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**To:** Arnaud Marjollet, Director of Permit Services, San Joaquin Valley Air Pollution Control District, 4800 Enterprise Way, Modesto, CA 95356

**Submitted via email at:** [publicnotices@valleyair.org](mailto:publicnotices@valleyair.org)

**Subject:** Comment on the District's Preliminary Decision to Grant a Permit to Lawrence Livermore National Lab to Conduct Larger Bomb Blasts at Site 300 near Tracy, CA

**Facility & Project #s:** Facility Number N-472; Project Number N-1173492

**Submitted on:** August 7, 2018

This is a public comment from Tri-Valley CAREs (Communities Against a Radioactive Environment) on the San Joaquin Valley Air Pollution Control District's ("the District") Preliminary Decision to Permit and give "Authority to Construct" ("ATC") to Lawrence Livermore National Lab's ("LLNL" or "Livermore Lab") Site 300 High Explosives Testing Range so that it can increase the weight of its blasts ten-fold from 100 lbs. per blast of high-explosive compounds to 1000 lbs. daily/per blast and increase the yearly limit more than seven-fold from 1000 lbs. to 7500 lbs. The blasts would occur at the Site 300 Building 851 Firing Table, an already contaminated, outdoor firing table lacking air pollution control technology.

Tri-Valley CAREs has monitored activities at the Livermore Lab and involved the public in decision-making under the California Environmental Quality Act ("CEQA"), the National Environmental Policy Act and other laws, regulations and agency proceedings since its founding in 1983.

Of particular note in the context of the ATC/proposed permit, Tri-Valley CAREs holds a Technical Assistance Grant from the US EPA to analyze documents, interface with regulators, and inform the community regarding Site 300 cleanup under the Superfund law ("CERCLA") including at the Building 851 open-air Firing Table, the location of the proposed project.

Tri-Valley CAREs submits this public comment on behalf of its more than 5,700 members. Our staff, board of directors, Tracy environmental advisory committee participants, and the majority of our members live, work or recreate near, and/or are affected by, operations at the Livermore Lab, including its Site 300.

The ATC/proposed permit to increase the weight of high explosive blasts at Site 300 involves potential adverse impacts with regard to air toxics and overall air quality, noise, encroaching population, re-suspension of radioactive particles in soils, cumulative effects, worker and other risks, endangered species, waste management and the Superfund cleanup.

As part of its permitting process, the District was required to comply with the California Environmental Quality Act. Its CEQA analysis is confined to a 12-page “Notice of Exemption Assessment” wherein the District decided that it would not be conducting an Environmental Impact Report or even an Initial Study under CEQA for this bomb blast project. Instead, the District improperly declared the project exempt from CEQA.

### **Public Hearing and Comment Process**

When asked at the public hearing, it appeared that the District was unaware of the extensive and numerous comments submitted during the already conducted NEPA review process. This includes comments from Tri-Valley CAREs, other organizations, the City of Tracy, Rutan & Tucker, LLP (on behalf of the Tracy Hills developers), the California Department of Toxic Substances Control, the Central Valley Regional Water Quality Control Board, San Joaquin County, and more than 1000 individuals.

Prior to the public hearing, Tri-Valley CAREs had specifically requested that the District obtain all comments submitted pursuant to the NEPA review process and to consider them in conducting its preliminary review and decision-making process. According to the District’s statements at the hearing, it failed to do so.

Tri-Valley CAREs asks that the District obtain and consider all comments submitted in the NEPA process as comments on the ATC/proposed permit.

Moreover, the public hearing process itself was flawed due to the lack of any recording device or stenographer. There were dozens of public comments made to which the District did not directly respond, and the public has no way to ensure that the District adequately captured critical, often detailed, information in the public comments and will (or can) respond adequately. Tri-Valley CAREs reiterates its call, made that night, for a second hearing.

### **The Project is not a “Minor Alteration to an Existing Facility”**

The District has improperly given this project a CEQA Exemption on several bases, including its fundamental rationale for the exemption – which is that the project is a “Minor Alteration to an Existing Facility.” California Code of Regulation 15301 defines what constitutes a minor alteration to an existing facility. It is things like adding safety equipment, making small additions to buildings, things that are “negligible or no expansions of existing use.” (See the attached copy of CCR 15301). A 10-fold increase in the size of outdoor bomb blasts from 100 to 1000 lbs./day can hardly be called a “minor alteration to an existing facility.”

### **Cortese List**

Additionally Section 4.2.3 Exceptions to Categorical Exemptions states that a project that is otherwise categorically exempt is still subject to CEQA when, “a project is located on a site which is included on any list compiled pursuant to section 65962.5 of the Government

Code.” Site 300 is on that List of Solid Waste Disposal Sites, (aka the Cortese List) identified by the Water Board. (See attached) This list is one of the lists compiled pursuant to section 65926.5.

Thus, a categorical exemption to CEQA cannot be given by the District to a project being conducted at Site 300.

### **Significant Controversy**

The proposed blasts are significantly controversial in the community of Tracy and beyond. Approximately 1600 people of which we are aware have signed petitions or made public comments to the District so far (in addition to the approximately 1,000 people who opposed the project during the prior NEPA process). Eighty people showed up for the public hearing on July 12, 2018 to speak against the project despite the notice in the Tracy Press having been a scant 6 days before the hearing (published on July 6, 2018). Several dozen people made oral comments, all but one opposed the project.

The District’s CEQA Implementation Process Summary Flow Chart states that the preliminary review of a project should identify whether the project has significant environmental impact OR public concern. If the answer to either question is YES, then a Detailed CEQA analysis is required. The public has showed its concern.

Tri-Valley CAREs membership – centered in the Tri-Valley and Tracy areas - is concerned about the LLNL’s activities at Site 300. Our membership, in addition to other commenters, wants the in depth study of the health and environmental effects of these bomb blasts that a full Environmental Impact Report under CEQA would provide.

Site 300’s presence on the Cortese list and the clear public controversy surrounding the proposal are two reasons specifically stated in the District’s own regulations to not apply an exemption to CEQA. The exemption should be withdrawn, and a full CEQA analysis should be conducted.

### **Failed Best Available Control Technology/Alternatives Analysis**

This taxpayer-funded project is proposed by a major federal laboratory. LLNL has a budget from the U.S. Department of Energy approaching \$1.5 billion annually (its FY19 budget request is \$1.48 billion), and this figure does not include additional federal funds received under “Work for Others.” No in-depth examination of the cost of alternatives has been performed, although the costs would likely be a small fraction LLNL’s annual budget calculated over the permit period.

The District’s Best Available Control Technology (BACT) analysis examines the possibility of LLNL building a containment structure at Site 300 to contain the blasts, which is an obvious control technology. The District noted that the existing Contained Firing Facility at Site 300 is too small to house these large blasts, but also found that a large enough building is feasible and could, indeed, be built.

The District's analysis of whether it could require LLNL to construct a permanent containment facility at Site 300 applied its standard District Policy Guidance (which generally applies to private permit applicants) when calculating the annualized cost – thus imposing a 10% per year interest factor that does not apply to the way federal projects are funded – i.e. as budget lines without any interest. Without applying the interest factor, the annual cost would have been \$10 million/yr., below the District's MCET threshold of \$11.054 million. The District should require a BACT containment facility as a permit condition.

It should also be noted here that Livermore Lab already operates the Big Explosives Experimental Facility (BEEF) at the Nevada National Security Site where all of the experiments in the proposal could be conducted. This is a feasible alternative to the proposed project that the District failed to analyze.

According to the Livermore Lab publication "Energy & Technology Review" January/February 1995 edition, BEEF was established by Livermore Lab to "allow the Laboratory to conduct large hydrodynamic experiments using charges far larger than those allowed at Site 300..."

An October 1998 Livermore Lab report, "Testing and Diagnostic Capabilities at LLNL" includes the following description: "The Big Explosives Experimental Facility is a new LLNL hydrodynamic facility for large scale above ground evaluation of non-nuclear devices... BEEF was activated for full manned operation in March 1997. NTS [now the Nevada Nuclear Security Site] is an ideal location for a facility qualified for large-charge high-explosive experiments..."

In a 2005 LLNL special insert, "Up Close" published in the Lab "Newslines," BEEF is cited as one of LLNL's "principle laboratories for shock physics experiments."

The Livermore Lab website (<https://wci.llnl.gov/facilities/beef>) has a description that reads in part: "The need for the BEEF site originated when, due to community encroachment near the Lawrence Livermore National Laboratory (LLNL) facility in Livermore, California, DOE was no longer allowed to perform high explosives experiments at the facilities Site 300 Shaped Charge Scaling Project. Therefore looking at the Nevada Test Site as a location to continue to perform these large, high scale experiments, two earth covered, two foot steel reinforced concrete bunkers, built to monitor atmospheric tests at Yucca Flat in the 1950s were located and found to be ideally configured. The facility consists of a control bunker, a camera bunker, a gravel firing table, and associated control and diagnostic systems. The facility has conducted safely conventional high-explosives experiments using a test bed that provides sophisticated diagnostics such as high-speed optics and x-ray radiography on the firing table, while operating personnel are present in the bunker..."

As we show in the above-listed reports, BEEF is an LLNL facility, built expressly to meet Livermore Lab's large weight high explosives "needs". Livermore Lab personnel have long-

managed it. Since 1997, Livermore Lab has routinely and successfully executed a variety of hydrodynamic explosive tests at BEEF rather than at Site 300.

### **Encroaching Population**

While we address City of Tracy's current boundary and the Tracy Hills housing development elsewhere this comment, we underscore here the sentence on the LLNL website that, "The need for the BEEF site originated when, due to community encroachment near the Lawrence Livermore National Laboratory (LLNL) facility in Livermore, California, DOE was no longer allowed to perform high explosives experiments at the facilities Site 300 Shaped Charge Scaling Project..." We emphasize this because the population density and the pressures population represents have mounted rather than abated since BEEF was established in 1995.

The ATC/proposed permit review ignores BEEF as an alternative, which is both a deficiency in its own right and, also, another reason why a full CEQA review must be conducted.

### **Cumulative Impacts**

As defined in Section 15355, a cumulative impact consists of an impact, which is created as a result of the combination of the project evaluated... together with other projects causing related impacts. The Cumulative Air Impacts section of the CEQA review only refers to the estimated project air pollutant levels rather than the cumulative air pollutant levels of the entire site.

Specifically, the air blasts are directly connected to burning of explosives waste (and other related wastes) at Site 300. The larger the blasts, the more explosives waste that will be generated and then burned in the open burn units at the site. However, the Cumulative Impacts section of the CEQA review does not take into account the emissions from the burning of waste cumulatively with the emissions from the blasts themselves. When added together, the overall cumulative emissions from the site are much closer to the "Thresholds of Significance" than when analyzed separately. When a cursory estimation of impacts results in amounts close to the thresholds of significance, the agency should perform a full CEQA review to determine the impacts more precisely and propose mitigation measures.

Additionally, the agency only looked at Best Available Control Technologies applied to the new project, rather than the site as a whole. There are three very primitive open burn units used to burn hazardous explosives waste in the open air at Site 300. Less polluting alternatives exist for these activities and should be required for the site to lower the cumulative impacts.

The district uses emissions estimates for these burn units that are inconsistent with the California Department of Toxic Substances Control's recently issued Hazardous Waste Permit for Site 300, and it is unclear which amount is more correct given that the Hazardous Waste Permit was issued before LLNL announced its intention to increase the

size of the explosive blasts at Site 300. The District needs to clarify with the Lab and the DTSC with regard to the permitted and actual amount of waste that will be burned in these units, as well as what is permitted to be burned in them. (The DTSC permit allows non explosive waste like contaminated gloves, containers and other tangibles to be burned in the units and the emissions from those items do not appear to be included in the District's emissions calculations.)

### **Re-suspension of Radioactive Material**

The ATC/proposed permit does not adequately address the disturbance of radioactively contaminated soil surrounding the detonation table. There are significant amounts of uranium-238 in soils around the firing table, some of this radioactive material is in the form of finely-divided particles (of varying sizes, including microscopic sizes most easily re-suspended) and some is in the form of larger pieces. The re-suspension of radioactive contamination from past open-air tests requires careful and detailed analysis that is missing in the ATC/proposed permit.

The ATC mentions LLNL applying shotcrete to the "berm" (i.e., a hill that sits behind the firing table), but does not substantiate why that would be a sufficient barrier. The hill has not been a sufficient barrier to contamination around the firing table in past blasts. Moreover, at the public hearing, the District began any talk of the "berm" by saying things like, "Livermore Lab said" or "Livermore Lab told us." It appears that the District has conducted little to no independent assessment. Analysis is lacking specifically regarding disturbance of soils when the maximum 1,000 pounds of high explosives is detonated in a single test.

In June 2016, Tri-Valley CAREs obtained documents revealing that hunks of uranium-238 (also called depleted uranium or DU) were unexpectedly found strewn around the ground at the Building 851 Firing Table. Employees were routinely sampling groundwater in the summer of 2014 when they spotted the uranium-238 littering the surface soil. The Lab found 27 pieces of uranium-238 measuring 3-inches in diameter or greater. The chunks weighed 80 pounds.

Following that discovery, Livermore Lab undertook a gamma radiation survey of uranium-238 in surface soils at the Building 851 Firing Table. The survey disclosed highly elevated gamma radiation levels radiating outward from the table. Further, there were high levels of gamma radiation found in the area of an ephemeral stream that is not included in the Firing Table description in the ATC/proposed permit.

Additional characterization by LLNL of soils in a 700-foot radius around the firing table also took place during 2016. Those results were reported to state and federal agencies pursuant to the Superfund (CERCLA) cleanup underway at the Building 851 Firing Table.

According to the LLNL minutes of a meeting on September 22, 2017 with the state and federal regulatory agencies: Surface soils samples were collected from 40 locations within the 700-foot radius of the detonation pad and analyzed for uranium isotopes. The

maximum uranium-238 activity was 44.3 picocuries/gram. Twenty sample locations contained uranium isotopes exceeding the current 3.1 picocuries/gram background calculation for Site 300. Thirty- three (out of 40) of the sample locations exceeded the 1.4 picocuries/gram US EPA composite worker Preliminary Remediation Goal, or PRG. Samples from all 40 locations exceeded the MCL-based Soil Screening Level (SSL) for uranium-238 of .006 picocuries/gram.

Further, the soil sampling revealed uranium-235 (the nuclear weapons grade isotope) concentration of .63 picocuries/gram in at least one sample location. Twenty-one (out of 40) sample locations contained uranium-235 in exceedance of the .0737 picocuries/gram that is the current background number for Site 300. Two sample locations exceeded the EPA PRG. Thirty-eight sample locations exceeded the MCL-based SSL of .039 picocuries/gram. The surface soil samples also revealed uranium-234 and uranium-236 isotopes.

We note that the higher radiation levels found by LLNL were generally in the soil survey locations nearest the detonations that caused the contamination, which is suggestive of greatest re-suspension potential.

Moreover, as noted above, one of the highest areas of radioactive contamination found by Livermore Lab in its initial soil gamma survey at the Building 851 Firing Table was in the area of an ephemeral stream that is missing from the ATC/proposed permit. The very generalized notation in the document does not analyze this ephemeral stream at the Building 851 Firing Table area. This missing information has implications for potential re-suspension of particles.

Finally, there are apparent discrepancies within the ATC/proposed permit with gravels sometimes noted as the medium intended to absorb shock on the firing table and concrete mentioned for that purpose in other sections. In no case is there any supporting analysis. However, the shock absorbencies of different materials may differ.

A full CEQA review would contain the needed analysis of re-suspension potential and its possible impacts.

### **Impact of the Project on the Superfund Cleanup**

The ATC/proposed permit fails to consider direct evidence from LLNL documents pursuant to the Superfund (CERCLA) cleanup ongoing at Building 851 that permitting this project would conflict with the ongoing remedy for Site 300's OU8, which contains the B851 Firing Table. This is a yet another potential impact the ATC/proposed permit leaves unexamined.

The September 2017 "Draft Five-Year Review Report for the Operable Units 3 and 8 at LLNL Site 300," states on page 130, "...any cleanup of contaminants in surface soil [at Building 851] that are found at concentrations/activities in excess of screening levels or are found to be a threat to groundwater and thus require remediation to protect human

health and the environment in the long term would not occur until the firing table is no longer active at some time in the future.”

Further, the November 9, 2017 Livermore Lab minutes of the regulatory authorities meeting on the Superfund cleanup – which included LLNL, the Dept. of Energy National Nuclear Security Administration Livermore Field Office, EPA Region IX, California Department of Toxic Substances Control, and the Central Valley Regional Water Quality Control Board – states on page 4: “It was acknowledged that the Building 851 Firing Table is currently in use, although depleted uranium has not been used in explosive experiments [there] since 2008 or earlier. Continued use of the firing table complicates the CERCLA remediation pathway...”

It is notable that following the withdrawal by Livermore Lab of a permit application for a similar Proposed Action in 2007, three open-air firing tables were closed and made available for remediation under CERCLA. There is not any discussion or analysis of the project’s impact on the future status of the Building 851 Firing Table (including its lesser usage – or potential closure) if the permit is not granted.

It is not sufficient under CEQA for the ATC/proposed permit to shrug off the multiple ways in which the project may directly and indirectly impact or complicate the Superfund cleanup in progress. The Superfund cleanup is both a matter of law (CERCLA) and a priority of our members and the public at large in communities near Site 300. A full analysis of impacts must be undertaken, made available for public comment, and reflected in decision-making.

### **Air Toxics, Air Quality and Risk Analyses**

According to DOE/EA-2076 and its permit application to the District, the project will result in airborne emissions involving 121 hazardous constituents. Many of the listed pollutants are known to damage organs, cause cancer and other diseases and may lead to prompt or premature death, including beryllium, vinyl chloride, phosphine, hydrogen cyanide and dioxin. The ATC/proposed permit does not list all of the contaminants and fails to adequately consider them all.

Some of these materials could be present in the high explosive compound used and in a test device; for example, beryllium could be present in both. There is no clear description of the actual amounts of these contaminants per test/day or per year in DOE/EA-2076, only a table of expected emissions based on calculations. There is not enough information in the EA for the reader to make a crosswalk from amounts in the test and expected emissions.

The ATC/proposed permit, at a minimum, should contain this additional information. Instead it contains even less detail and information than the EA.

The adequacy of the ATC/proposed permit to address air toxics and emissions is fundamentally lacking in other areas as well. For instance, the ATC has a confusing mash up

of notations about cratering and emissions vis-a-vis concrete, shotcrete or gravel. They would not be the same.

The ATC/proposed permit contradicts itself in describing the B851 Firing Table, its concrete pad, use of a raised metal base for some experiments, the precise location of the hill/rise nearby that is to act as a berm, and the soils and other features immediately surrounding the Firing Table.

In fact, the ATC/proposed permit appears to cite the same measurement in some sections as being calculated from the center of the Firing Table and at other sections as calculated from its rim.

Overall, it appears that the District has neither independently verified the precise positions of these features nor adequately analyzed the impact of their location on emission potentials. For example, the ATC/proposed permit appears to take LLNL's spoken words as its "evidence" in crediting the so-called berm with more air emission suppression potential than may be warranted.

Further, the ATC/proposed permit appears to accept the DOE/EA-2076's use of an Open Burn Open Detonation model that may understate emissions. The June 20, 2017 report on "Characterization of Air Emissions from Open Burning at the Radford Army Ammunition Plant," suggests, based on drone collection of air data, that the actual emissions at the Army Plan (and by extension at other sites) may be understated. This 2017 report and its data must be included in the analysis of airborne emissions from the Proposed Action at the Building 851 Firing Table.

The project would unquestionably result in hazardous airborne contaminants. Site 300 is located in an extreme non-attainment zone for some air pollutants, such as ozone, and a nonattainment zone for others, such as PM<sub>2.5</sub> (particulate matter with a diameter less than 2.5 micrometers). These hazards are noted but appear to be minimized in the ATC/proposed permit. First, nonattainment zones should not be used as justification for more pollutants (e.g., by using comparisons of "added" pollution to the existing overburden and suggesting it's just a little more than is currently present). Further, the discussion of the area's nonattainment zones and extreme nonattainment zones appears to be de-emphasized in the ATC/proposed permit, including when considering cumulative impacts. As we note elsewhere in this comment, a more complete analysis of cumulative impacts is needed. Again, a full CEQA review is required.

Moreover, the overall modeling and the "release fractions" done by LLNL staff may be optimistic and should be re-visited by the District in a full independent analysis.

It is worth noting that DOE/EA-2076 posits that the blasts will result in an Acute Hazard Index of .7 at the Carnegie State Vehicle Recreation Area (SVRA) ranger residence. The threshold of 1.0 would disqualify the Proposed Action in its permit application process. The methodology to determine the .7 rating is crucial to understanding the magnitude of risk.

The EA also notes that the Proposed Action carries a cumulative cancer risk of 15.4 in a million and that 20 in a million would be disqualifying.

These possibly overoptimistic numbers show that, in any event, the project is not insignificant - and it appears to be nearing the District's "no go" boundary for issuing a permit.

As a separate but related issue, we note that the ATC/proposed permit quotes LLNL as saying that all of the proposed blasts will be shaped charge experiments. Neither the DOE/EA-2076 nor the LLNL air permit application to the District that is its Appendix A used the term "shaped charge" in describing the blasts. These LLNL documents are not proscriptive and do not limit the types of experiments with nonradioactive hazardous materials to be conducted in the manner the ATC/proposed permit assumes. The air modeling in the ATC/proposed permit credits the directional nature of shaped charge experiments with limiting emissions in all cases. Setting aside the embedded unchecked assumptions there, it is not clear that every experiment conducted with more than 100 pounds of high explosives at the B851 Firing Table over the many years of the permit will be shaped charge blasts, although it is likely that some or many may be. The ATC/proposed permit contains only general and weak LLNL self-reporting of Firing Table conditions after the shots. Certainly, there is nothing to prohibit other types of experiments in addition to shaped charges. All air modeling must include the impacts of various kinds of explosive experiments that could be conducted over the permit period.

### **Site 300 Worker Health and Safety**

The ATC/proposed permit lacks analysis of potential impacts to Site 300 workers. Air impacts for Site 300 workers are not analyzed in any detail. Noise impacts to Site 300 workers are not addressed. In its DOE/EA-2076, LLNL has stated that all Site 300 workers must be kept indoors during these larger detonations. This should be a "red flag" for the District to conduct a detailed analysis, yet none was done. There is no detailed discussion of what the impact could be if, for example, a worker was not housed inside a building during the detonation. Or, if the windows blow out in a particular building (see also the noise impacts section below).

### **Tracy Hills Development**

The recently approved development of 5500 new houses dubbed "Tracy Hills" is being built within a mile of Site 300, but is not even mentioned in the District's brief analysis of impacts. This is an unacceptable omission and must be remedied.

### **Potential Impacts Related to Improper Location in the ATC**

In addition to Tracy Hills, it is not clear that other portions of the impacted environment - and those inhabiting it - are properly located in the ATC/proposed permit. For example, the City of Tracy comes to within about 7,000 feet of Site 300, while the District places it about

6 miles away from Site 300. As noted, the property line of the Tracy Hills development is close by and not listed at all in the ATC/proposed permit.

Corral Hollow Road is located at the Site 300 boundary and yet its traffic is not discussed in the ATC/proposed permit. The Site 300 section of Corral Hollow Road receives increased usage during commute periods because of congestion on Interstate-580 through the Altamont Pass. Indeed, with the expansion of population in Tracy and communities to its east and south, the build out at Mountain House, and other population increases, Corral Hollow Road is sometimes choked with vehicles ranging from motorcycles to tractors and minivans and trucks. Corral Hollow Road is likely to become more congested as the Tracy Hills development approaches build out. For air toxics and risk (as well as noise) drivers/commuters are not considered in the ATC/proposed permit and should be. It's worth noting people ride bicycles through here as well.

Directly across Corral Hollow Road from Site 300 is a state park, called the Carnegie State Vehicle Recreation Area and Campground. The park rangers and the users (especially dirt bike riders) can be substantially closer to Site 300 than noted in the ATC/proposed permit.

At the Carnegie SVRA and Campground, rangers often work near the park boundary directly across Corral Hollow Road from Site 300 and very near the Building 851 Firing Table. Rangers have told us that they have become overwhelmed by smoke when working in the open during the period that the Building 851 area is "control burned." They also have noted seeing airborne debris "clouds" they believe are associated with blast tests wafting toward them. Moreover, the dirt bike activity at the SVRA involves kicking up substantial dust and re-suspension of particles not noted in the District's air and risk analyses. Nor are possible campers noted.

### **Encroaching Population**

In general, the ATC/proposed permit seeks to assert that there will be little or no impact from the larger open-air blasts. This stands in contrast to the March 1997 LLNL publication, "Science & Technology Review" that suggests the impetus for building the Contained Firing Facility at Site 300 was to reduce emissions as well as other impacts to nearby populations from open-air tests.

The publication states, "Sometime in 2000, far fewer loud 'BOOMS' will resonate from Site 300, the Laboratory's explosives test complex. LLNL's new Contained Firing Facility (CFF) will begin operation that year to provide indoor testing of high explosives and most open-air experiments at Site 300 will be discontinued..."

[Note that this LLNL article is relevant also to noise impacts, waste impacts and whether the project could result in the Firing Table remaining open for a longer timeframe as a consequence of issuing the permit.]

The LLNL article continues: "CFF will drastically reduce emissions to the environment and minimize the generation of hazardous waste, noise, and blast pressures... Future

residential development in an area less than a mile away will also benefit from the facility's environmental precautions..." And, it says, "The elimination of most open-air testing at Site 300 will significantly reduce the amount of contaminated firing table gravel waste."

In sum, the LLNL article notes the impacts of open air testing on the surrounding and rapidly encroaching populations, while the ATC/proposed permit tends to be vague about them or misplace them altogether location-wise. The District's analysis is additionally flawed by these errors.

### **Impacts of Additional Explosives and Waste Management**

The project may increase high explosives shipments into and out of Site 300. The District does not analyze transportation risks.

Further, the District appears to have taken at face value LLNL assertions that the project will result in a "minimal increase in explosives wastes." Logically, if the project contains 1,000-pounds of high explosives - 10 times the weight of high explosives allowed at present - and an increase annually from 1,000 pounds to 7,500 pounds (containing 121 hazardous constituents) - how could there not be a substantial increase in hazardous wastes?

Either the increased amounts of high explosives material with the 121 hazardous constituents is blowing in the wind and causing air impacts, or it is falling out on soils and causing impacts there, or it is resulting in waste. There do not appear to be other options for the material once detonated on the open-air firing table. Yet, the ATC/proposed permit analysis does not adequately account for it in any of these categories.

### **Noise Impacts**

The ATC/proposed permit analysis improperly ignores noise impacts, which must be considered under CEQA. In particular, we note that the ATC/proposed permit asserts LLNL has "established" the 126 dB limit as a ceiling above which it will not go. This is not substantiated by LLNL's own assessment in DOE/EA-2076.

Since there is no independent noise analysis in the ATC/proposed permit, we will use the numbers in the DOE/EA-2076 here while also reiterating that a full CEQA assessment conducted by the District must be undertaken.

The DOE/EA-2076 states that that peak pressure levels above 120 dB may "rattle loose windows or pictures on walls..." The EA discusses peak sound pressure levels of 126 dB and suggests that level would not be exceeded in populated areas. However, the EA then states that the "sound pressure level of 126 dB would not be exceeded in populated areas or at receptors of concern for 85% of all detonations." A plain language reading suggests that the sound pressure level of 126 dB may be exceeded 15% of the time in populated areas. The maximum dB of the 15% must be determined - and the potential impacts analyzed by the District.

The EA then discloses that the project would result in peak sound levels at the southern portion of the Carnegie state park of 130 dB. The EA designates the rangers and park users as “not populated.” The EA doesn’t say how state park workers and members of the public would be kept out the public park during blasts. The District’s analysis must account for all impacted populations. The noise impacts certainly will be greater than the 126 dB level that was accepted by the District without any accompanying evidence or analysis in the ATC/proposed permit.

Weather and atmospheric conditions affect noise transport and levels. The modeling underlying the EA conclusion that the impulse noise would be “higher” but not “significant” may have used optimistic assumptions about weather patterns (and other conditions) to reach that conclusion. A full CEQA analysis is needed to make this determination.

### **Endangered Species Impacts**

Site 300 is home to numerous endangered, threatened and sensitive species (including near the B851 Firing Table itself) and LLNL documents cite “the potential for noise to harm wildlife.” Given that bigger, louder blasts constitute the project, a CEQA analysis should consider the impact of the project on wildlife at Site 300.

### **Environmental Justice**

As noted elsewhere, the City of Tracy lies approximately 7000 feet from Site 300. According to the City of Tracy website, its population is about 40% Latino/Hispanic. Many are monolingual or more comfortable in Spanish. Moreover, Southside Tracy, a region close to Site 300, has a high concentration of minority residents. Environmental justice issues were not considered in the ATC/proposed permit.

### **Conclusion**

California case law has asserted that, “(w)here there is any reasonable possibility that a project or activity may have a significant effect on the environment, an exemption would be improper.’ *Wildlife Alive v. Chickering* (1976) 18 Cal. 3d 190, 205-206 [132 Cal. Rptr. 377, 553 P.2d 537].

We demand that the district adhere to its commitment to protect the health of Valley residents by at least conducting a full Environmental Impact Report under CEQA that scientifically and methodically analyzes and discloses the potential impacts of this project for the public. Then it is the District’s duty under the law to find ways to avoid or mitigate those impacts if possible.

We note that obvious mitigation possibilities exist, such as building a large containment structure for these blasts rather than conducting them in the open air, which the District dismisses outright as too expensive at around \$100 million dollars, despite the fact that LLNL has an annual budget in the \$1.5 billion range, counting its Dept. of Energy funding alone.

Moreover, an Environmental Impact Report pursuant to CEQA would contain an alternatives analysis and other considerations outlined in our public comment. The public deserves no less.

Thank you for this opportunity to comment on the ATC/proposed permit. We ask the District to inform Tri-Valley CAREs (and other commenters) of all actions taken on this project.

Sincerely,

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Note: All cited documents should be treated in their entirety as part of this comment.