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May 17, 2023

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**Re: Agenda Item 6A - Comments on Duke Warehouse at Patterson Avenue and Nance Street Project – Final Environmental Impact Report (SCH No. 2022010274)**

Dear Chairman Hammond, Vice-Chairman Shively, Honorable Planning Commissioners: Jimenez, Lopez, Gomez-Barrera, Mr. Fenn, Ms. Brenes, and Mr. Phung:

On behalf of Californians Allied for a Responsible Economy (“CARE CA”), we submit these comments on Agenda Item 6A the Duke Warehouse at Patterson Avenue and Nance Street Project (“Project”) and the Final Environmental Impact Report (“FEIR”) (SCH No. 2022010274)<sup>1</sup>, Specific Plan Amendment 21-05267, Tentative Parcel Map 21-05086 (TPM-38259), Development Plan Review 21-00005 proposed by Prologis and Duke Realty Limited Partnership (collectively, “Applicant”) to facilitate construction of a 764,753 square foot industrial distribution building which includes approximately 20,000 SF of office space.<sup>2</sup> The Project would be located at the northeastern corner of Patterson Avenue and Nance

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<sup>1</sup> City of Perris, Final Environmental Impact Report Duke Warehouse at Patterson Avenue and Nance Street Perris, California SCH No. 2022010274 (April 2023), <https://www.cityofperris.org/home/showpublisheddocument/16438/638187871285500000> (“FEIR”).

<sup>2</sup> City of Perris, Planning Commission, Agenda and Staff Report (May 17, 2023), <https://www.cityofperris.org/home/showpublisheddocument/16484/638195101995470000> (“Staff Report”).

Street, in the City of Perris, California 92571 Assessor Parcel Numbers (APNs) 314-153-015 through -040, 314-153-042, 314-153-044, 314-153-046, 314-153-048, 314-160-005 through -012, and 314-160-033.<sup>3</sup> The Project site is within the PVCCSP planning area, and Planning Area 1 (PA 1), North Commercial/Industrial, of the Perris General Plan 2030. The total construction period is expected to require approximately eleven months.

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We have reviewed the FEIR, its technical appendices, and reference documents with assistance of Commenters' expert consultants, whose comments and qualifications are attached. We prepared our comments on air quality, public health, and GHG emissions with the assistance of air quality and GHG expert James Clark, whose comments ("Clark Comments") and curriculum vitae ("CV") are attached hereto as **Attachment A**. We have prepared our comments on noise and vibration with the assistance of acoustics, noise, and vibration expert Jack Meighan of Wilson Ihrig. Mr. Meighan's Comments ("Meighan Comments") and Mr. Meighan's CV are attached hereto as **Attachment B**.

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The FEIR and the Staff Report do not resolve a number of issues raised in our comments on the DEIR. Although the City nominally responded to public comments, the Responses to Comments on the DEIR which are included in the FEIR ("Responses to Comments") are wholly inadequate under CEQA.<sup>4</sup> The City failed to adequately respond to CARE CA's DEIR comments, and the comments of its experts, on significant environmental issues, in violation of CEQA.<sup>5</sup> As a result, it is premature to recommend that the City Council take action on the Project.

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We urge the Planning Commission to decline to make any recommendation to the City Council at this time. Instead, the Commission should remand the Project to Staff to revise and recirculate a legally adequate EIR which adequately analyzes and mitigates Project impacts and appropriately responds to public comments. The Project must not be rescheduled for a further public hearing before the Commission until all of the issues raised in these comments, and in the comments of other members of the public, have been fully addressed. We reserve the right to supplement these comments at a later date, and at any later proceedings related to this Project.<sup>6</sup>

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<sup>3</sup> *Id.* at 1-4.

<sup>4</sup> 14 CCR § 15088(a), (c); *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 879–882; *The Flanders Foundation v. City of Carmel-by-the-Sea* (2012) 202 Cal.App.4th 603, 615.

<sup>5</sup> *Id.*

<sup>6</sup> Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield ("Bakersfield")* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

## I. STATEMENT OF INTEREST

CARECA is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards, and the environmental impacts of the Project. The coalition includes Riverside residents Brett Sanchez, Alejandro Villalobos and Jorge Suarez, Southern California Pipe Trades District Council 16 and District Council of Iron Workers of the State of California, along with their members, their families, and other individuals who live and work in the City of Perris and Riverside County.

CARECA advocates for protecting the environment and the health of their communities' workforces. CARECA seeks to ensure a sustainable construction industry over the long-term by supporting projects that offer genuine economic and employment benefits, and which minimize adverse environmental and other impacts on local communities. CARECA members live, work, recreate, and raise their families in the City of Perris and Riverside County and surrounding communities. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist onsite.

In addition, CARECA has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making the area less desirable for new businesses and new residents. Indeed, continued environmental degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

## II. THE PROJECT DESCRIPTION REMAINS INADEQUATE

CARE CA previously commented that the DEIR failed to include an accurate and complete Project description because the DEIR failed to identify reasonably foreseeable uses of the Project site, rendering the DEIR's impact analysis inadequate. The FEIR fails to correct this omission, and the Staff Report perpetuates it, by failing to clarify specific end user tenants.

The Project is being constructed to support warehouse, distribution, and cold storage uses, which as pointed out by CARB, can result in highly significant environmental impacts: "Freight facilities, such as warehouse and distribution

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facilities, can result in high daily volumes of heavy-duty diesel truck traffic and operation of on-site equipment (e.g., forklifts and yard tractors) that emit toxic diesel emissions, and contribute to regional air pollution and global climate change.”<sup>7</sup> The impacts generated by the particular operations of different users within this broad category can also result in significant impacts. The FEIR’s ongoing omission of information about the reasonably foreseeable operations at the Project site that could have significant impacts is a violation of CEQA.

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CEQA requires that an EIR “set forth a project description that is sufficient to allow an adequate evaluation and review of the environmental impact.”<sup>8</sup> An accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity.<sup>9</sup> “An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.”<sup>10</sup> Accordingly, a lead agency may not hide behind its failure to obtain a complete and accurate project description.<sup>11</sup>

“Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal’s benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal ... and weigh other alternatives in the balance.”<sup>12</sup> As articulated by the court in *County of Inyo v. City of Los Angeles*, “a curtailed, enigmatic or unstable project description draws a red herring across the path of public input.”<sup>13</sup> Without a complete project description, the environmental analysis under CEQA is impermissibly limited, thus minimizing the project’s impacts and undermining meaningful public review.<sup>14</sup>

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The purpose of an EIR is to reveal to the public “the basis on which its responsible officials either approve or reject environmentally significant action,” so that the public, “being duly informed, can respond accordingly to action with which it disagrees.”<sup>15</sup> Further, “[t]o be adequate, the EIR must include sufficient detail to enable those who did not participate in its preparation to understand and

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<sup>7</sup> CARB Comments re: Rubidoux Commerce Park Notice of Preparation of DEIR, December 17, 2020, p. 1; CARB NOP Comments regarding the Mariposa Industrial Park DEIR.

<sup>8</sup> *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 654 (citing 14 C.C.R. § 15124).

<sup>9</sup> *McQueen v. Board of Directors* (1988) 202 Cal. App. 3d 1136, 1143.

<sup>10</sup> *Santiago County Water Dist. v. County of Orange* 118 Cal. App. 3d 818, 829-830.

<sup>11</sup> *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311 (“*Sundstrom*”).

<sup>12</sup> *Santiago County Water Dist. v. County of Orange* 118 Cal. App. 3d 818, 829-830.

<sup>13</sup> *Id.* at 197-198.

<sup>14</sup> See, e.g., *Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1988) 47 Cal.3d 376.

<sup>15</sup> *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392

‘meaningfully’ consider the issues raised by the proposed project.”<sup>16</sup> The City’s failure to provide the square footage breakdown between high-cube logistics and e-commerce uses is a violation of CEQA. Without an accurate Project Description, the FEIR fails as an informational document under CEQA. A revised EIR must be recirculated for public review.

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Here, the Project is being developed for unknown future tenants, but for reasonably foreseeable future uses. The DEIR admits that “[t]here is the potential for routine use, storage, or transport of other hazardous materials; however, the precise materials are not known, as the tenants of the proposed warehouses are not yet known.”<sup>17</sup> The transport of hazardous materials may result in potentially significant impacts.

The DEIR’s omission of information about the reasonably foreseeable operations at the Project site that could have significant impacts is similar to the EIR’s omission of critical operational analysis in *Bakersfield Citizens for Local Control v. City of Bakersfield*. In *Bakersfield*, the court found that an EIR’s simple statement that “no stores have been identified” for the subject shopping center “without disclosing the type of retailers envisioned for the proposed project is not only misleading and inaccurate, but it hints at mendacity.”<sup>18</sup> Since the Project is being designed to be capable of supporting warehouse, distribution, and hazardous materials transport uses at the Project site, the FEIR must be revised to include specific use information and to analyze the impacts of the most intensive reasonably foreseeable uses of the Project site. The FEIR must also include all known information about the types of future users at the Project site. The FEIR’s failure to provide information about the reasonably foreseeable use causes the FEIR to fail as an informational document. The FEIR must be revised and recirculated to comply with CEQA.

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<sup>16</sup> *California Oak Foundation v. City of Santa Clarita* 133 Cal.App.4th 1219, 1237 quoting *Santa Clarita Organization for Planning the Environment* 106 Cal.App.4th 715, 721; see also *Concerned Citizens of Costa Mesa Inc, v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929,935 [“To facilitate CEQA’s informational role, the EIR must contain facts and analysis, not just the agency’s bare conclusions or opinions”].

<sup>17</sup> DEIR, p. 5.8-15.

<sup>18</sup> *Bakersfield Citizens for Local Control v. City of Bakersfield (“Bakersfield”)* (2004) 124 Cal.App.4th 1184, 1213.

**III. THE FEIR STILL FAILS TO ADEQUATELY ANALYZE AIR QUALITY, GHG, AND ENERGY IMPACTS AND FAILS TO INCORPORATE ALL FEASIBLE MITIGATION MEASURES AND ALTERNATIVES AS REQUIRED BY CEQA**

**A. The FEIR Does Not Include All Feasible Mitigation to Reduce Public Health Impacts from Human Exposure to Valley Fever Spores to the Greatest Extent Feasible**

CARE CA previously commented that the DEIR failed to adequately mitigate the Project's construction and operational air quality impacts, and suggested significant mitigation measures which could feasibly reduce Project impacts. The Staff Report neglects to include CARE CA's proposed feasible mitigation, and instead attacks the substantial evidence proffered by CARE CA's expert consultant.

The Staff Report incorrectly asserts that CARE CA failed to provide any evidence that conventional dust control methods are not effective to reduce Valley Fever impacts. The Staff Report asserts that CARE CA's expert concluded, without citing any literature, that conventional dust control measures do not prevent the spread of Valley Fever. This is incorrect, and demonstrates that the City did not consider the evidence cited in Dr. Clark's comments on the DEIR. The DEIR provides no analysis regarding potential Valley Fever and the FEIR makes the conclusory statement that Valley Fever impacts are speculative. In fact, Dr. Clark presented substantial evidence that Valley Fever may pose a significant risk to workers onsite, but this impact was not adequately mitigated in the EIR.

As Dr. Clark explains, conventional dust control measures, such as in MM Air 3, are not effective at controlling Valley Fever<sup>19</sup> because they largely focus on visible dust or larger dust particles—the PM10 fraction—not the very fine particles where the Valley Fever spores are found. While dust exposure is one of the primary risk factors for contracting Valley Fever and dust-control measures are an important defense against infection, it is important to note that PM10 and visible dust, the targets of conventional dust control mitigation, are only indicators that *Coccidioides ssp.* spores may be airborne in a given area.<sup>20</sup> Freshly generated dust clouds usually contain a larger proportion of the more visible coarse particles, PM10 (</=0.01 mm), compared to cocci spores (0.002 mm). However, these larger particles

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<sup>19</sup> Clark Comments, p. 2.

<sup>20</sup> Clark Comments, p. 3.

settle more rapidly and the remaining fine respirable particles may be difficult to see and are not controlled by conventional dust control measures.<sup>21</sup>

Spores of *Coccidioides ssp.* have slow settling rates in air due to their small size (0.002 mm), low terminal velocity, and possibly also due to their buoyancy, barrel shape, and commonly attached empty hyphae cell fragments.<sup>22</sup> Thus spores, whose size is well below the limits of human vision, may be present in air that appears relatively clear and dust free. Such ambient, airborne spores with their low settling rates can remain aloft for long periods and be carried hundreds of miles from their point of origin. Thus, implementation of conventional dust control measures will not provide sufficient protection for both on-site workers and the general public.

Further, infections by *Coccidioides ssp.* frequently have a seasonal pattern with infection rates that generally spike in the first few weeks of hot dry weather that follow extended milder rainy periods. In California, infection rates are generally higher during the hot summer months, especially if weather patterns bring the usual winter rains between November and April.<sup>23</sup> The majority of cases of Valley Fever accordingly occur during the months of June through December, which are typically periods of peak construction activity.

The harmful effects of construction worker exposure to Valley Fever spores is well-documented, as is the ineffectiveness of standard dust control measures to limit exposure. For example, at two photovoltaic solar energy projects in San Luis Obispo County, Topaz Solar Farm<sup>24</sup> and California Valley Solar Ranch,<sup>25</sup> 44 construction workers contracted Valley Fever, including 13 electricians/linemen/wiremen; 11 equipment operators; 6 laborers; 5 carpenters/ironworkers/millwrights/mechanics; 4 managers/superintendents, and 3 others. Of these, 39% visited an emergency room, 20% were hospitalized, and 77%

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<sup>21</sup> *Id.*

<sup>22</sup> Fisher et al. 2007.

<sup>23</sup> *Ibid.*

<sup>24</sup> U.S. Department of Energy, Final Environmental Impact Statement, Volume 1, Loan Guarantee to Royal Bank of Scotland for Construction and Startup of the Topaz Solar Farm, San Luis Obispo County, California, August 2011; <https://www.energy.gov/sites/prod/files/Topaz-FEIS-Volume-I-PDF-Version.pdf>.

<sup>25</sup> U.S. Department of Energy, Final Environmental Assessment, Volume 1, Loan Guarantee to High Plains II, LLC for the California Valley Solar Ranch Project in San Luis Obispo County and Kern County, California, August 2011; California Valley Solar Ranch; <https://www.energy.gov/sites/prod/files/EA-1840-FEA-vol1-2011.pdf>.

missed work.<sup>26,27</sup> Exposures included “performing soil-disruptive work, such as digging trenches, and working in a trench. In addition, workers reported working in a dust cloud or dust storm, and operating heavy equipment without enclosed cabs, closed windows, and air-conditioned with high-efficiency particle (HEPA) filtration.”<sup>28</sup>

Both of the EISs for these projects recognized Valley Fever impacts and included mitigation<sup>29</sup> that was much more comprehensive than the conventional PM10 dust mitigation in the EIR and MM Air 3. The EISs for these projects contained no Valley Fever construction mitigation, recommending only conventional fugitive dust control measures. The Topaz Farm EIS, for example, recommended only to “reduce fugitive dust,”<sup>30</sup> concluding (as for the Project) with no analysis at all, that implementation of conventional dust control measures would reduce Valley Fever impacts to less than significant.<sup>31</sup> The California Valley Solar Ranch EIS only required “dust control measures” and provided no information on Valley Fever to workers and nearby residents.<sup>32</sup> These omissions resulted in significant morbidities among construction workers on those projects. Here, the City must do more to ensure worker safety by providing more Valley Fever protections.

As shown in these comments, and those of CARE CA’s expert consultant, the EIR’s Mitigation Measure MM-3 will not significantly control Valley Fever spores, which are orders of magnitude small than conventional construction dust. Conventional dust control measures will not be effective at reducing the risk of Valley Fever to the greatest extent feasible. The City must recirculate the EIR to include adequate Valley Fever mitigation before the Project can lawfully be approved.

Dr. Clark proposed the following mitigation measures to feasibly reduce impacts from Valley Fever, but the FEIR fails to include them: The City should require measures from the Proponent to actively suppress the spread of VF by:

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<sup>26</sup> McNary and Deems, 2020, pdf 22.

<sup>27</sup> Julie Cart, Officials Study Valley Fever Outbreak at Solar Power Projects, Los Angeles Times, April 30, 2013; <https://www.latimes.com/local/la-xpm-2013-apr-30-la-me-solar-fever-20130501-story.html>.

<sup>28</sup> de Perio et al., 2019, p. S-43.

<sup>29</sup> Topaz EIS, pp. 2-65/66, MM AQ-1.3 and California Valley Solar Ranch FEIR., p. 3-126, 3-128 (“Dust control measures and the integration of San Luis Obispo Health Agency Interim Valley Fever Recommendations for Workers into construction operations would reduce exposure to Valley Fever. Therefore, effects on public or occupational health related to disease vectors would be negligible and not significant.”).

<sup>30</sup>Topaz EIS, Volume I, March 2011, Table ES-4, AQ-1.3.

<sup>31</sup> Ibid., p. ES-16.

<sup>32</sup> Table 2-1, pdf 34 and 217.

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1. A site specific Valley Fever Dust Management Plan should be prepared that includes a site-specific work plan (SWP) as well as a sampling and analysis plan (SAP) to measure the amount of *Coccidioides immitis* present in soils at the Site prior to any soil disturbance on site. The SWP and SAP should detail the goals of the investigation(s), the collection methods, the number of samples to be collected, and the minimum detection requirements. The results of the investigation should be presented to the South Coast Air Quality Management District (SCAQMD) to ensure compliance with the goals of the SAP and approval of the investigation results.
2. Include specific requirements in the Project's Injury and Illness Prevention Program (as required by Title 8, Section 3203) regarding safeguards to prevent Valley Fever.
3. Control dust exposure:
  - Apply chemical stabilizers at least 24-hours prior to high wind event;
  - Apply water to all disturbed areas a minimum of three times per day. Watering frequency should be increased to a minimum of four times per day if there is any evidence of visible wind-driven fugitive dust;
  - Provide National Institute for Occupational Safety and Health (NIOSH)-approved respirators for workers with a prior history of Valley Fever.
  - Half-face respirators equipped with a minimum N-95 protection factor for use during worker collocation with surface disturbance activities. Half-face respirators equipped with N-100 or P-100 filters should be used during digging activities. Employees should wear respirators when working near earth-moving machinery.
  - Prohibit eating and smoking at the worksite, and provide separate, clean eating areas with hand-washing facilities.
  - Avoid outdoor construction operations during unusually windy conditions or in dust storms.
  - Consider limiting outdoor construction during the fall to essential jobs only, as the risk of cocci infection is higher during this season.
5. Prevent transport of cocci outside endemic areas:
  - Thoroughly clean equipment, vehicles, and other items before they are moved off-site to other work locations.
  - Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate;
  - Load all haul trucks such that the freeboard is not less than six inches when material is transported on any paved public access

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road and apply water to the top of the load sufficient to limit VDE to 20 percent opacity; or cover haul trucks with a tarp or other suitable cover.

- Provide workers with coveralls daily, lockers (or other systems for keeping work and street clothing and shoes separate), daily changing and showering facilities.
  - Clothing should be changed after work every day, preferably at the work site.
  - Train workers to recognize that cocci may be transported offsite on contaminated equipment, clothing, and shoes; alternatively, consider installing boot-washing.
  - Post warnings onsite and consider limiting access to visitors, especially those without adequate training and respiratory protection.
6. Improve medical surveillance for employees:
- Employees should have prompt access to medical care, including suspected work-related illnesses and injuries.
  - Work with a medical professional to develop a protocol to medically evaluate employees who have symptoms of Valley Fever.
  - Consider preferentially contracting with 1-2 clinics in the area and communicate with the health care providers in those clinics to ensure that providers are aware that Valley Fever has been reported in the area. This will increase the likelihood that ill workers will receive prompt, proper and consistent medical care.
  - Respirator clearance should include medical evaluation for all new employees, annual re-evaluation for changes in medical status, and annual training, and fit-testing.
  - Skin testing is not recommended for evaluation of Valley Fever.
  - If an employee is diagnosed with Valley Fever, a physician must determine if the employee should be taken off work, when they may return to work, and what type of work activities they may perform.

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Dr. Clark proposed the foregoing mitigation measures, based on substantial evidence supported by fact, and undergirded by actual experience during construction of solar and wind projects in endemic areas. These measures should be included in a Mitigation Monitoring and Reporting Program in a revised and recirculated EIR for the Project, before the Project can lawfully be approved.

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## **B. The FEIR’s Air Quality, GHG, and Energy Impacts Analysis is Not Supported by Substantial Evidence**

The DEIR did not include any analysis of the Project’s emissions associated with the diesel-powered fire flow pump, an energy consuming source of GHG and other air emissions. The FEIR was revised to mention the diesel-powered fire flow pump, but concludes, absent quantitative evidence, that “emissions would be negligible.”<sup>33</sup> James Clark comments provided that the CalEEMOD outputs provided in the Air Quality, Greenhouse Gas, and Energy Impact Study prepared by Webb<sup>34</sup>, no fire pump system is included in the analyses. Dr. Clark therefore concludes that the Air Quality, Greenhouse Gas Emissions, and Energy sections of the EIR are not supported by substantial evidence, for failing to analyze a large source of Project emissions. The EIR must be revised and recirculated to accurately reflect the Project’s emissions associated with the diesel-powered fire flow pump before the Project can be approved.

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Moreover, the FEIR’s health risk analysis (“HRA”) still fails to analyze the emissions from passenger vehicles, which make up a majority of the vehicle miles traveled (“VMT”) associated with the site during construction and operation. This results in an inaccurate analysis of the Project’s health risks.<sup>35</sup> Dr. Clark provides substantial evidence in his comments, that the FEIR’s construction Health Risk Assessment fails to analyze the tailpipe emissions of air toxins and total organic gases emitted from vehicles utilizing the Project site.<sup>36</sup> Dr. Clark cites to the California Air Resources’ analysis of tailpipe emissions which shows that in addition to simple alkane hydrocarbons, tailpipe emissions also contain benzene (human carcinogen), 1,3-butadiene (human carcinogen), ethylbenzene (human carcinogen), toluene (neurotoxin), acetaldehyde (respiratory irritant), and formaldehyde (human carcinogen), and other air toxins.<sup>37</sup> These air toxins make up approximately 22% of the total organic gases (TOGs) emitted from vehicles.<sup>38</sup> The EIR fails to analyze the Project’s potentially significant health risk impacts associated with tailpipe emissions from the substantial passenger vehicle trips to the Project site during construction and operation. This omission must be remedied in a revised and recirculated EIR to comply with CEQA.

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<sup>33</sup> FEIR, p. 2-99.

<sup>34</sup> Webb, Air Quality/Greenhouse Gas Analysis for Duke Warehouse at Patterson Avenue and Nance Street (DPR No. 21 00005), City of Perris, prepared Albert A. Webb Associates for Duke Realty Corporation, (2022) p. 4

<sup>35</sup> Clark Comments, p. 3.

<sup>36</sup> *Id.* at 4.

<sup>37</sup> Clark Comments, p. 4.

<sup>38</sup> *Id.*

Commenters proposed substantial mitigation which would feasibly reduce Project air pollution and greenhouse gas emissions, including:

- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity that is equal to or greater than the building's projected energy needs, including all electrical chargers.
- Designing all project building roofs to accommodate the maximum future coverage of solar panels and installing the maximum solar power generation capacity feasible.

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But the FEIR fails to require solar panels as a condition of approval. The Conditions of Approval provide that “[t]he project does not propose rooftop solar panels at this time.”<sup>39</sup> Solar panels should be included as binding mitigation in a mitigation monitoring and reporting program in a revised and recirculated EIR.

#### **IV. THE FEIR STILL FAILS TO ADEQUATELY ANALYZE NOISE AND VIBRATION IMPACTS AND INCORPORATE ALL FEASIBLE MITIGATION MEASURES AND ALTERNATIVES AS REQUIRED BY CEQA**

The FEIR still fails to adequately analyze the Project's potentially significant and unmitigated noise and vibration impacts. The FEIR provides that “since there are no mechanical engineering plans available, the Project's noise analysis used a reference sound level of 68 dBA at 3 feet” for the HVAC equipment.<sup>40</sup> The failure to conduct an analysis of the HVAC noise emissions, reflective of the Project's actual conditions constitutes impermissibly deferred analysis, in violation of CEQA. CEQA Guidelines § 15126.4(a)(1)(B) provide that formulation of mitigation measures shall not be deferred until some future time.<sup>41</sup> “By deferring environmental assessment to a future date, the conditions run counter to that policy of CEQA which requires environmental review at the earliest feasible stage in the planning process.”<sup>42</sup>

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The Project's increase in the ambient noise level of 2.8 dBA directly contravenes Perris Municipal Code Section 7.34.050 which provides that:

It is unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which

<sup>39</sup> Staff Report, Attachment 1, Conditions of Approval, p. 2.

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<sup>41</sup> 14 CCR 15126.4(a)(1)(B).

<sup>42</sup> *Sundstrom* (1998) 202 Cal.App.3d 296, 305.

unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof... **To the extent that the noise created causes the noise level at the property line to exceed the ambient noise level by more than 1.0 decibels, it shall be presumed that the noise being created also is in violation of this section.**<sup>43</sup>

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Cont.

The FEIR estimates that the Project will increase the ambient noise levels by 2.8 dBA for sensitive receptors at R3, which in itself is a violation of the Municipal Code.<sup>44</sup> Additionally, substantial evidence presented by Mr. Meighan shows that the increase will exceed 5 dBA for residential receptors at R3 and violate the City's Municipal Code. The FEIR's conclusion that noise impacts are less than significant is not supported by substantial evidence. In fact, substantial evidence suggests that stationary operational noise, particularly from the Project's HVAC system, results in a permanent increase in ambient noise levels in excess of the City of Perris' Municipal Code Section 7.34.050, and results in a significant impact under CEQA.

The FEIR still fails to implement all feasible mitigation to reduce noise and vibration impacts to less than significant levels. As shown above, noise impacts from construction and operation are significant, and unmitigated. The FEIR fails to include noise buffers or sound walls, as proposed by Mr. Meighan, to feasibly reduce construction noise and vibration impacts. The FEIR fails to implement noise buffers, even though the Environmental Justice Element of the General Plan requires that noise barriers and sound buffers be implemented where incompatible uses cannot possibly be separated.<sup>45</sup> The Environmental Justice Element provides:

LC2-P

Goal 3.1 A community that reduces the negative impacts of land use changes, environmental hazards and climate change on disadvantaged communities. Continue to ensure new development is compatible with the surrounding uses by collocating compatible uses and using physical barriers, geographic features, roadways or other infrastructure to separate less compatible uses. When this is not possible, impacts may be mitigated using: noise barriers, building insulation, sound buffers, traffic diversion.<sup>46</sup>

<sup>43</sup> City of Perris Municipal Code Section 7.34.050 (a), [https://library.municode.com/ca/perris/codes/code\\_of\\_ordinances?nodeId=COOR\\_TIT7HEWE\\_CH7.34\\_NOCO\\_S7.34.020DE](https://library.municode.com/ca/perris/codes/code_of_ordinances?nodeId=COOR_TIT7HEWE_CH7.34_NOCO_S7.34.020DE).

<sup>44</sup> FEIR, p. 2-170.

<sup>45</sup> DEIR, p. 5.10-8.

<sup>46</sup> Perris General Plan Environmental Justice Element, p. 39, <https://www.cityofperris.org/home/showpublisheddocument/14502/637677498851330000>.

The FEIR’s failure to provide sufficient mitigation in the form of noise barriers and sound buffers not only violates CEQA, but violates the City’s Environmental Justice Element. Implementing the measures identified in the FTA Transit Noise and Vibration Assessment Manual could feasibly lessen the duration and magnitude of vibration, resulting in increased compliance with CEQA and the General Plan.

LC2-P  
Cont.

For these reasons, and those provided in CARE CA’s prior comments and those of our expert consultants, the FEIR fails to adequately identify and analyze construction and operational Project noise and vibration impacts and fails to identify and require feasible mitigation for the Project’s potentially significant noise and vibration impacts. The FEIR should be revised and recirculated to provide a vibration control and monitoring plan that identifies on-site layout, truck access and speed limits for vibration control, buffer distances and other measures to reduce vibration such as phasing and scheduling.<sup>47</sup> This plan should also include a description of the process by which complaints will be documented and resolved.<sup>48</sup> Construction noise and vibration must be mitigated to a less than significant level through feasible measures, including limiting heavy trucks in the immediate vicinity of neighbors, and reducing truck and vehicle speeds.<sup>49</sup> A revised EIR should include a vibration control and monitoring plan that requires specified off-site truck access routes, speed limits, and other measures to reduce vibration such as phasing and scheduling.<sup>50</sup>

LC2-Q

**V. THE CITY STILL CANNOT MAKE THE REQUIRED FINDINGS TO SUPPORT APPROVAL OF THE LAND USE ENTITLEMENTS**

**A. The City Cannot Make the Required Findings to Support the Approval of the Development Plan Review**

LC2-R

The Perris Municipal Code provides that “development plan review is required to protect the health, safety and welfare of the citizens of the city and to ensure that all development proposed within the city is consistent with the city’s general plan, applicable specific plans, and zoning.”<sup>51</sup> “The purpose of the development plan review is to protect the health, safety, and welfare of the citizens of the city; to ensure that all development proposed within the city is consistent

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<sup>47</sup> Meighan Comments, p. 3.

<sup>48</sup> *Id.*

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> City of Perris Municipal Code Sec. 19.50.010.

with the city's general plan, zoning, any applicable specific plan, and city requirements to protect and enhance the built and natural environment of the city, identifying and mitigating potential impacts that could be generated by the proposed use, such as traffic, noise, smoke, dust, fumes, vibration, odors, other hazards, or community impacts.”<sup>52</sup>

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Cont.

The Project’s significant impacts from air pollution, dust, noise, hazards and community impacts, as described below, contravene the purpose of the development plan review. The Planning Commission cannot approve the development plan review absent substantial additional project mitigation.

**B. The City Cannot Make the Required Findings to Support the Approval of the Tentative Parcel Map**

The Perris Municipal Code provides that “No parcel map shall be considered filed until all provisions of CEQA have been complied with.”<sup>53</sup> Given that “all provisions of CEQA” have not been complied with, due to the City’s failure to analyze and mitigate the Project’s potentially significant impacts, as shown herein, and in CARE CA’s prior comments and those of CARE CA’s expert consultants, the City cannot make the required findings to approve the tentative parcel map.

LC2-S

**C. The City Cannot Make the Required Findings to Support the Approval of the Specific Plan Amendment**

The Perris General Plan Noise Element provides that sound levels that exceed 40 to 45 dBA are excessive for sleeping areas within a residence.<sup>54</sup> The Project is anticipated to operate 24 hours a day, seven days a week. Commenters’ expert noise consultant found that Project operational noise would exceed 52 dBA assuming some shielding from the edge of the roof.<sup>55</sup> Mr. Meighan’s comments provide substantial evidence that operation of the Project, in particular the HVAC unit will result in an exceedance of the General Plan Noise Element’s threshold and results in a significant impact under CEQA.

LC2-T

<sup>52</sup> City of Perris Municipal Code Sec. 19.54.040(f)  
[https://library.municode.com/ca/perris/codes/code\\_of\\_ordinances?nodeId=COOR\\_TIT19ZO\\_CH19.54A\\_UREPR\\_S19.54.030REAUPRPR](https://library.municode.com/ca/perris/codes/code_of_ordinances?nodeId=COOR_TIT19ZO_CH19.54A_UREPR_S19.54.030REAUPRPR).

<sup>53</sup> City of Perris Municipal Code Sec. 18.16.020,  
[https://library.municode.com/ca/perris/codes/code\\_of\\_ordinances?nodeId=COOR\\_TIT18SU\\_CH18.16P\\_AMAPR\\_S18.16.010TEPAMA](https://library.municode.com/ca/perris/codes/code_of_ordinances?nodeId=COOR_TIT18SU_CH18.16P_AMAPR_S18.16.010TEPAMA).

<sup>54</sup> General Plan Noise Element, p. 3,  
<https://www.cityofperris.org/home/showpublisheddocument/461/637203139725000000>.

<sup>55</sup> Meighan Comments, p. 4.

The Project's nonconformance with the General Plan precludes the City from making the necessary findings to support approval of the Specific Plan Amendment, without first revising and recirculating the EIR to adequately analyze the Project's potentially significant impacts.

## VI. CONCLUSION

For the foregoing reasons, CARE CA respectfully requests the Planning Commission remand the Project to Staff to remedy the errors and omissions in the EIR before the Project can be recommended for approval. The City must fulfill its responsibilities under CEQA by preparing a legally adequate EIR to address the significant omissions and deficiencies described in this comment letter and the attached expert comments. The EIR must be revised and recirculated to adequately inform the decision-makers and public of the Project's significant environmental impacts and feasible mitigation measures. The EIR must also be revised and recirculated to enable the City to make the necessary findings for approval of the Development Plan Review, Tentative Parcel Map, and Specific Plan Amendment.

Thank you for your attention to these comments.

Sincerely,



Kelilah D. Federman

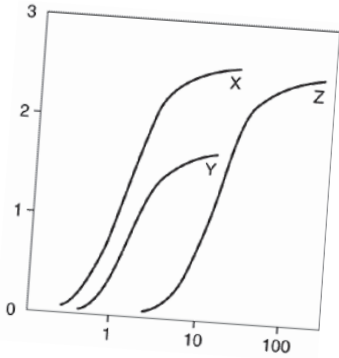
Attachments  
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Cont.

LC2-U



# **ATTACHMENT A**



May 15, 2023

Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080

**Attn: Ms. Kelilah Federman**

**Subject: Response To City’s Staff Report and Replies To Comment Letter on Duke Warehouse At Patterson Avenue and Nance Street, Perris, California, Draft Environmental Impact Report SCH No. 2022010274**

**Clark & Associates**  
Environmental Consulting, Inc.

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310-907-6165

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Dear Ms. Federman:

At the request of Adams Broadwell Joseph & Cardozo (ABJC), Clark and Associates (Clark) has reviewed materials related to the above referenced project.

**Specific Comments:**

- The City’s Response Regarding *Coccidioides Immitis* (Valley Fever Cocci) Transport From The Project Site To The Nearest Sensitive Receptor Is Not Consistent With The Facts Regarding Valley Fever Rates In Riverside County.**

The City’s response that Valley Fever (VF) is not an issue in Perris is not consistent with the known facts regarding VF incident rates in Riverside County. The most at-risk populations are construction and agricultural workers.<sup>1</sup> Construction workers are the very population that would be most directly exposed by the Project. A refereed journal article on occupational exposures notes that “[l]abor groups where occupation involves close contact with the soil

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<sup>1</sup> Lawrence L. Schmelzer and R. Tabershaw, Exposure Factors in Occupational Coccidioidomycosis, *American Journal of Public Health and the Nation’s Health*, v. 58, no. 1, 1968, pp. 107–113, Table 3; available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1228046/?page=1>.

are at greater risk, especially if the work involves dusty digging operations.”<sup>2</sup>

The potentially exposed population in surrounding areas is much larger than construction workers because the nonselective raising of dust during Project construction will carry the very small spores, 0.002–0.005 millimeters (“mm”), into nonendemic areas, potentially exposing large non-Project-related populations.<sup>3,4</sup> These very small particles are not controlled by conventional construction dust control mitigation measures.

Since 2015, the number of cases of Valley Fever in Riverside County has increased from 57 in 2015 to 455 in 2019, as reported by the California Department of Public Health (CDPH).<sup>5</sup> This nearly 800 percent (800%) increase is significant by any public health measure. In 2021, 114 cases were recorded in Riverside County,<sup>6</sup> twice as many as the amounts reported in 2015. In the first quarter of 2023, San Bernardino County reported 94 cases. It is clear from the data provided by the California Department of Public Health Surveillance and Statistics Section that Valley Fever is a significant unaddressed issue in the FEIR. The City must revise the EIR to include the detailed mitigation measures outlined in my previous comment letter to ensure worker safety and the safety of other receptors near the Project site do the vast quantity of soils that will be disturbed during the construction phase of the Project. Without adequate mitigation measures to reduce the risk of exposure to Valley Fever spores, the City cannot conclude that Valley Fever impacts would be less than significant.

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A1-1  
Cont.

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<sup>2</sup> *Ibid.*, p. 110.

<sup>3</sup> Schmelzer and Tabershaw, 1968, p. 110; Pappagianis and Einstein, 1978

<sup>4</sup> Pappagianis and Einstein, 1978, p. 527 (“The northern areas were not directly affected by the ground level windstorm that had struck Kern County but the dust was lifted to several thousand feet elevation and, borne on high currents, the soil and arthrospores along with some moisture were gently deposited on sidewalks and automobiles as ‘a mud storm’ that vexed the residents of much of California.” The storm originating in Kern County, for example, had major impacts in the San Francisco Bay Area and Sacramento).

<sup>5</sup> CDPH. 2019. Epidemiologic Summary of Valley Fever (Coccidiomycosis) In California, 2019. Surveillance and Statistics Section, Infection Diseases Branch, Division of Communicable Disease Control, Center For Infectious Diseases, California Department of Public Health.  
<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2019.pdf>

<sup>6</sup> CDPH. 2023. Coccidiomycosis In California, Provisional Monthly Report, January – March 2023 (as of March 31, 2023). Surveillance and Statistics Section, Infection Diseases Branch, Division of Communicable Disease Control, Center For Infectious Diseases, California Department of Public Health.  
<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciinCAProvisionalMonthlyReport.pdf>

**2. The FEIR Fails To Address the Comment that The Average Truck Trip Length Of 40 Miles Used In The Air Quality Analysis Does Not Match The Length(s) Used To Support Other Similar Duke Warehouses.**

Like the DEIR, the FEIR still underestimates the average truck trip length for warehouse shipments and lacks support for its assumption that trucks will travel just 40 miles to and from the Project site to deliver warehouse goods.

The FEIR fails to address where the trucks associated with the Project will be starting their journey to and from the Project Site. Instead, the FEIR assumes a standard 40-mile trip length, consistent with SCAQMD guidance.<sup>7</sup> However, as with all analyses of this type, specificity of the information (e.g., expected trip length) is a critical step in the analysis. The FEIR’s reliance on a 40-mile trip length is not supported by any evidence of actual anticipated trip lengths. According to a recent report in the Times of San Diego<sup>8</sup> and the Los Angeles Times,<sup>9</sup> the Ports of Los Angeles and Long Beach account for 40% of all goods shipped to the United States via water, making it reasonably foreseeable that a percentage of Project shipments will arrive through those ports. Since the FEIR fails to state where the trucks will be coming from and going to, it is incumbent on the City to analyze the most likely scenarios.

Other comparable Duke Realty warehouse projects incorporate the distance to the Ports of Los Angeles and Long Beach as the primary trip length for trucks. As was pointed out in my initial comment letter, in its 2019 DEIR of the Duke Realty Alabama and Palmetto Warehouse Project, SCH 2019029078, submitted to the County of San Bernardino, an average truck trip length of approximately 77 miles was assumed, which is the distance to the Ports of Los Angeles/Long Beach.<sup>10</sup> The Alabama/Palmetto Warehouse is located approximately 15 miles north of the Nance/Patterson Project,

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<sup>7</sup> Webb. 2022. Air Quality/Greenhouse Gas Analysis for Duke Warehouse at Patterson Avenue and Nance Street (DPR No. 21 00005), City of Perris. Prepared Albert A. Webb Associates for Duke Realty Corporation. Pg 4

<sup>8</sup> <https://timesofsandiego.com/business/2021/11/06/container-lots-truck-drivers-rules-california-eyes-fixes-for-shipping-backlog/>

<sup>9</sup> <https://www.latimes.com/business/story/2022-02-09/port-of-long-beach-supply-chain>

<sup>10</sup> MIG. 2019. Duke Alabama and Palmetto Warehouse Draft Environmental Impact Report, p. 4.3-16. Prepared for Count of San Bernardino. Appendix B Air Quality Analysis Technical Memorandum. Pg 3; available at <https://ceqanet.opr.ca.gov/2019029078/2/Attachment/VK0ZFL>.

and the Ports are located to the west of both project sites. By contrast, the FEIR does not provide any information about what, if any, sources of goods shipments are located within the assumed 40 miles of the Project site. This is contrary to recent California Attorney General guidance on warehouse projects which explains that “full public disclosure of a project’s anticipated truck trips [] entails calculating truck trip length based on likely truck trip destinations, rather than the distance from the facility to the edge of the air basin, local jurisdiction, or other truncated endpoint.”<sup>11</sup>

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A1-2  
Cont.

It is reasonable to anticipate that Project shipments will arrive from the Port of Los Angeles and/or the Port of Long Beach. Using the associated 80-mile daily truck trip length to those Ports will nearly double the daily emissions of pollutants associated with the Project, increasing the Regional burden and resulting in a potentially significant impact. The City must address this impact in a revised DEIR.

**4. The City’s Air Quality Analysis Fails To Include A Quantitative Health Risk Analysis Of All Of The Toxic Air Contaminants From Light Duty Vehicles That Will Be Utilized During The Construction Phase And The Operational Phase Of The Project For The Nearest Sensitive Receptor(s)**

While the City has updated the FEIR to include a construction phase HRA, it still fails to assess all of the air toxins emitted from the Project. The HRA completely ignores the emissions from passenger vehicles which make up the majority of the VMT associated with the site (84% of VMT from passenger vehicles and light duty trucks).

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CalEEMod Version: CalEEMod.2020.4.0 Page 20 of 25 Date: 4/12/2022 11:29 AM

Duke Warehouse at Patterson Ave and Nance St - Riverside-South Coast County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Other Non-Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
Unrefrigerated Warehouse-No Rail	0.567150	0.059410	0.183070	0.000000	0.000000	0.026000	0.032500	0.098420	0.000650	0.000330	0.025500	0.001170	0.005800

<sup>11</sup> California Attorney General, Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act, p. 7, available at <https://oag.ca.gov/system/files/media/warehouse-best-practices.pdf>.

CARB’s analysis of tailpipe emissions shows that in addition to simple alkane hydrocarbons, the emissions also contain benzene (human carcinogen), 1,3-butadiene (human carcinogen), ethylbenzene (human carcinogen), toluene (neurotoxin), acetaldehyde (respiratory irritant), and formaldehyde (human carcinogen), and other air toxins. These air toxins make up approximately 22% of the total organic gases (TOGs) emitted from vehicles.

CARB TOG Speciation Profile Run Exhaust <sup>12</sup>		
CAS#	Chemical Name	Fraction
75070	Acetaldehyde	0.0028
107028	Acrolein	0.0013
71432	Benzene	0.0247
106990	1,3-Butadiene	0.0055
100414	Ethylbenzene	0.0105
50000	Formaldehyde	0.0158
110543	Hexane	0.0160
67561	Methanol	0.0012
78933	Methyl Ethyl Ketone	0.0002
91203	Naphthalene	0.0005
115071	Propylene	0.0306
100425	Styrene	0.0012
108883	Toluene	0.0576
1330207	Xylenes	0.0480

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Cont.

Clearly the majority of emissions of these compounds from the Project site will be associated with passenger vehicles.

By choosing to focus on one toxic air contaminant, diesel exhaust, the City is focusing on a limited component of the toxicity of the emissions. There is notable precedent requiring a quantitative analysis of all TACs from diesel exhaust in CEQA documents. Moreover, the absence of this analysis renders the IS/MND’s Air Quality Analysis incomplete. In a 2017 Notice of Preparation of a CEQA Document For the Los Robles Apartments Project, SCAQMD<sup>13</sup> noted that:

“In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health

<sup>12</sup> <https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling>

<sup>13</sup> SCAQMD. 2017. Comment Letter To David Sanchez, Senior Planner City of Pasadena from Jillian Wong, Planning and Rules Manager, SCAQMD.

risk assessment. Guidance for performing a mobile source health risk assessment (“Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis”) can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysishandbook/mobile-source-toxics-analysis>. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.” This is a common and feasible analysis that is routinely performed for development projects like the Duke Warehouse Project.

Here, the City’s analysis ignores the presence of other TACs being emitted during the construction and operational phases of the project without making any attempt to quantify all the impacts. This omission is a continuing flaw that must be addressed by the City. The results should then be presented in a revised FEIR.

### **Conclusion**

The facts identified and referenced in this comment letter lead me to reasonably conclude that the Project could result in significant impacts if allowed to proceed. A revised final environmental impact report should be prepared to address these substantial concerns.

Sincerely,



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Cont.

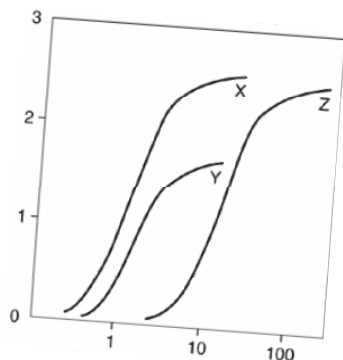
LC2  
A1-4

Exhibit A:  
Curriculum Vitae

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Environmental Consulting, Inc

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***James J. J. Clark, Ph.D.***

*Principal Toxicologist*

**Toxicology/Exposure Assessment Modeling**  
**Risk Assessment/Analysis/Dispersion Modeling**

**Education:**

Ph.D., Environmental Health Science, University of California, 1995  
M.S., Environmental Health Science, University of California, 1993  
B.S., Biophysical and Biochemical Sciences, University of Houston, 1987

**Professional Experience:**

Dr. Clark is a well recognized toxicologist, air modeler, and health scientist. He has 20 years of experience in researching the effects of environmental contaminants on human health including environmental fate and transport modeling (SCREEN3, AEROMOD, ISCST3, Johnson-Ettinger Vapor Intrusion Modeling); exposure assessment modeling (partitioning of contaminants in the environment as well as PBPK modeling); conducting and managing human health risk assessments for regulatory compliance and risk-based clean-up levels; and toxicological and medical literature research.

Significant projects performed by Dr. Clark include the following:

**LITIGATION SUPPORT**

**Case: James Harold Caygle, et al, v. Drummond Company, Inc. Circuit Court for the Tenth Judicial Circuit, Jefferson County, Alabama. Civil Action. CV-2009**

**Client: Environmental Litigation Group, Birmingham, Alabama**

Dr. Clark performed an air quality assessment of emissions from a coke factory located in Tarrant, Alabama. The assessment reviewed include a comprehensive review of air quality standards, measured concentrations of pollutants from factory, an inspection of the facility and detailed assessment of the impacts on the community. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Rose Roper V. Nissan North America, et al. Superior Court of the State Of California for the County Of Los Angeles – Central Civil West. Civil Action. NC041739**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to multiple chemicals, including benzene, who later developed a respiratory distress. A review of the individual's medical and occupational history was performed to prepare an exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to respiratory irritants. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: O'Neil V. Sherwin Williams, et al. United States District Court Central District of California**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to petroleum distillates who later developed a bladder cancer. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Summary judgment for defendants.**

**Case: Moore V., Shell Oil Company, et al. Superior Court of the State Of California for the County Of Los Angeles**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to chemicals while benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Raymond Saltonstall V. Fuller O'Brien, KILZ, and Zinsser, et al. United States District Court Central District of California**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Richard Boyer and Elizabeth Boyer, husband and wife, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-7G.**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: JoAnne R. Cook, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-9R**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of an individual exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Patrick Allen And Susan Allen, husband and wife, and Andrew Allen, a minor, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-W**

**Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.**

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Michael Fahey, Susan Fahey V. Atlantic Richfield Company, et al. United States District Court Central District of California Civil Action Number CV-06 7109 JCL.**

**Client: Rose, Klein, Marias, LLP, Long Beach, California**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Settlement in favor of plaintiff.**

**Case: Constance Acevedo, et al., V. California Spray-Chemical Company, et al., Superior Court of the State Of California, County Of Santa Cruz. Case No. CV 146344**

Dr. Clark performed a comprehensive exposure assessment of community members exposed to toxic metals from a former lead arsenate manufacturing facility. The former manufacturing site had undergone a DTSC mandated removal action/remediation for the presence of the toxic metals at the site. Opinions were presented regarding the elevated levels of arsenic and lead (in attic dust and soils) found throughout the community and the potential for harm to the plaintiffs in question.

**Case Result: Settlement in favor of defendant.**

**Case: Michael Nawrocki V. The Coastal Corporation, Kurk Fuel Company, Pautler Oil Service, State of New York Supreme Court, County of Erie, Index Number I2001-11247**

**Client: Richard G. Berger Attorney At Law, Buffalo, New York**

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the

known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

**Case Result: Judgement in favor of defendant.**

#### **SELECTED AIR MODELING RESEARCH/PROJECTS**

##### **Client – Confidential**

Dr. Clark performed a comprehensive evaluation of criteria pollutants, air toxins, and particulate matter emissions from a carbon black production facility to determine the impacts on the surrounding communities. The results of the dispersion model will be used to estimate acute and chronic exposure concentrations to multiple contaminants and will be incorporated into a comprehensive risk evaluation.

##### **Client – Confidential**

Dr. Clark performed a comprehensive evaluation of air toxins and particulate matter emissions from a railroad tie manufacturing facility to determine the impacts on the surrounding communities. The results of the dispersion model have been used to estimate acute and chronic exposure concentrations to multiple contaminants and have been incorporated into a comprehensive risk evaluation.

##### **Client – Los Angeles Alliance for a New Economy (LAANE), Los Angeles, California**

Dr. Clark is advising the LAANE on air quality issues related to current flight operations at the Los Angeles International Airport (LAX) operated by the Los Angeles World Airport (LAWA) Authority. He is working with the LAANE and LAX staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

**Client – City of Santa Monica, Santa Monica, California**

Dr. Clark is advising the City of Santa Monica on air quality issues related to current flight operations at the facility. He is working with the City staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

**Client: Omnitrans, San Bernardino, California**

Dr. Clark managed a public health survey of three communities near transit fueling facilities in San Bernardino and Montclair California in compliance with California Senate Bill 1927. The survey included an epidemiological survey of the effected communities, emission surveys of local businesses, dispersion modeling to determine potential emission concentrations within the communities, and a comprehensive risk assessment of each community. The results of the study were presented to the Governor as mandated by Senate Bill 1927.

**Client: Confidential, San Francisco, California**

Summarized cancer types associated with exposure to metals and smoking. Researched the specific types of cancers associated with exposure to metals and smoking. Provided causation analysis of the association between cancer types and exposure for use by non-public health professionals.

**Client: Confidential, Minneapolis, Minnesota**

Prepared human health risk assessment of workers exposed to VOCs from neighboring petroleum storage/transport facility. Reviewed the systems in place for distribution of petroleum hydrocarbons to identify chemicals of concern (COCs), prepared comprehensive toxicological summaries of COCs, and quantified potential risks from carcinogens and non-carcinogens to receptors at or adjacent to site. This evaluation was used in the support of litigation.

**Client – United Kingdom Environmental Agency**

Dr. Clark is part of team that performed comprehensive evaluation of soil vapor intrusion of VOCs from former landfill adjacent residences for the United Kingdom's Environment

Agency. The evaluation included collection of liquid and soil vapor samples at site, modeling of vapor migration using the Johnson Ettinger Vapor Intrusion model, and calculation of site-specific health based vapor thresholds for chlorinated solvents, aromatic hydrocarbons, and semi-volatile organic compounds. The evaluation also included a detailed evaluation of the use, chemical characteristics, fate and transport, and toxicology of chemicals of concern (COC). The results of the evaluation have been used as a briefing tool for public health professionals.

### EMERGING/PERSISTENT CONTAMINANT RESEARCH/PROJECTS

#### **Client: Ameren Services, St. Louis, Missouri**

Managed the preparation of a comprehensive human health risk assessment of workers and residents at or near an NPL site in Missouri. The former operations at the Property included the servicing and repair of electrical transformers, which resulted in soils and groundwater beneath the Property and adjacent land becoming impacted with PCB and chlorinated solvent compounds. The results were submitted to U.S. EPA for evaluation and will be used in the final ROD.

#### **Client: City of Santa Clarita, Santa Clarita, California**

Dr. Clark is managing the oversight of the characterization, remediation and development activities of a former 1,000 acre munitions manufacturing facility for the City of Santa Clarita. The site is impacted with a number of contaminants including perchlorate, unexploded ordinance, and volatile organic compounds (VOCs). The site is currently under a number of regulatory consent orders, including an Imminent and Substantial Endangerment Order. Dr. Clark is assisting the impacted municipality with the development of remediation strategies, interaction with the responsible parties and stakeholders, as well as interfacing with the regulatory agency responsible for oversight of the site cleanup.

#### **Client: Confidential, Los Angeles, California**

Prepared comprehensive evaluation of perchlorate in environment. Dr. Clark evaluated the production, use, chemical characteristics, fate and transport, toxicology, and remediation of perchlorate. Perchlorates form the basis of solid rocket fuels and have recently been detected in water supplies in the United States. The results of this research



were presented to the USEPA, National GroundWater, and ultimately published in a recent book entitled *Perchlorate in the Environment*.

**Client – Confidential, Los Angeles, California**

Dr. Clark is performing a comprehensive review of the potential for pharmaceuticals and their by-products to impact groundwater and surface water supplies. This evaluation will include a review if available data on the history of pharmaceutical production in the United States; the chemical characteristics of various pharmaceuticals; environmental fate and transport; uptake by xenobiotics; the potential effects of pharmaceuticals on water treatment systems; and the potential threat to public health. The results of the evaluation may be used as a briefing tool for non-public health professionals.

**PUBLIC HEALTH/TOXICOLOGY**

**Client: Brayton Purcell, Novato, California**

Dr. Clark performed a toxicological assessment of residents exposed to methyl-tertiary butyl ether (MTBE) from leaking underground storage tanks (LUSTs) adjacent to the subject property. The symptomology of residents and guests of the subject property were evaluated against the known outcomes in published literature to exposure to MTBE. The study found that residents had been exposed to MTBE in their drinking water; that concentrations of MTBE detected at the site were above regulatory guidelines; and, that the symptoms and outcomes expressed by residents and guests were consistent with symptoms and outcomes documented in published literature.

**Client: Confidential, San Francisco, California**

Identified and analyzed fifty years of epidemiological literature on workplace exposures to heavy metals. This research resulted in a summary of the types of cancer and non-cancer diseases associated with occupational exposure to chromium as well as the mortality and morbidity rates.

**Client: Confidential, San Francisco, California**

Summarized major public health research in United States. Identified major public health research efforts within United States over last twenty years. Results were used as a briefing tool for non-public health professionals.

**Client: Confidential, San Francisco, California**

Quantified the potential multi-pathway dose received by humans from a pesticide applied indoors. Part of team that developed exposure model and evaluated exposure concentrations in a comprehensive report on the plausible range of doses received by a specific person. This evaluation was used in the support of litigation.

**Client: Covanta Energy, Westwood, California**

Evaluated health risk from metals in biosolids applied as soil amendment on agricultural lands. The biosolids were created at a forest waste cogeneration facility using 96% whole tree wood chips and 4 percent green waste. Mass loading calculations were used to estimate Cr(VI) concentrations in agricultural soils based on a maximum loading rate of 40 tons of biomass per acre of agricultural soil. The results of the study were used by the Regulatory agency to determine that the application of biosolids did not constitute a health risk to workers applying the biosolids or to residences near the agricultural lands.

**Client – United Kingdom Environmental Agency**

Oversaw a comprehensive toxicological evaluation of methyl-*tertiary* butyl ether (MtBE) for the United Kingdom's Environment Agency. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MtBE. The results of the evaluation have been used as a briefing tool for public health professionals.

**Client – Confidential, Los Angeles, California**

Prepared comprehensive evaluation of *tertiary* butyl alcohol (TBA) in municipal drinking water system. TBA is the primary breakdown product of MtBE, and is suspected to be the primary cause of MtBE toxicity. This evaluation will include available information on the production, use, chemical characteristics, fate and transport in the environment, absorption, distribution, routes of detoxification, metabolites, carcinogenic potential, and remediation of TBA. The results of the evaluation were used as a briefing tool for non-public health professionals.

**Client – Confidential, Los Angeles, California**

Prepared comprehensive evaluation of methyl *tertiary* butyl ether (MTBE) in municipal drinking water system. MTBE is a chemical added to gasoline to increase the octane

rating and to meet Federally mandated emission criteria. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MTBE. The results of the evaluation have been used as a briefing tool for non-public health professionals.

**Client – Ministry of Environment, Lands & Parks, British Columbia**

Dr. Clark assisted in the development of water quality guidelines for methyl tertiary-butyl ether (MTBE) to protect water uses in British Columbia (BC). The water uses to be considered includes freshwater and marine life, wildlife, industrial, and agricultural (e.g., irrigation and livestock watering) water uses. Guidelines from other jurisdictions for the protection of drinking water, recreation and aesthetics were to be identified.

**Client: Confidential, Los Angeles, California**

Prepared physiologically based pharmacokinetic (PBPK) assessment of lead risk of receptors at middle school built over former industrial facility. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

**Client: Kaiser Venture Incorporated, Fontana, California**

Prepared PBPK assessment of lead risk of receptors at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

**RISK ASSESSMENTS/REMEDIAL INVESTIGATIONS**

**Client: Confidential, Atlanta, Georgia**

Researched potential exposure and health risks to community members potentially exposed to creosote, polycyclic aromatic hydrocarbons, pentachlorophenol, and dioxin compounds used at a former wood treatment facility. Prepared a comprehensive toxicological summary of the chemicals of concern, including the chemical characteristics, absorption, distribution, and carcinogenic potential. Prepared risk characterization of the carcinogenic and non-carcinogenic chemicals based on the exposure assessment to quantify the potential risk to members of the surrounding community. This evaluation was used to help settle class-action tort.

**Client: Confidential, Escondido, California**

Prepared comprehensive Preliminary Endangerment Assessment (PEA) of dense non-aqueous liquid phase hydrocarbon (chlorinated solvents) contamination at a former printed circuit board manufacturing facility. This evaluation was used for litigation support and may be used as the basis for reaching closure of the site with the lead regulatory agency.

**Client: Confidential, San Francisco, California**

Summarized epidemiological evidence for connective tissue and autoimmune diseases for product liability litigation. Identified epidemiological research efforts on the health effects of medical prostheses. This research was used in a meta-analysis of the health effects and as a briefing tool for non-public health professionals.

**Client: Confidential, Bogotá, Columbia**

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of a 13.7 hectares plastic manufacturing facility in Bogotá, Colombia. The risk assessment was used as the basis for the remedial goals and closure of the site.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally cadmium) and VOCs from soil and soil vapor at 12-acre former crude oilfield and municipal landfill. The site is currently used as a middle school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and was used as the basis for regulatory closure of site.

**Client: Confidential, Los Angeles, California**

Managed remedial investigation (RI) of heavy metals and volatile organic chemicals (VOCs) for a 15-acre former manufacturing facility. The RI investigation of the site included over 800 different sampling locations and the collection of soil, soil gas, and groundwater samples. The site is currently used as a year round school housing approximately 3,000 children. The Remedial Investigation was performed in a manner

that did not interrupt school activities and met the time restrictions placed on the project by the overseeing regulatory agency. The RI Report identified the off-site source of metals that impacted groundwater beneath the site and the sources of VOCs in soil gas and groundwater. The RI included a numerical model of vapor intrusion into the buildings at the site from the vadose zone to determine exposure concentrations and an air dispersion model of VOCs from the proposed soil vapor treatment system. The Feasibility Study for the Site is currently being drafted and may be used as the basis for granting closure of the site by DTSC.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally lead), VOCs, SVOCs, and PCBs from soil, soil vapor, and groundwater at 15-acre former manufacturing facility. The site is currently used as a year round school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and will be basis for regulatory closure of site.

**Client: Confidential, Los Angeles, California**

Prepared comprehensive evaluation of VOC vapor intrusion into classrooms of middle school that was former 15-acre industrial facility. Using the Johnson-Ettinger Vapor Intrusion model, the evaluation determined acceptable soil gas concentrations at the site that did not pose health threat to students, staff, and residents. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

Client –Dominguez Energy, Carson, California

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of 6-acre portion of a 500-acre oil and natural gas production facility in Carson, California. The risk assessment was used as the basis for closure of the site.

**Kaiser Ventures Incorporated, Fontana, California**

Prepared health risk assessment of semi-volatile organic chemicals and metals for a fifty-year old wastewater treatment facility used at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

ANR Freight - Los Angeles, California

Prepared a comprehensive Preliminary Endangerment Assessment (PEA) of petroleum hydrocarbon and metal contamination of a former freight depot. This evaluation was as the basis for reaching closure of the site with lead regulatory agency.

**Kaiser Ventures Incorporated, Fontana, California**

Prepared comprehensive health risk assessment of semi-volatile organic chemicals and metals for 23-acre parcel of a 1,100-acre former steel mill. The health risk assessment was used to determine clean up goals and as the basis for granting closure of the site by lead regulatory agency. Air dispersion modeling using ISCST3 was performed to determine downwind exposure point concentrations at sensitive receptors within a 1 kilometer radius of the site. The results of the health risk assessment were presented at a public meeting sponsored by the Department of Toxic Substances Control (DTSC) in the community potentially affected by the site.

**Unocal Corporation - Los Angeles, California**

Prepared comprehensive assessment of petroleum hydrocarbons and metals for a former petroleum service station located next to sensitive population center (elementary school). The assessment used a probabilistic approach to estimate risks to the community and was used as the basis for granting closure of the site by lead regulatory agency.

**Client: Confidential, Los Angeles, California**

Managed oversight of remedial investigation most contaminated heavy metal site in California. Lead concentrations in soil excess of 68,000,000 parts per billion (ppb) have been measured at the site. This State Superfund Site was a former hard chrome plating operation that operated for approximately 40-years.

**Client: Confidential, San Francisco, California**

Coordinator of regional monitoring program to determine background concentrations of metals in air. Acted as liaison with SCAQMD and CARB to perform co-location sampling and comparison of accepted regulatory method with ASTM methodology.

**Client: Confidential, San Francisco, California**

Analyzed historical air monitoring data for South Coast Air Basin in Southern California and potential health risks related to ambient concentrations of carcinogenic metals and volatile organic compounds. Identified and reviewed the available literature and calculated risks from toxins in South Coast Air Basin.

**IT Corporation, North Carolina**

Prepared comprehensive evaluation of potential exposure of workers to air-borne VOCs at hazardous waste storage facility under SUPERFUND cleanup decree. Assessment used in developing health based clean-up levels.

**Professional Associations**

American Public Health Association (APHA)

Association for Environmental Health and Sciences (AEHS)

American Chemical Society (ACS)

California Redevelopment Association (CRA)

International Society of Environmental Forensics (ISEF)

Society of Environmental Toxicology and Chemistry (SETAC)

**Publications and Presentations:**

**Books and Book Chapters**

Sullivan, P., **J.J. J. Clark**, F.J. Agardy, and P.E. Rosenfeld. (2007). *Synthetic Toxins In The Food, Water and Air of American Cities*. Elsevier, Inc. Burlington, MA.

Sullivan, P. and **J.J. J. Clark**. 2006. *Choosing Safer Foods, A Guide To Minimizing Synthetic Chemicals In Your Diet*. Elsevier, Inc. Burlington, MA.

Sullivan, P., Agardy, F.J., and **J.J.J. Clark**. 2005. *The Environmental Science of Drinking Water*. Elsevier, Inc. Burlington, MA.

Sullivan, P.J., Agardy, F.J., **Clark, J.J.J.** 2002. *America's Threatened Drinking Water: Hazards and Solutions*. Trafford Publishing, Victoria B.C.

**Clark, J.J.J.** 2001. "TBA: Chemical Properties, Production & Use, Fate and Transport, Toxicology, Detection in Groundwater, and Regulatory Standards" in *Oxygenates in the Environment*. Art Diaz, Ed.. Oxford University Press: New York.

**Clark, J.J.J.** 2000. "Toxicology of Perchlorate" in *Perchlorate in the Environment*. Edward Urbansky, Ed. Kluwer/Plenum: New York.

**Clark, J.J.J.** 1995. Probabilistic Forecasting of Volatile Organic Compound Concentrations At The Soil Surface From Contaminated Groundwater. UMI.

Baker, J.; **Clark, J.J.J.**; Stanford, J.T. 1994. Ex Situ Remediation of Diesel Contaminated Railroad Sand by Soil Washing. Principles and Practices for Diesel Contaminated Soils, Volume III. P.T. Kostecki, E.J. Calabrese, and C.P.L. Barkan, eds. Amherst Scientific Publishers, Amherst, MA. pp 89-96.

#### **Journal and Proceeding Articles**

- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, Volume 70 (2008) page 002254.
- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, Volume 70 (2008) page 000527
- Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** (2007). "Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." *Environmental Research*. 105:194-199.
- Rosenfeld, P.E., **Clark, J. J.**, Hensley, A.R., and Suffet, I.H. 2007. "The Use Of An Odor Wheel Classification For The Evaluation of Human Health Risk Criteria For Compost Facilities" *Water Science & Technology*. 55(5): 345-357.
- Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** 2006. "Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006, August 21 – 25, 2006. Radisson SAS Scandinavia Hotel in Oslo Norway.
- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2005. "The Value Of An Odor Quality Classification Scheme For Compost Facility Evaluations" The U.S. Composting Council's 13<sup>th</sup> Annual Conference January 23 - 26, 2005, Crowne Plaza Riverwalk, San Antonio, TX.
- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2004. "The Value Of An Odor Quality Classification Scheme For Urban Odor" WEFTEC 2004. 77th Annual Technical Exhibition & Conference October 2 - 6, 2004, Ernest N. Morial Convention Center, New Orleans, Louisiana.
- Clark, J.J.J.** 2003. "Manufacturing, Use, Regulation, and Occurrence of a Known Endocrine Disrupting Chemical (EDC), 2,4-Dichlorophenoxyacetic Acid (2,4-D) in California Drinking Water Supplies." National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Minneapolis, MN. March 20, 2003.



- Rosenfeld, P. and **J.J.J. Clark**. 2003. "Understanding Historical Use, Chemical Properties, Toxicity, and Regulatory Guidance" National Groundwater Association Southwest Focus Conference: Water Supply and Emerging Contaminants. Phoenix, AZ. February 21, 2003.
- Clark, J.J.J.**, Brown A. 1999. Perchlorate Contamination: Fate in the Environment and Treatment Options. In Situ and On-Site Bioremediation, Fifth International Symposium. San Diego, CA, April, 1999.
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- Browne, T., **Clark, J.J.J.** 1998. Treatment Options For Perchlorate In Drinking Water. Proceedings From the Groundwater Resource Association Seventh Annual Meeting, Walnut Creek, CA, October 23, 1998.
- Clark, J.J.J.**, Brown, A., Rodriguez, R. 1998. The Public Health Implications of MtBE and Perchlorate in Water: Risk Management Decisions for Water Purveyors. Proceedings of the National Ground Water Association, Anaheim, CA, June 3-4, 1998.
- Clark J.J.J.**, Brown, A., Ulrey, A. 1997. Impacts of Perchlorate On Drinking Water In The Western United States. U.S. EPA Symposium on Biological and Chemical Reduction of Chlorate and Perchlorate, Cincinnati, OH, December 5, 1997.
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Ozone Exposures in Residents of Los Angeles County. American Review of Respiratory Disease. 141(4):A70.

Tierney, D.F. and **J.J.J. Clark**. (1990). Lung Polyamine Content Can Be Increased By Spermidine Infusions Into Hyperoxic Rats. American Review of Respiratory Disease. 139(4):A41.

# **ATTACHMENT B**



**WILSON IHRIG**  
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA  
WASHINGTON  
NEW YORK

WI #22-005.39

May 16, 2023

Kelilah D. Federman  
Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080

**SUBJECT: Response to Comments on Duke Warehouse Project Noise Analysis Letter D Attachment 3**

The following page includes a response to comments for the Duke Warehouse at Patterson Avenue and Nance Street FEIR

Very truly yours,

WILSON IHRIG

Jack Meighan  
Associate

LC2  
A3-1

Response to Comments on Duke Warehouse Project Noise Analysis Letter D Attachment 3. docx

Comment	Response	
<b>DIII-4 Paragraph 1</b>	The comment pertains to information present in the 'Noise and Vibration Study Duke Warehouse at Patterson Avenue & Nance Street, Perris, California' document.	LC2 A3-2
<b>DIII-4 Paragraph 3</b>	PPV is a peak value, while VdB is based off the root mean square, fundamentally different ways of measuring wave amplitude. In the cited Table 7-4 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, the middle column is in only PPV, while the right column is in only VdB. These numbers can be equivalent with an accepted crest factor conversion.	LC2 A3-3
<b>DIII-5 Paragraph 1</b>	The methodology cited in the comment is not consistent with the FTA Transit Noise and Vibration Impact Assessment Manual. While the general assessment states "Assume that all equipment operates at the center of the project" it is also stated to "Assume a usage factor of 1" which was not done in the DEIR. This underestimates sound levels by as much as 6 decibels during the paving phase.	LC2 A3-4
<b>DIII-5 Paragraph 2+</b>	How the use of mufflers is included in the noise model, such as a measured reference level or set noise attenuation, should be noted so that the model can be recreated to verify that the method used is reasonable.	LC2 A3-5
<b>DIII-8 Paragraph 1</b>	There is no citation of HVAC equipment in Appendix D of the Noise and Vibration Study. While 68 dBA at 3 feet is a reasonable value for an HVAC system, it still doesn't represent a realistic worst-case for the analysis, where large HVAC systems can be much louder at the source. While it is true that no parapet in the model represents a conservative analysis based on the fact it is required in the design, a more accurate modeling method would be to use a louder HVAC source modeled with a parapet. Absent this data, the Noise and Vibration Study is not supported by substantial evidence.	LC2 A3-6



## JACK MEIGHAN

*Associate*

Jack joined Wilson Ihrig in 2021 and is an experienced acoustics engineer with expertise in projects involving rail transit systems, highways, CEQA analysis, environmental noise reduction, mechanical drawing reviews, and construction noise and vibration mitigation. He has hands-on experience with project management, including client coordination and presentations, as well as in designing, developing, and testing MATLAB code used in acoustics applications. Additionally, his expertise includes taking field measurements, developing test plans and specifying, purchasing, setting up and repairing acoustic measurement equipment. He has experience in using Traffic Noise Model (TNM), CadnaA, EASE, Visual Basic, LabView, and CAD software.

### Education

- B.S. in Mechanical Engineering, University of Southern California, Los Angeles, CA

### Project Experience

#### ***Metro Regional Connector, Los Angeles CA***

Planned, took, and processed measurements as part of a team to determine the effectiveness of floating slab trackwork for a new subway in downtown Los Angeles that travels below the Walt Disney Concert Hall and the Colburn School of Music.

#### ***Rodeo Credit Enterprise CEQA Analysis for New Construction, Palmdale, CA***

Wrote an accepted proposal and executed it for a noise study project to determine noise mitigation requirements on a new housing development. Led all aspects of the project and managed the budget during all phases of project completion. Completed 5 separate projects of this type for this developer.

#### ***Blackhall Studios, Santa Clarita, CA***

Led the vibration measurement effort for a new soundstage directly adjacent to an existing freight and commuter rail line. Tested equipment, processed data, and analyzed results to determine the vibration propagation through the soil to the proposed soundstage locations, and was part of the team that developed mitigation techniques for the office spaces directly next to the rail line.

#### ***Octavia Residential Condos CEQA Study, San Francisco, CA***

Calculated the STC ratings for the proposed windows to meet Title 24 requirements, modeled the acoustic performance of floor and ceiling structures, researched noise codes, helped with a mechanical design review, and wrote a report summarizing the results for a new Condominium project being developed in San Francisco.

#### ***San Diego International Airport Terminal I Replacement, CA***

Conducted interior noise and vibration measurements, analyzed measurement data to help determine project criteria, modeled the existing and future terminals in CadnaA, and was part of a team that did a complete HVAC analysis of the entire terminal, as part of a CEQA analysis where a new terminal for the airport is being designed.

***Five Points Apartments Noise Study, Whittier, CA***

Took measurements, researched sound data and solutions, and recommended mitigation for a new apartment complex that was located next to an existing car wash, as part of a CEQA review.

***USC Ellison Vibration Survey, Los Angeles, CA***

Conducted vibration measurements as part of a survey to determine the effectiveness of vibration isolation platforms that are used to insulate cell growth in a cancer research facility. Determined the effectiveness and presented this information to the client. Researched and recommended a permanent monitoring system so the client could view data in real time.

***TEN50 Condos 'Popping' Noise Investigation, Los Angeles, CA***

Was part of a team that investigated the noise source of an unwanted popping noise in luxury condos in Downtown Los Angeles. Helped isolate the noise source location with accelerometers to determine where vibrations were occurring first and used an acoustic camera to determine where in the condo the noise was coming from.

***2000 University Project, Berkely, CA***

Wrote a construction noise monitoring plan based on environmental noise calculations, wrote a report summarizing the results, and attending a meeting with the client to discuss options.

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***Bay Area Rapid Transit (BART) On-Track, CA, San Francisco Bay Area, CA\****

Day to day project manager, responsible for meetings, presentations, and coordination with the client for an ongoing noise study on the BART system. Developed MATLAB code to process measurements and determine areas where high corrugation was present, contributing to excessively high in-car noise levels. Performed noise measurements inside both the right of way and the vehicle cabin, in addition to rail corrugation measurements.

***California I-605/SR-60 Interchange Improvement, Los Angeles, CA\****

Developed a noise model of the area that predicted sound levels for abatement design, in addition to conducting noise measurements and analysis. Led the Team in use of the FHWA Traffic Noise Model Software for the project, involving three major highways and two busy interchanges extending over 17 miles in southern California.

***Sound Transit On-Track, Seattle, WA\****

Took measurements, fixed equipment, and developed software in MATLAB to process Corrugation Analysis Trolley measurements as part of an ongoing noise study on the Sound Transit Link system. Tested vibration data to determine the best measurement and processing techniques to store the data in an online database for in-car measurements.

***LA Metro CRRC Railcar Testing, Los Angeles, CA\****

Led the effort to plan the measurements, determine measurement locations and finalize the test plan. Formulated a method to capture speed data directly from legacy train vehicles. Executed noise and vibration specification measurements for new rail cars delivered by CRRC.

***City of Los Angeles, Pershing Square Station Rehabilitation Noise Monitoring, CA\****

Built noise models, wrote a construction noise plan, and assisted in on-site construction noise issues as they arose for a renovation of the Pershing Square metro station in downtown Los

Angeles. Trained construction personnel in techniques for noise reduction and how to conduct noise monitoring measurements to meet project specifications.

***City of Orange Metrolink Parking Garage Construction Monitoring, CA\****

Wrote an adaptive management vibration monitoring plan, set up equipment to monitor live vibration levels, and generated weekly reports as part of an effort to build a new parking garage. Designed, planned, and completed measurements to predict and mitigate pile driving construction impacts at three historic building locations adjacent to the construction site. Coordinated with the client whenever an on-site problem arose.

***LA Metro Westside Subway Construction, Los Angeles, CA\****

Planned, organized, and processed noise measurements for the Purple Line extension construction. Implemented both long term microphones to measure noise levels and accelerometers to measure vibration levels in existing subway tunnels. Oversaw noise monitoring at sensitive construction sites for the project and worked with the contractor to find ways to reduce construction noise levels by approximately 10dB.

***Montreal Réseau Express Métropolitain, Canada\****

Conducted vibration propagation measurements used to create models to predict operational vibration levels for an under-construction transit line. Managed equipment, solved problems in the field, and wrote parts of the report summarizing the findings of the acoustic study.

***NHCRP Barrier\****

Took on-highway measurements and wrote, designed, developed, and tested MATLAB code to identify specific spectrograms to use for analyses for a project evaluating barrier reflected highway traffic noise differences in the presence of a single absorptive or reflective noise barrier.

***Siemens Railcar Testing for Sound Transit, Seattle, WA\****

Measured in-car noise and vibration for new rail cars delivered by Siemens. Developed new internal techniques for measurements based on the written specifications. Contributed to the team that helped identify issues that new cars had in meeting the Sound Transit specifications for noise and vibration. Participated in developing the test plan and specified then acquired new equipment for the measurement.

***Toronto/Ontario Eglinton Crosstown Light Rail, Final Design, Canada\****

Assisted in vibration propagation measurements, analysis, and recommendations for mitigation for a 12-mile light-rail line both on and under Eglinton Avenue. Set up and ran equipment for at-grade measurements with an impact hammer for underground measurements with an impact load cell that was used during pre-construction borehole drilling.