains Resource Council, Inc. v. Surface Transp. Bd.*, \_\_\_ F.3d \_\_\_, 2011 WL 6826409, at \*3 (9th Cir. Dec. 29, 2011) (quoting *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983)).

We may not impose ourselves “as a panel of scientists that instructs the [agency] . . . , chooses among scientific studies . . . , and orders the agency to explain every possible scientific uncertainty.” *Lands Council*, 537 F.3d at 988. And “[w]hen specialists express conflicting views, *an agency must have discretion to rely on the reasonable opinions of its own qualified experts* even if, as an original matter, a court might find contrary views more persuasive.” *Id.* at 1000 (quoting *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 378 (1989)) (emphasis added).

At a minimum, an agency must support its conclusions with studies that the agency deems reliable. *Lands Council*, 537 F.3d at 994. An agency will have acted arbitrarily and capriciously only when “the record plainly demonstrates that [the agency] made a clear error in judgment in concluding that a project meets the requirements” of NEPA. *Id.*

### ***1. Our Mandate in Tri-Valley CAREs I***

In *Tri-Valley CAREs I*, we affirmed the original EA on all grounds, except for its failure to consider the impact of a possible terrorist attack. On that ground alone, we remanded “for the DOE to consider whether the threat of terrorist activity necessitates the preparation of an Environmental Impact Statement,” by conducting a comprehensive analysis of the human health, safety, and environmental risks associated with a terrorist attack at LLNL’s BSL-3 facility. *Tri-Valley CAREs I*, 203 F. App’x at 107 (citing *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm’n*, 449 F.3d 1016 (9th Cir. 2006) (“*Mothers for Peace I*”). Following that decision, in *Mothers for Peace II*, we upheld the NRC’s finding of no significant impact in a revised EA in which the NRC first analyzed site the site-specific low risk factors, and then bounded the maximum impact of an attack using an MCE model. See *San Luis Obispo Mothers for Peace v. NRC*, 635 F.3d 1109 (9th Cir. 2011) (*Mothers for Peace II*) (applying 28 U.S.C. § 157(b)(2)(A)).

[1] An agency has “the discretion to determine the physical scope used for measuring environmental impacts” so long as the scope of analysis is “reasonable.” *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 973 (9th Cir. 2002). If the proposed action does not significantly alter the *status quo*, it does not have a significant impact under NEPA. *Burbank Anti-Noise Group v. Goldschmidt*, 623 F.2d 115, 116 (9th Cir. 1980). At bottom, an agency need only provide a “convincing statement” of why the threat did not require an EIS to satisfy NEPA. *See Ocean Advocates v. U.S. Army Corps. of Eng’rs*, 402 F.3d 846, 864 (9th Cir. 2005) (internal citations and quotation marks omitted). An agency is not required to consider every scenario, and further, nothing in NEPA requires it to rely on purely empirical data. *Id.*

**a. Direct Attack on the LLNL Facility**

[2] The DOE utilized its MCE scenario, developed in the original EA, to evaluate the outer bounds of a pathogen release. *In Tri-Valley CAREs I*, we previously upheld the use of this centrifuge model for a bounding analysis of the impacts of abnormal catastrophic events, including earthquakes and accidental plane crashes. There, the model was applied not to measure the cause of the triggering event, but rather the outer limits of its impact.

In selecting the centrifuge model to measure the potential impact of a direct terrorist attack on the LLNL BSL-3 facility, the DOE specifically reasoned that the “catastrophic release” model was analogous to the “direct attack” scenario because the triggering incidents (earthquake or accidental plane crash in the former, intentional plane crash or suicide bombing in the latter) would result in similar structural damage to the LLNL BSL-3 facility. Moreover, the DOE further refined its analysis of a terrorist attack using the centrifuge model by highlighting several key distinctions from the Army’s original model that would significantly alter the consequences of such an event at the LLNL facility—specifically: (1) the very lim-

ited quantities of biological agents generally in use; (2) the likely destruction of pathogens resulting from the fire caused by an airplane crash or explosive device; and (3) the likely destruction of pathogens resulting from general environmental exposure.

[3] Because the Army’s catastrophic release scenario measured the *effects* of a catastrophic event at LLNL BSL-3, it was reasonable that the model be applied to consider the outer bounds of a threat of terrorist attack. We read *Mothers for Peace II* as supporting the proposition that use of an MCE model, such as the catastrophic release scenario applied here, is an acceptable method to simulate the bounds of a direct terrorist attack when the agency decision to use that model is reasonably supported by agency evidence. See *Mothers for Peace II*, 635 F.3d at 1113 (affirming assessment of a terrorist threat where agency projected pathogen release using maximum credible event).<sup>3</sup> Here, as in *Mothers for Peace II*, the DOE applied a general MCE analysis to measure the outer limits of the impact of a direct terrorist attack. The MCE centrifuge model used in the original EA was an outer bounding model for a *hypothetical maximum credible event*—it was not designed to be unique to only one particular incident, or even *type* of incident. We find the DOE’s use of the MCE centri-

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<sup>3</sup>Tri-Valley CAREs distorts the meaning of *Mothers for Peace II* in contending that the analysis undertaken in *Mothers for Peace II* is distinguishable from the analysis undertaken here. Specifically, Tri-Valley CAREs maintains that *Mothers for Peace II* contained a nebulous level of “additional analysis” not present in the instant case. We disagree. Although the DOE did not use the exact same type of additional analysis used by the NRC in *Mothers for Peace II*, it nonetheless considered different, yet equally significant, additional analysis in the form of its site-specific Biological Risk and Threat Assessment (BRTA), which included an “in-depth” analysis of potential LLNL BSL-3 vulnerabilities and which guided the discussion of terrorist threats in both the DREA and FREA. Thus, we conclude that the DOE’s consideration of site-specific factors in the BRTA is analogous to the “additional analysis” undertaken by the NRC in contacting law enforcement and intelligence communities under *Mothers for Peace II*. 635 F.3d at 1113.

fuge model sufficient under NEPA and *Mothers for Peace II* because the DOE reasonably justified its selection based upon record evidence and additional analysis of site-specific factors.

[4] Whether we agree that a centrifuge model was the best way to assess the threat of direct terrorist attack is not the inquiry before us. *Lands Council*, 537 F.3d at 988 (“[w]hen specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.”) (internal citations omitted). Under NEPA, we must restrain from acting as a type of omnipotent scientist, and instead must restrict ourselves to inquiring only whether an agency took a “hard look” at the potential environmental impacts at issue. *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 814 (9th Cir.1999) (per curiam) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)). When reasonable scientists disagree on appropriate models for analysis, we *must* defer to agency experts. *Lands Council*, 537 F.3d at 988. Here, the DOE provided ample justification and evidence for why it used the centrifuge model to assess the impact of a terrorist attack: it analogized triggering events, compared critical distinctions, and considered uniquely different circumstances. Accordingly, because of the deference that must be afforded to the agency, we find that the DOE took the requisite “hard look” at the threat of direct terrorist attack.

**b. Theft and Release by a LLNL BSL-3 Terrorist Outsider**

In assessing the impact of a terrorist threat by the theft and release by an LLNL BSL-3 terrorist outsider, the DOE used a comparative nationwide analysis to determine that the LLNL BSL-3 facility would not be an attractive terrorist target. Specifically, the DOE explained that the LLNL BSL-3 would not alter the status quo basis because there are hun-

dreds of other BSL-3 facilities in the United States that regularly handle and store the same substances, and moreover, that such substances are also available to potential terrorists from common environmental sources.

Tri-Valley CAREs contends that the DOE's analysis is deficient because, pursuant to 40 C.F.R. § 1508.27(a), the DOE must assess the risk of terrorist theft and release "in the context of the Livermore locale." We disagree. Although 40 C.F.R. § 1508.27(a) suggests that site-specific actions are generally evaluated in the context of a project locale, nothing in the regulation prohibits the DOE from exercising its discretion to apply a nationwide analysis when appropriate. *See Nat'l Parks & Cons. Ass'n v. Babbitt*, 241F.3d 722, 731 (9th Cir. 2001). The "identification of the geographic area" within which a project's impacts on the environmental resources may occur "is a task assigned to the special competency of the appropriate agencies." *Kleppe v. Sierra Club*, 427 U.S. 390, 414 (1976).

[5] We find that the DOE's determination of the potential impact of a terrorist theft and release of a pathogen on a national level satisfies NEPA because the record does not show any meaningful difference between the materials present at the LLNL BSL-3 facility and those present at other BSL-3 facilities nationwide. Nowhere in the record is there any proof that the LLNL BSL-3 facility is more prone or attractive to terrorist theft and release of a pathogen by an outsider than any other BSL-3 facility. To the contrary, the record reveals that LLNL is actually one of the most heavily guarded federal facilities, in contrast to hundreds of relatively unguarded BSL-3 facilities nationwide. Given that there are more than 1,300 other BSL-3 facilities nationwide, many of which lack the safeguards of LLNL's BSL-3 facility, and further, given that many of the BSL-3 pathogens also exist in the natural environment, DOE reasonably concluded that the construction of a BSL-3 facility at LLNL did not change the status quo, and therefore found no significant impact. *See*

*Burbank Anti-Noise Group v. Goldschmidt*, 623 F.2d 115, 116 (9th Cir. 1980) (holding that where a proposed project does not alter the status quo then it does not have a significant impact). Accordingly, we find that the DOE reasonably exercised its discretion in determining no significant impact from the threat of theft and release by a LLNL BSL-3 terrorist outsider.

**c. Theft and Release by a LLNL BSL-3 Terrorist Insider**

[6] Lastly, the DOE's discussion of the impact of the potential theft and release of a pathogen by an LLNL BSL-3 terrorist insider also satisfies NEPA. Although the DOE did not use an empirical model, it engaged in a thorough two-step probabilistic analysis that assessed: (1) the probability that an insider with access to BSL-3 pathogens would have the motive to commit such an attack; and (2) the public threat that would result, assuming that an insider *did have* the access and motive to release a pathogen.

[7] Tri-Valley CAREs' claim that the DOE violated NEPA because it did not employ empirical analysis fails. Empirical analysis is not required under NEPA; an agency must only provide a "convincing statement" of why the threat did not require an EIS. *See Ocean Advocates v. U.S. Army Corps. of Eng'rs*, 402 F.3d 846, 864 (9th Cir. 2005). The DOE laid out its dual-tiered probabilistic analysis, discretely defined the scope of its inquiry, and thoughtfully examined the likelihood of an insider stealing and releasing pathogens from LLNL. Based upon the facts that (1) a very small number of people have access to the select agents at LLNL BSL-3, all of whom are subject to extensive screening procedures from multiple agencies; and (2) the form and quantities of the pathogens at LLNL BSL-3 would require significant additional efforts to bring about a terrorist attack, the DOE concluded that the threat of a theft and release by an insider was not significant. The DOE's methodical inquiry satisfies NEPA's requirement

that it provide a “convincing statement” as to why the threat did not require an EIS. Accordingly, we find that the DOE reasonably concluded, based upon its discretion and a thorough examination of the evidence in the record, that threat of terrorist attack by a theft and release from an LLNL BSL-3 terrorist insider was not significant.

## 2. Adequacy of the FREA

The purpose of an EA under NEPA is not to amass and disclose all possible details regarding a proposal, but to create a “concise public document” that serves to “[b]riefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.” 40 C.F.R. § 1508.9; *League of Wilderness Defenders Blue Mountains Biodiversity Project v. Allen*, 615 F.3d 1122, 1136 (9th Cir. 2010) (NEPA review “must concentrate on the issues that are truly significant to the action . . . , rather than amassing needless detail.”) (quoting 40 C.F.R. § 1500.1(b)). An EA “must provide the public with sufficient environmental information, considered in the totality of the circumstances, to permit members of the public to weigh in with their views and thus inform the agency decision-making process.” *Bering Strait Citizens v. U.S. Army Corps. of Eng’rs*, 524 F.3d 938, 953 (9th Cir. 2008).

### a. The 2005 Anthrax Shipping Incident

Tri-Valley CAREs maintains that the DOE did not satisfy the standard set forth in *Mothers for Peace I*, which held that NEPA serves two fundamental purposes: (1) to require agency consideration of detailed information concerning *significant environmental impacts*; and (2) to ensure that the public can both *access and contribute to that body of information via comments*. *Mothers for Peace I*, 449 F.3d at 1034 (citing *Dep’t of Trans. v. Public Citizen*, 541 U.S. 752, 768 (2004) (emphasis added)). Specifically, Tri-Valley CAREs claims that the DOE violated NEPA by failing to fully dis-

close a 2005 anthrax shipping incident, therefore depriving the public of the ability to comment.

The 2005 incident involved a professor at Louisiana State University who owned a collection of anthrax samples used at LLNL and contracted with a former LLNL employee to return to LLNL to package and ship the collection to two private labs. The former employee returned to LLNL on August 25, 2005, and packaged and shipped 1,065 samples from the collection to one of the labs, without incident. On September 13, 2005, the former employee returned to the facility to ship 3,108 samples to the other lab. The shipment arrived intact but the second lab noted discrepancies between the shipment received and the inventory. Finally, on September 14, 2005, the former employee sent a second shipment of 1,025 samples to the first lab. In unpacking the vials, employees at the first lab discovered improperly sealed vials, and were exposed to anthrax that had leaked into the interior packaging. The first lab concluded, however, that “nothing was detected on the outside of the shipping container and therefore [the leak] was ‘not a public health issue.’ ” As a result of the incident, the CDC suspended all transfers of select agents from LLNL, and LLNL voluntarily suspended all work with select agents pending an investigation. It also established an Incident Analysis Committee. In December 2005, the Incident Analysis Committee completed a comprehensive report identifying areas in need of correction and tracing many of the causes of the incident to the unique role of the former employee. In response, LLNL implemented numerous corrective actions, including expanding the Select Agent Security Plan. In February 2006, DOT examined LLNL’s select agent program, concluded that the new procedures were sufficient and that the 2005 incident resulted from an “unusual” event. On April 18, 2006, the DOE authorized the resumption of select agent work at LLNL.

In the original EA, the DOE reasoned that the addition of milliliter-quantity samples from LLNL to the hundreds of tons

of infectious material already shipped daily would not have a significant impact on the risk of transportation accidents. In the DREA, the DOE added a brief discussion of the 2005 shipping incident, without identifying the select agent involved, but found that a more detailed discussion was not warranted when considered against the decades-long history of safe shipments of hundreds of tons of infectious materials. Following public comment to the disclosure of this incident in the DREA, *including comments from Tri-Valley CAREs itself*, the DOE revised the FREA to include an even more detailed discussion of the 2005 anthrax shipping incident in the hope of providing the public with a “better understand[ing of] why the incident did not add significant information and did not challenge the conclusions of the document.”

[8] Tri-Valley CAREs’ arguments are unpersuasive because in the original EA, the DREA, and the FREA, the DOE specifically and carefully considered the risks of shipping infectious materials to and from the BSL-3 lab and disclosed these risks to the public. In the original EA, the DOE analyzed and found that the risk of fatality from hazardous waste transportation incidents was less than .11 per million shipments, and the specific risk from infectious substance incidents was too low to even be quantified. Tri-Valley CAREs cannot escape the logical inconsistency of its position. How could the DOE’s disclosure of the 2005 shipping incident be so deficient as to deprive the public of the ability to respond, when Tri-Valley CAREs itself relied upon that very document to specifically and publicly comment on the 2005 shipping incident?

[9] The purpose of an EA is not to compile an exhaustive examination of each and every tangential event that potentially could impact the local environment. Such a task is impossible, and never-ending. The purpose of the EA is simply to create a workable public document that *briefly* provides evidence and analysis for an agency’s finding regarding an environmental impact. 40 C.F.R. § 1508.9; *League of Wilder-*

*ness Defenders Blue Mountains Biodiversity Project v. Allen*, 615 F.3d 1122, 1136 (9th Cir. 2010) (emphasizing the parsimonious nature of an effective EA) (quoting 40 C.F.R. § 1500.1(b)). The DOE has more than met its burden here. Accordingly, we find that the DOE’s discussion of the 2005 anthrax shipping incident in the DREA and the FREA satisfies NEPA.

**b. The “Restricted” Experiments**

We do not reach the issue of whether the DOE’s decision not to include information about “restricted” experiments in the FREA was arbitrary or capricious because the district court properly found that this argument was waived. Here, Tri-Valley CAREs did not address the district court’s ruling that the argument was deemed waived in its opening appellate brief. Thus, the issue is not properly before us. *See Smith v. Marsh*, 194 F.3d 1045, 1052 (9th Cir. 1999) (holding that arguments not raised by a party in its opening brief are deemed waived). Claims not made in an opening brief in a sufficient manner to put the opposing party on notice are deemed waived. *Swierkiewicz v. Sorema, N.A.*, 534 U.S. 506, 512 (2002) (holding that claims must put parties on sufficient notice of underlying arguments, or arguments are deemed waived).

**c. The 2008 Security Assessment**

[10] NEPA requires supplementation of any NEPA analysis in response to “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(1)(ii). Supplementation is not required “every time new information comes to light after the EIS is finalized. To require otherwise would render agency decisionmaking intractable, always awaiting updated information.” *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 373-74 (1989). Whether new information requires supplemental analysis is a “classic example of a

factual dispute the resolution of which implicates substantial agency expertise.” *Id.* at 376.

[11] Tri-Valley CAREs contends that the DOE violated the NEPA supplementation rule when it failed to supplement the FREA to address the results of its Security Assessment (SA) conducted at LLNL in 2008 by the DOE’s Health, Safety and Security Office of Independent Oversight. The SA included a mock attack on the “Superblock,” where special nuclear materials are stored, and identified several deficiencies in performance of LLNL’s protective force. The SA gave LLNL’s protective force the lowest possible rating, “Significant Weaknesses.” Specifically, the SA identified deficiencies in LLNL’s physical security systems and protection program management. In July 2008, however, the DOE prepared a supplemental report to determine whether the SA constituted significant new information requiring supplementation of the FREA. There, the DOE examined whether the low rating, and the deficiencies identified therein, significantly altered the outcomes of any of the three terrorist attack scenarios (as previously discussed, (1) intentional airplane crash, (2) intentional theft and release from LLNL outsider, and (3) intentional theft and release from LLNL insider). Because the DOE determined in its supplemental report that the SA did not show a “seriously different picture of the likely environmental harms stemming from the proposed project,” we must defer to the DOE’s finding that a supplemental REA was not required. *Wisconsin v. Weinberger*, 745 F.2d 412, 416-17 (7th Cir. 1984).

## **B. Evidentiary Claims**

A reviewing court may consider extra-record materials only: (1) if necessary to determine whether the agency has considered all relevant factors and explained its decision, (2) when the agency has relied on documents not in the record, (3) when supplementing the record is necessary to explain technical terms or complex subject matter, or (4) when plain-

tiffs make a showing of agency bad faith. *Inland Empire Pub. Lands Council v. Glickman*, 88 F.3d 697, 703-04 (9th Cir. 1996). However, exceptions to the normal rule regarding consideration of extra-record materials “only appl[y] to information available at the time, not post-decisional information.” *Rock Creek Alliance v. U.S. Fish & Wildlife Serv.*, 390 F. Supp. 2d 993, 1002 (D. Mont. 2005). When considering the *Inland Empire* factors, post-decision information “may not be advanced as a new rationalization either for sustaining or attacking an agency’s decision” because “it inevitably leads the reviewing court to substitute its judgment for that of the agency.” *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 450 F.3d 930, 943 (9th Cir. 2006) (internal citations and quotations omitted).

**1. Northern District of California Civil Local Rule 7-11(a)**

[12] Tri-Valley CAREs contends that the district court abused its discretion in denying its motion to augment the record with a report by the National Research Council of the National Academies of Science (NRC), regarding the alleged inapplicability and inadequacy of centrifuge models to measure the environmental impact of terrorist attacks. In this case, the district court properly denied Tri-Valley CAREs’ motion to supplement the record because of its failure to comply with the local rules. Denial of a motion as the result of a failure to comply with local rules is well within a district court’s discretion. *Grove v. Wells Fargo Fin. California, Inc.*, 606 F.3d 577, 582 (9th Cir. 2010). Northern District of California Civil Local Rule 7-11(a) requires that any motion for administrative relief include a stipulation or declaration explaining why a stipulation could not be obtained. N. Cal. L. R. 7-11(a). Nowhere in its motion, nor in its additional briefs, did Tri-Valley CAREs include the requisite stipulation or declaration. Accordingly, the district court acted well within its discretion to deny Tri-Valley CAREs’ motion to augment the record with the NRC Report.

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## 2. *Adequacy of the Record*

Even if the district court had abused its discretion in denying Tri-Valley CAREs' motion to supplement the record for failure to comply with the local rules, it nonetheless could have appropriately denied Tri-Valley CAREs' motion to augment the administrative record on the merits. In its complaint, Tri-Valley CAREs only contended that augmentation was necessary "to ascertain whether the agency considered all relevant factors or fully explicated its course of conduct or grounds for decision." Such an assertion fails to demonstrate how the NRC report satisfies any of the exceptions under *Inland Empire*. The only ground on which Tri-Valley CAREs asserts that this evidence should be admitted into the record is that it is relevant to determining whether the agency considered all relevant factors, or the first exception under *Inland Empire*. The post-decision bar, however, renders this exception inapplicable, as the NRC report was completed over nearly two years after the commencement of this litigation. *See Ctr. for Biological Diversity*, 450 F.3d at 943 (9th Cir. 2006) (explaining the post-decision bar may not be applied to require augmentation of information used to rationalize, attack, or even analyze an agency decision post hoc). Accordingly, the district court did not abuse its discretion in refusing to grant Tri-Valley CAREs' motion to supplement the record with the NRC report.

## IV. CONCLUSION

For the foregoing reasons, we affirm the decision of the district court.

**AFFIRMED.**