A report on the foreseeability and avoidability of power disruptions and the need for 11 megawatts of diesel generators to power cannabis cultivation at 5601 and 5733 San Leandro Street, Oakland, CA June 27, 2022

Evan Mills, Ph.D.
Prepared for The Bay Area Air Quality Management District (BAAQMD)

Dr. Mills has had a 40-year career in energy demand analysis and energy management. He has a specialization in energy demand forensics, particularly pertaining to the buildings sector, including more than a decade researching the energy use of cannabis facilities. He is a retired Senior Scientist at the UC Berkeley, Energy and Resources Group, and a participant in work of the United Nations Intergovernmental Panel on Climate Change (IPCC), which shared the 2007 Nobel Peace Prize. I have prepared this report independent of the aforementioned organizations.

He is a retired Senior Scientist at the UC Berkeley Energy and Resources Group. He has a specialization in energy demand forensics, particularly pertaining to the buildings sector, including more than a decade researching the energy use of cannabis facilities. He is a retired Senior Scientist at the UC Berkeley Energy and Resources Group, and a participant in work of the United Nations Intergovernmental Panel on Climate Change (IPCC), which shared the 2007 Nobel Peace Prize. I have prepared this report independent of the aforementioned organizations.

Qualifications:

Prepared for the Bay Area Air Quality Management District (BAAQMD)

Evan Mills, Ph.D.

June 27, 2022

Cultivation at 5601 and 5733 San Leandro Street, Oakland, CA

The need for 11 megawatts of diesel generators to power cannabis cultivation at 5601 and 5733 San Leandro Street, Oakland, CA.
Reasonableness of potential crop-loss cost estimates: Inexplicably high

Avoidable: The use of generators prior to the July 7, 2021 outage was elective, outage was avoidable, and post-outage generator use could have been markedly reduced.

Foreseeability: The high potential for power outages could have been foreseen.

Benchmarking energy use

Timeline of generator deployment

Subject properties

Cannabis cultivation energy use

Precedents

Power outage events

Key sources (see appendices)
Power outage event: July 7, 2021

There was a failure in the PG&E vault on 7/7/21. The vault where the transformers were located had about 700KW [i.e. 0.7 megawatts, MW] of power. The power was being used by Legion of Bloom (LOB) on the second floor. LOB was using about 1,000 kilowatts (KW) [i.e. 1 MW] of power, and they were not checking their phase balances. One of the phases of the 3-phase power was unbalanced, and there was a fault that caused the connection to the PG&E transformer to melt and that caused the fuse on the power pole to "blow up." Once that happened, there was no power to LOB. Source: December 2021 email correspondence between Green Sage construction consultant Martin Espinosa and BAAQMD.

Per Green Sage's construction consultant:
- Demand at Legion of Bloom was ~1 MW at time of outage, exceeding the associated transformers' capacity of 0.7 MW
- Cause was tenant "not checking their phase balances" resulting in circuit overload
- Letter from Green Sage attorney Darrin Gambelin to BAAQMD
Key data from PG&E (as of June 13, 2022)

Power outage: July 7, 2021

Cause: Customer overloaded

Transformer(s) blown: 500 kVA

Service: 3000 Amps

APCO EXHIBIT 12, P. 4

5601’s service: 3000 Amps
Transformer(s) blown: 500 kVA
Cause: Customer overloaded
Three other events consistent with excessive power draw:

1. July 31, 2020 - outage at 5733 San Leandro Avenue (per PG&E)*
   "The customer added load which resulted in the service wire failing and blowing the fuses at the transformer. PG&E was not consulted before this load was added."

2. October 27, 2021 - outage related to PCB leak from transformer near 5733, and power out for ~18 hrs while repaired**

3. February 14, 2022 (approx) - non-specific outage described by Green Sage attorney***

* Email from Fariya Ali, State Agency Relations, PG&E, June 23, 2022
** Email from Martin Espanola (Green Sage's construction consultant) to Patricia Barnes, BAAQMD, 16 December 2021
*** February 25, 2022 Letter from Attorney Darrin Gambelin, sent to BAAQMD on behalf of Green Sage
Grid outages caused by cannabis operations are a well-known problem. In some cases, growers impose enough load to require substation upgrades.

- 2014 - Florida - 68 plants at a house (United Press International, UPI)
- 2014 - Excel Power (CO) - Transformers blowing in converted warehouses (EnergyWire)
- 2015 - Los Angeles - 2,100 plants in 13-14 rooms. Transformer blew, leaving many nearby businesses without power (NBC)
- 2015 - Portland General Electric (OR) - Legal cannabis operations responsible for 85% of transformer problems in residential areas (Daily Astorian)
- 2015 - Pacific Power (OR) - 7 transformers in 3 months. Just one or two in-house growing operations on a circuit could overload the local grid and many neighboring businesses without power (Associated Press)
- 2015 - Oregon - 3,000 plants. Multiple transformers blown. 7 blackouts in one summer (News Tribune)
- 2019 - East Oakland - 6,000-7,000 plants. Blew transformer. Property owner deemed responsible, a dozen adjacent businesses without power 1/2 mile away from the subject property (CBS News/KPIX)
- 2022 - Portland General Electric (OR) - Utility replacing ~40 transformers a year (10% of all replacements) due to overloading caused by cannabis operations (Associated Press, AP)
- 2022 - 1/4 as many plans as Legion of Bloom. Event occurred on May 12. General Electric now testing the grid's ability to handle such grows without blowing transformers (Associated Press)
- 2022 - 7 transformers in 3 months. Pacific Power (OR) - Just one or two in-house growing operations on a circuit could overload the local grid and many neighboring businesses without power (Associated Press)
- 2022 - 40 transformers a year for Portland General Electric (OR) (Associated Press)
- 2022 - Portland - 6,000-7,000 plants. Transformer blew. Property owner deemed responsible, a dozen adjacent businesses without power 1/2 mile away from the subject property (CBS News/KPIX)
- 2022 - 1.1 miles away from the subject property, and perhaps 1/4 as many plants as Legion of Bloom. Event occurred on May 12. General Electric now testing the grid's ability to handle such grows without blowing transformers (Associated Press)
Indoor cannabis cultivation requires prodigious energy use.

- Responsible for 1% of national electricity use, 3% CA total, 9% Residential (2012)
- APCC EXHIBIT 12, P. 7
  - In the state with highest per-capita use (CO), 60% of consumers' at-home carbon footprint is attributed to their cannabis use.
  - 1% of national electricity use, 3% CA total, 9% residential (2012)
  - Energy intensive
    - Light 100x brighter than in a normal office building (as bright or even brighter than the sun)
    - Long operating hours
    - Intensive needs for heating, cooling, dehumidification
    - Other assorted uses: fans, pumping, water pre-heat, flower drying, refrigeration
    - Electricity worth of 90,000 homes worth of electricity with its own 90 MW power plant, ~8x what we have at San Leandro Street
  - Energy use, expenditure, and emissions per square foot is 65-times that of an average U.S. home and 30-times that of an average U.S. office building
  - Likely greater today.
  - When analyzed in 2012, national cannabis energy use had a carbon footprint equivalent to that of 3 million cars nationally. Likely greater today.
  - In the state with highest per-capita use (CO), 60% of consumers' at-home carbon footprint is attributed to their cannabis use.

7
Cannabis is many-times more energy intensive than ordinary buildings: 71-times more so than warehouses.
Diesel generators power the grow.

Each LED fixture (white) is 1,000-1,500 watts & each conventional fixture (orange) is 315 watts.

This generator set delivers 1.5 megawatts.

Source: Photos by BAAQMD Inspector Barnes 3/24/2022

Numerous heating and cooling units.

Exhibit 12, P. 9

Building power to numerous heating units.

Each LED fixture (white) is 1,000-1,500 watts & each conventional fixture (orange) is 315 watts.
Planning took place in 2018 for what appear to be ~120 potential grow rooms (yellow), with a total "net canopy" of ~225,000 square feet. This floor leased to Legion of Bloom, which as of 8/2021 held licenses from the state for 44,000 square feet. 

Email from Rene Hussar, California Department of Cannabis, to Brian Case, BAAQMD, May 2, 2022.

Northern District of California, Case No. 3:20-CV-04278 (Romspen vs Koentges.pdf)

* Email from Rene Hussar, California Department of Cannabis, to Brian Case, BAAQMD, May 2, 2022.
### Tenancy, Facility, and Licensing Information for Cultivators on Generators

<table>
<thead>
<tr>
<th>Address</th>
<th>R NK</th>
<th>Magic Bowl</th>
<th>Connections</th>
<th>Legion of Bloom</th>
</tr>
</thead>
<tbody>
<tr>
<td>733 San Leandro St.</td>
<td>XYZ</td>
<td>Connections</td>
<td>Connections</td>
<td>Legion of Bloom</td>
</tr>
<tr>
<td>601 San Leandro St.</td>
<td>5601 San Leandro St.</td>
<td>601 San Leandro St.</td>
<td>733 San Leandro St.</td>
<td></td>
</tr>
</tbody>
</table>

### Periods of Time

- **Generator Rental Dates**
  - 04/13/2021 - 03/18/2022
  - 06/29/2021 - 03/18/2022
  - 04/02/2021 - 07/28/2021
  - 10/09/2020 - 03/18/2022

### Total Number of Operating Generators Over Time

- **Total Number of Operating Generators Over Time**
  - 10
  - 7
  - 3
  - 11

### Maximum Megawatts

- **Maximum Megawatts**
  - 3.0 MW
  - 2.5 MW
  - 2.0 MW
  - 3.0 MW

### Cultivation Area

- **Total Square Footage**
  - Lease
  - 30,000 sq ft
  - 40,000 sq ft
  - 0 sq ft
  - 40,000 sq ft

- **Total Square Footage with Current State Cultivation License**
  - 40,000 sq ft
  - 40,000 sq ft
  - 0 sq ft
  - 40,000 sq ft

- **Square Footage in Cultivation (Canopy)”**
  - 40,000 sq ft
  - 40,000 sq ft
  - 0 sq ft
  - 40,000 sq ft

### Additional Notes

- **8 Additional Cultivators and 6 Manufacturers and Distributors Filed CEQA Forms with the City of Oakland, Some of Which Are Subtenants of the Entities in This Table.**
- **All Eighteen (18) Non-Residential CEQA Form Filers Were Potentially Served by Generators for Varying Periods of Time.**
- **NOTE: Eight (8) Additional Cultivators and Six (6) Manufacturers and Distributors Filed CEQA Forms with the City of Oakland, Some of Which Are Subtenants of the Entities in This Table.**
Legion of Bloom video (posted online August 25, 2021) - See Appendix C

This document provided useful information on:

- Tenant’s canopy in use, permitted, and leased
- Original and upgraded lighting technology and its power requirements
- Lighting power per square foot
- Yields per square foot
- Duration of crop cycle

At the peak (11.1 MW, summer 2021) there were enough generators on site to power almost 9,000 California homes.

Other observations:
- More gens on site than needed
- More costly to operate as far as possible b/c generators far from PG&E
- Strong incentive to push grid power as far as possible, based on PG&E "upgrade" of 16 MW from PG&E provided required power "upgrade" of Peak is lower than Green Sage's
- Unique generators over time: 32
- Max # generators at one time: 12
- 3,000 "generator-days"
- Days generators onsite: 628

Total days generators on site:
- 628 days
- 3,000 "generator-days"

Canopy expanding => 8 generators remained on site as of most recent billing records. Canopy expanding => LEDs installed on a recent date.

Source: Installed capacity history from United Rentals invoices. Only generators in-use and with return invoices are counted.
Generators on-site and with return invoices are counted.

Source: Installed capacity history from United Rentals invoices.

EXHIBIT 12, P. 14

Additional observations:

- Power provided by the generators
- Power at 5601 was about one-third that of the existing PG&E service at 5601 at time of outage
- Power almost 9,000 Californian homes
- There were enough generators on-site to serve the peak (11.1 MW, summer 2021)

At the peak (11.1 MW, summer 2021) there were 8 generators and the peak was lower than the required power upgrade of 16 MW from PG&E.

- Strong incentive to push grid power as far as possible due to generators far more costly to operate
- Outages were served by 3 or 4 cultivators
- All 3 or 4 cultivators were served by generators prior to outage
- Max # generators at one time: 12
- Unique generators over time: 32
- Total "generator-days": 3,000
- Days generators on-site: 628
- Installed capacity history from United Rentals invoices.

EXHIBIT 12, P. 14
Generator Use Timeline: October 9, 2020 - March 18, 2022

**Foreseeability: Indicators of power need**

- 08/20/2019: $1.265 M upgrade cost indicates need for upgrades having been recognized and estimated.
- 03/30/2018: Architectural drawings showing 225,414 sf of planned canopy build-out.
- 01/15/2021: Yifu lease at 5601 anticipates an investment of $538,000 in power service upgrades.
- 10/09/2020: First large generators to property.
- 07/07/2020: CEQA form ("Dr. Toke") noted that they contemplated "Upgraded power through PG&E.
- 06/29/2021: Permit application for 4000-Amp upgrade at 5601.
- 02/25/2022: 16 MW power need referenced in Green Sage's attorney letter to BAAQMD.

**Capacity of PG&E service @ 5601**

- RNK
- 8 generators remained on-site as of most recent billing records (6/29/2022):
- Existing PG&E service at 5601 at time of outage was about one-third that provided by the generators.
- Power almost 9,000 California homes.
- There were enough generators on site to power the peak (11.1 MW, summer 2021)

**Other observations:**

- Days generators onsite: 628
- Max # generators at one time: 12
- "Generator-days": 3,000
- Peak is lower than Green Sage's stated required power in "upgrade" of "upgraded power through PG&E.

**Installed Capacity (megawatts)**

- 0/1: July 27, 2020
- 1: July 27, 2020
- 2: July 27, 2021
- 3: October 27, 2021
- 4: Approx. Feb 16, 2022
- 5: April 1, 2022
- 6: October 1, 2022
- 7: July 1, 2021
- 8: July 1, 2022
- 9: July 1, 2021
- 10: July 1, 2022
- 11: July 1, 2022
- 12: July 1, 2022

**APCO EXHIBIT 12.P.15**
Generator Use Timeline: October 9, 2020 - March 18, 2022

Regulatory Interactions

- 07/06/2021: Stop Work Order to Green Sage by OAK code enforcement
- 07/28/21: MB generators removed upon Oakland Fire Department Inspection
- 08/14/20: Oakland Fire Department request for updates
- 02/16/22: BAAQMD Notice of Violation
- 03/21/22: OAK Fire Notice of Violation: stop generator use (multiple prior inspections)
- 08/14/20: OAK Notice of Violation (including unpermitted electrical)
- 07/30/20: 90-day OAK Fire permit for single generator @ 5733 San Leandro Street
- 07/06/2021: Stop Work Order to Green Sage by OAK code enforcement
- 07/28/20: 90-day OAK Fire permit
- 09/27/21: Complaint to BAAQMD
- 11/04/21: BAAQMD inspection

Legion of Bloom
XYZ
Magic Bowl
Capacity of PG&E service @ 5601 RNK
8 generators remained on-site as of most recent billing records as of outage was about one-third that provided by the generators remaining on-site to power almost 9,000 California homes. There were enough generators on site to power the peak (11.1 MW, summer 2021)

Outages
OUTAGES - 1: July 7, 2020
2: July 7, 2021
3: October 27, 2021
4: Approx. Feb 16, 2022

Installed Capacity (megawatts)
0 2 4 6 8 10 12
Green Sage tenants in range with peers

Energy use benchmarks: Green Sage tenants in range with peers

Notes: Canopy supportable with “as-built” infrastructure is based on energy that could be drawn from the available power of 1 MW (per Green Sage report). Canopy supportable with the “as-built” infrastructure is based on energy that could be drawn from the available power of 1 MW (per Green Sage report).
The significant potential for power outages could have been foreseen.

### Foreseeability

<table>
<thead>
<tr>
<th>Landlord</th>
<th>Grower Respondent</th>
<th>Cultivator Respondent (5601a LLC, 5061b LLC, aka Legion of Bloom)</th>
</tr>
</thead>
</table>
| x        |                   | Clear inadequacy of existing electrical service for build-out (irrespective of fault)
| x        |                   | Risks associated with unpermitted, non-compliant, uninspected, or unbalanced electrical infrastructure
| x        | x                 | Significant precedent of publicized power outages caused by smaller facilities (including very nearby in 2019)
| x        | x                 | Elementary engineering calculations can quickly ballpark needs and limitations
| x        | x                 | Common knowledge within the industry of high power requirements

APCO EXHIBIT 12, P. 19
Simplified Foreseeability Illustration: Lighting only

Locations and sizes of ~120 grow rooms per architectural drawings dated 2018
Lighting need per square foot per Legion of Bloom stated design and case study published on Fohse website.
Assumes no high-power LEDs
Assumes the lighting schedule is concurrent in all buildings.

Prior to the July 2021 outage, Legion of Bloom’s electrical panel had 1 MW of PG&E capacity, and the entire building (5601) had about 2 MW.

Prior to the July 2021 outage, Legion of Bloom’s electrical panel had 1 MW of PG&E capacity, and the entire building (5601) had about 2 MW.
Avoidability

<table>
<thead>
<tr>
<th>Defer upgrade to more power-intensive lighting**** (done in proximity to the outage)</th>
<th>AECO EXHIBIT 12, P. 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>**</td>
<td>X</td>
</tr>
<tr>
<td>**</td>
<td>X</td>
</tr>
</tbody>
</table>

Manage operations to match what could be supported by available grid power:
- e.g., limit canopy area, fewer grow cycles, strain choice, staggered room operations***

Improve energy efficiency:** Log uses approximately 3x more energy than best-in-class

Assure proper functioning of electrical infrastructure (keeping phases balance)

Disallow generators at time of leasing.* Brickworks FN

Structure leasing to ensure that tenants operate within PG&E power constraints

Authorize electrical connections only for legal cultivations (only 1 of many licensed)

Use of generators prior to the outage was elective, outage was avoidable, and post-outage generator use could have been reduced

---

Legend:
- X: Respondent
- **: Landlord

<table>
<thead>
<tr>
<th>Defer upgrade to more power-intensive lighting**** (done in proximity to the outage)</th>
<th>AECO EXHIBIT 12, P. 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>**</td>
<td>X</td>
</tr>
<tr>
<td>**</td>
<td>X</td>
</tr>
</tbody>
</table>

Manage operations to match what could be supported by available grid power:
- e.g., limit canopy area, fewer grow cycles, strain choice, staggered room operations***

Improve energy efficiency:** Log uses approximately 3x more energy than best-in-class

Assure proper functioning of electrical infrastructure (keeping phases balance)

Disallow generators at time of leasing.* Brickworks FN

Structure leasing to ensure that tenants operate within PG&E power constraints

Authorize electrical connections only for legal cultivations (only 1 of many licensed)
Calibration of statement that stopping the generators would risk $50 million in crop losses

This calculation is gross potential revenue, excluding expenses (debt service, labor, materials, generator rental, fuel, other NNN expenses...)

Even @ imputed canopy area for all tenants (licensed and non-licensed), average energy use per pound at their apparent energy use per pound (and have been half of this value at their own) revenue had circuit not been overloaded and PG&E power would still have been half of its value at their own.

Revenue had circuit not been overloaded and PG&E power would still have been half of its value at their own.

Legion of Bloom
Canopy area (square feet)* 30,000
Annual yield (pounds)* 15,000
Harvests per year* 5.8
Yield per cycle (pounds) 2,589
Canopy area (square feet) 30,000
Gross per-crop revenue ($M)** Low 0.8 $300 $1.8 $700 High $2.8 $1,100

California wholesale price range as of February 18, 2022

https://mjbizdaily.com/california-wholesale-cannabis-prices-rebound-from-slippery-slope/

* Reported by Legion of Bloom (LoB) in video by lighting manufacturer (FOHSE): https://www.fohse.com/pages/case-study-legion-of-bloom

** California wholesale price range as of February 16, 2022 from Downey Brand, attorney for Green Sage, to BAAQMD, February 25, 2022.

"Interruption of the power currently supplied by the generators would put $50,000,000 of cannabis product at risk..." (Letter from Downey Brand, attorney for Green Sage, to BAAQMD, February 25, 2022.)
Licensing status: Lab had completed the process; others not

Post your license

Your application will be reviewed and, if approved, your license will be issued. Once you receive your license, your business is considered to be in good standing.

APCO EXHIBIT 12, P. 24

Create a licensing system account

DCD has an online system where you can create your account. We recommend you use this system to apply for your license.

Gather your application information and documents

You need to provide all required documents and information to complete the application process. These include your business information, financial statements, and any other required documents.

Learn the state regulations for cannabis businesses

Make sure you understand the regulations for your business. You can access the regulations on the state's website or by contacting the Department of Consumer Affairs.

Complete local permitting processes

Depending on your location, you may need to obtain local permits or licenses. Check with your local government to determine what is required.

Complete your application

Double-check all information and ensure that all required documents are submitted. Submit your application online through the licensing system.

Pay your application fee and submit your application

Submit your application and payment. You will receive a confirmation that your application has been received. If your application is complete, you will receive a letter of approval within 30 days.

Answer any emails from the licensing team

If you receive any questions or updates from the licensing team, respond promptly and ensure all required documents are submitted.

Pay your license fee

Your application will be reviewed and, if approved, your license will be issued. Once you receive your license, your business is considered to be in good standing.
Conflicting Landlord-Tenant Incentives

A Landlord’s least-cost pathway is to:
● Lease space as rapidly as possible
● Defer repair and upgrade of utility service (for which they must pay)
● Defer repair of costly utility infrastructure (for which PG&E would presumably expect to be paid)
● Have tenants pay for generator rental fees and the fuel to operate them
● Minimize investment in energy efficiency of HVAC and other energy-using equipment (since tenants pay)

A Tenants’ least-cost pathway is to:
● Have access to PG&E power
● Maximize energy efficiency

These factors create an intrinsic “split-incentive” or “dual-agency” issue, which well known and documented in the energy research and policy literature.
Imputed floor area in canopy, based on generator output.

Max is 151,000 square feet

Note: Per architectural drawings, the planned ultimate build-out

Legion of Bloom stated cultivation area (30,000 sf)

The ratio of generated electricity to the estimated energy used per square foot (LoB) indicates approximate canopy area.

Per architectural blueprints, the planned ultimate build-out

Planned canopy per architectural blueprints.

Stated canopy area per the following video, uploaded August 25, 2021: https://www.fohse.com/pages/case-study-legion-of-bloom (see Appendix C).

Per architectural drawings, the planned ultimate build-out

Planned canopy per architectural blueprints.
Many generators were under-utilized at 5601 and 5733.

**Ramifications**
- Lower efficiency
- Higher energy use
- Higher emissions
- More units running at one time, hence more noise

Source: Data from United Rentals invoices, computed as the difference between “meter out” reading when generator is returned and “meter in” reading when it is returned, divided by total number of hours in the calendar period of the rental.

APCO EXHIBIT 12, P. 27
A better "load factor" (flatter demand shape) means same energy but fewer generators.

Load Factor % = Energy KWh / (Demand kW * Days * 24hr/day)

- Load Factor is the ratio of average power to peak power.
- Height of curve = power (kW), Area under curve = energy (KWh)

Staggering the schedules of different areas flattens load.

Legion of Bloom reports having 19 individual grow rooms, "load factor" (average/peak load) is about 90%, which we adopt.

The highly diversified example to left (red line) is about 90%.

Figure 4.1. Concurrent vs. Staggered Flower Room Operation

The importance of load management practices

- Peak power needs dictate how many generators are required at a given facility.
- A "flat" load profile indicates that power requirements are spread evenly across hours, days, and weeks, minimizing peak requirements.
- This is highly desirable in order to minimize energy costs,generator rental costs, and the inefficiencies associated with "part-load" operation.

A relatively flat load profile can be achieved in a highly optimized cannabis facility.

- However, "ICE" submittals by tenants indicate a plan that the generator on-time would be only 15 hours per day, only 65% utilization, indicating the generators were at full power when on.
- MW-weighted days on site is "Meter In" minus "Meter Out". For invoices indicating a run-time range of 53% to only 15 hours per day, only 65% utilization if the generators were at full power when on.

A relatively flat load profile can be achieved in a highly optimized cannabis facility.
Power needed 24x7, but demand varies with lighting, heating, cooling, etc. A real-world example (Sacramento)
Source Material (1 of 5) attached in full as Appendix A

General background
Facility data

Source Material (2a of 5), attached in full as Appendix B
Facility data

Source Material (2b of 5), attached in full as Appendix B
Facility data

Source Material (2c of 5) attached in full as Appendix B
Facility data

Source Material (2d of 5), attached in full as Appendix B

764-765

June 23, 2022 Email from Brian Case, providing additional information on United Rentals Invoicing Procedures (p. 761-763)

June 23, 2022 Email from Fariba Ali to Brian Case regarding PG&E responses to questions (p. 764-765)

District Accusation (p. 753-760)

Email from BAAQMD Assistant Counsel Brian Case, attaching 5/5/2022 Email from Russell Weisman regarding Air

Request #22-2675) showing 5601-B Lease Agreement (p. 721-752)

Public records (obtained by BAAQMD Assistant Counsel Brian Case from City of Oakland Public Records Act

Request #22-2675) showing 5601-A Lease Agreement (p. 690-720)

Public records (obtained by BAAQMD Assistant Counsel Brian Case from City of Oakland Public Records Act

Public records (obtained from City of Oakland Public Records Act Request #22-2675) relating to identity of "XYZ

APCO EXHIBIT 12, P. 36
Energy use in other cannabis facilities: 2012-2020

Source Material (3 of 5), not included in appendices

- Energy use in other cannabis facilities: 2012-2020
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
  - Northwest Power and Conservation Council Forecasting Appendix, p E-64. Assuming 4 cycles/year.
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
  - Radil. 2016. "Northwest Marijuana Growers Try to Go Green (But It's Hard)." KUOW.
Power outages caused by other cannabis facilities: 2014-2022

Source material (4 of 5), not included in appendices