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CIRCUIT COURT OF
THE THIRD CIRCUIT
STATE OF HAWAII

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CLERK L. GLASSOW

Attorney for Plaintiffs

IN THE CIRCUIT COURT OF THE THIRD CIRCUIT

STATE OF HAWAII

PUNA PONO ALLIANCE, a Hawai'i)	Civil No. 15-1-0034
non-profit association, JON OLSON and)	(Hilo)
HILLARY E. WILT,)	(Declaratory Judgment)
)	
Plaintiff,)	FIRST AMENDED COMPLAINT,
)	EXHIBITS A-B; SUMMONS
vs.)	
)	
PUNA GEOTHERMAL VENTURE, a)	
Hawai'i Partnership; COUNTY OF)	
HAWAII and JOHN DOES 1-10;)	
)	
Defendants.)	
_____)	

FIRST AMENDED COMPLAINT

PLAINTIFF PUNA PONO ALLIANCE (PPA), a Hawai'i non-profit association,
JON OLSON and HILLARY E. WILT, for their Complaint against DEFENDANTS
PUNA GEOTHERMAL VENTURE, a Hawai'i Partnership, the COUNTY OF HAWAII
and JOHN DOES 1-10, allege and aver as follows:

I hereby certify that this is a full, true and correct
copy of the original on file in this office.


Clerk, Third Circuit Court, State of Hawaii

1. PLAINTIFF PUNA PONO ALLIANCE is an unincorporated nonprofit association organized pursuant to Hawai`i Revised Statutes (HRS) Chapter 429 and certified by the Internal Revenue Service pursuant to Internal Revenue Code section 501(c)(4), conducting activities in the County of Hawai`i, State of Hawai`i, with members including persons residing and owning real property located in Kapoho, Puna, Hawai`i.

2. PLAINTIFF JON OLSON resides in Leilani Estates, Puna, Hawai`i.

3. PLAINTIFF HILLARY E. WILT resides in Leilani Estates, Puna, Hawai`i.

4. DEFENDANT PUNA GEOTHERMAL VENTURE (PGV) is a Hawai`i general domestic partnership organized on July 27, 1981, and registered on March 23, 1982, doing business in the County of Hawai`i, State of Hawai`i.

5. DEFENDANT COUNTY OF HAWAI`I (COH) is a political subdivision of the State of Hawai`i.

6. DEFENDANTS JOHN DOES 1-10 are persons and/or entities with an unknown liability to Plaintiff or possible unknown interests in the matters that are the subject of this complaint, whose names or identities the Plaintiff has been unable to ascertain, despite Plaintiff's diligent and good-faith efforts, including review of permits.

7. Jurisdiction and venue are appropriate in this Third Circuit Court.

8. PGV operates a geothermal energy facility at Kapoho, Puna, Hawai`i.

9. From time to time PGV drills deep wells attempting to locate and tap a geothermal energy resource and for related purposes such as re-injection.

10. Operation of PGV's geothermal energy facility is generally subject to the terms and conditions of State of Hawai'i Geothermal Resource Mining Lease No. R-2, dated February 20, 1981, issued pursuant to Hawai'i Revised Statutes (HRS) Chapter 182, titled *Reservation and Disposition of Government Mineral Rights*, by the State Department of Land and Natural Resources (DLNR) to the Kapoho Land Partnership (owner of the land where PGV's facility is located.)

11. Paragraph 11 of the February 20, 1981, DLNR mining lease is entitled *Compliance with Laws*, and provides in relevant part as follows (emphasis supplied):

Lessee shall comply with all valid requirements of all municipal, state and federal authorities and observe all municipal, state and federal laws and regulations pertaining to the leased lands and Lessee's operations hereunder, *now in force or which may hereafter be in force*, including, but not limited to, all water and air pollution control laws, and those relating to the environment:...

Lessee shall have the right to contest or review, by legal procedures or in such other manner as Lessee may deem suitable, at its own expense, any order, regulation, direction, rule, law, ordinance, or requirement, and if able, may have the same cancelled, removed, revoked, or modified. *Such proceeding shall be conducted promptly* and shall include, if Lessee so decides, appropriate appeals. Whenever the requirements become final after a contest, Lessee shall diligently comply with the same....

12. The Planning Commission of COH, among other agencies with jurisdiction, permits and regulates operations of PGV's facility, including in particular a Geothermal Resource Permit identified as GRP-2.

13. A true and correct copy of said GRP-2, as amended on February 6, 2001, is attached hereto as Exhibit A.

14. Paragraph 43 of GRP-2 provides (emphasis supplied): “[t]he permittee shall obtain, and comply with the provisions of, *permits to drill*, modify use or abandon, as appropriate, from the State Board of Land and Natural Resources *for each geothermal well approved under this Geothermal Resource Permit.*”

15. As required by paragraph 43 of GRP-2, about November 12, 2014, PGV applied for a permit to drill a geothermal well covered under State of Hawai`i Geothermal Resource Mining Lease No. R-2.

16. A permit dated December 16, 2014, was issued by DLNR to PGV for the drilling of a geothermal well identified as KS-16.

17. A true and correct copy of PGV’s December 16, 2014, drilling permit for KS-16 is attached hereto as Exhibit B.

18. PGV’s December 16, 2014, drilling permit for KS-16 says, in relevant part:

The permittee shall observe and comply with all valid requirements of County, State and Federal authorities and regulations to the land and permittee's operations including but not limited to, all water and air pollution control laws and those relating to the environment; ...

19. In 2012 the Hawai`i County Council passed Bill 292, effective December 5, 2012, as Ordinance 12-151, subsequently codified as Hawai`i County Code § 14-114.

20. The County Council received extensive testimony addressing Bill 292.

21. Hawai`i County Code § 14-114 provides:

Geothermal resources exploration drilling and geothermal production drilling operations being conducted one mile or less from a residence, shall be restricted to the operating hours of 7:00 a.m. – 7:00 p.m.

22. The language of County Code § 14-114 is plain, clear, unambiguous and unmistakable in its meaning.

23. PGV has publicly stated its opinion that Hawai`i County Code § 14-114 does not apply to work on KS-16.

24. PGV has publicly stated that it obeys applicable laws, but also stated that it will drill KS-16 at night contrary to the provisions of County Code § 14-114.

25. COH has stated it believes County Code § 14-114 does not apply to PGV.

26. Plaintiffs Olson and Wilt and some of Plaintiff PPA's members reside near the PGV location and would suffer damage, disruption, injury and even possible loss of life if PGV fails to obey applicable laws.

27. Plaintiffs believe County Code § 14-114 applies to PGV.

28. Plaintiffs have publicly and actively challenged PGV's stated intent to violate Code § 14-114 by drilling KS-16 at night.

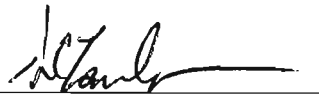
29. In the absence of enforcement by state or county authorities, it has become necessary for Plaintiffs to prosecute this action to assure that PGV obeys applicable laws.

30. Pursuant to Hawai`i Revised Statutes Chapter 632, an actual controversy involving interests of the parties has arisen so that relief by declaratory judgment may be appropriately granted to determine and resolve the legal relations, status, rights, or privileges of the parties.

31. Plaintiffs are entitled to declaratory and injunctive relief as prayed for herein, requiring that PGV obey applicable laws.

Wherefore Plaintiffs pray the Court (a) declare County Code § 14-114 applies to PGV; (b) issue preliminary injunctive relief as prayed for herein; (c) enter final judgment in favor of the Plaintiffs against the Defendants for declaratory and permanent injunctive relief as prayed for herein; (d) award Plaintiffs costs and reasonable attorneys fees, and (e) award such further relief as the Court deems just and equitable.

DATED: Hilo, Hawai`i, February 17, 2015.



Gary C. Zamber
Attorney for Plaintiffs

Puna Pono Alliance et al. vs. Puna Geothermal Venture et al.

Hawai`i Third Circuit Court Civil No. 15-1-0034 (Hilo) (Declaratory Judgment)

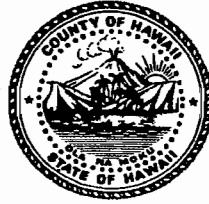
EXHIBIT A of the *First Amended Complaint*

County of Hawai`i Planning Commission of COH

Geothermal Resource Permit identified as GRP-2 to

Puna Geothermal Venture, as amended on February 6, 2001

Harry Kim
Mayor



County of Hawaii

PLANNING COMMISSION

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

CERTIFIED MAIL

7000 0600 0024 2904 6488

FEB 06 2001

Mr. Barry T. Mizuno
Puna Geothermal Venture
P.O. Box 30
Pahoa, HI 96778

Dear Mr. Mizuno:

Geothermal Resource Permit (GRP 2)
Applicant: Puna Geothermal Venture
Request: Amendment to Permit
Tax Map Key: 1-4-1:portion 2, 3, portion 19 and 58

The Planning Commission at its duly held public hearing on January 19, 2000, voted to approve the request for an amendment to Geothermal Resource Permit No. 2 (GRP 2) to allow an increase of generation of electrical power up to 60 MW of electrical capacity, and amendments to related conditions. The property is located on the eastern portion of the Kilauea East Rift Zone, Kapoho Section of the Geothermal Resource Subzone. The project site is located near the junction of the Pahoa-Kapoho and Pahoa-Pohoiki Roads, and adjacent to (north) Lanipuna Gardens Subdivision, Kapoho, Puna, Hawaii.

Approval of this request is based on the following:

Puna Geothermal Venture (PGV) is requesting the amendment to the permit to develop and operate a 60 MW geothermal power project consisting of multiple power generating units, up to 30 geothermal wells drilled within the subject property, brine and steam pipelines, pollution control equipment, steam separators, production and injection wells, related wellfield equipment, holding ponds, switch yards, office buildings, workshops, control buildings, access roads, and auxiliary facilities such as air compressors, and fire protection equipment, all in a manner consistent with applicable

regulatory standards and permits utilizing new technology and equipment upgrades. PGV is also requesting the amendments to incorporate regulatory standards and permit requirements that have been promulgated and issued since the permit was originally approved. When GRP No. 2 was approved in 1989, the Island of Hawaii consumed a peak of 130 MW of electrical energy. Consumption since then has steadily increased to a peak of 170 MW in 1999. With the anticipated growth of the Island population, it is expected that the peak requirement will increase approximately 3-4 MW each year.

On October 3, 1989, the Planning Commission approved GRP No. 2 (87-1) for the Puna Geothermal Venture Project, described as generating 25 MW of electrical energy from geothermal fluids produced from the Puna Geothermal field. The project consisted of the following:

- ten (10) integrated back-pressure steam turbines and air-cooled binary cycle turbine power generating modules;
- up to 30 geothermal wells drilled from six (6) wellpads;
- brine and steam pipelines;
- pollution control equipment;
- a brine surge tank and holding pond;
- a switchyard;
- an office, warehouse, workshop, and control buildings
- access roads; and
- auxiliary facilities such as air compressors and fire protection equipment.

The project was approved subject to 50 conditions (the permit indicates 51; however, due to a numbering error, there are actually 50 conditions). The applicant is requesting that 21 of the 50 conditions be amended. The primary reason for the amendments is to incorporate regulatory standards and permit requirements that have been promulgated and issued since the permit was originally approved in 1989. Of the 21 amendments requested, the majority (12) are necessary to incorporate current regulatory standards (Condition Nos. 6, 7, 10, 16-19, 21-24, and part of 39), three pertain to the Geothermal Asset Fund (Condition Nos. 29, 40 and 51), one is proposed to be deleted because the condition is no longer relevant (Condition No. 13), and five relate to proposed uses (Condition Nos. 1, 4, 15, 17, 48 and 49). However, the Planning Commission recommends that Condition Nos. 29, portion of 39, 40 and 51 pertaining to the

Geothermal Asset Fund be retained as stated in the permit. The Planning Commission also recommends that Condition Nos. 48 and 49 pertaining to Final Plan Approval and commence construction be retained but clarified to reflect the requested amendment.

In accordance with Section 205-5.1(e), Hawaii Revised Statutes, and Section 12-6 of the Planning Commission Rule 12, the approval of the amendments is based upon the following findings:

The proposed geothermal development activities would not have unreasonable adverse health, environmental, or socio-economic effects on residents or surrounding properties. PGV has been in operation since 1989, and occupies approximately 25 acres within a 500-acre project area located in the Kapoho Section of the Kilauea Lower East Rift Geothermal Resource Subzone. Each drill site is engineered to support the drilling equipment to keep drilling effluent contained on site, separate from any natural drainage. Each well pad has drilling mud pits, and sumps with sloped walls are used to temporarily store drilling wastes. The high porosity of the volcanic soils and rock in the site area results in rapid downward percolation of rainwater. Concrete pads and berms contain possible spills in areas where chemicals are handled. Catch basins, culverts, ditches, and berms are provided for drainage control. There are no surface streams or ponds in the vicinity of the drill sites, and groundwater is protected by cementing casing into the hole to depths below sea level.

The project provides a dependable source of electricity and reduces Hawaii's dependency on imported fuel for greater energy self-sufficiency. PGV has been a reliable source of alternative energy since 1989, and also provides employment opportunities for residents, leading to positive personal income and public revenues.

The applicant has taken measures to protect the environment, such as clearing vegetation to prevent fires, incorporating a landscaping program to minimize soil erosion around the perimeter of the property, cementing production and injection well casings into the ground to depths below sea level, well below the potable water table. In addition, the site is several miles from the ocean, therefore, there is no impact to marine life. PGV has developed strict operating, environmental, and safety procedures to ensure the facility is operating safely and in compliance with regulations. An Environmental/Safety Manager is on site to monitor the facility and to ensure that environmental compliance is maintained. The applicant has developed an Emergency Response Plan, which outlines procedures for dealing with any potential emergencies. The applicant has established an internal Incident Command System, and four incident commanders have been trained to coordinate mitigation response as required in an emergency. PGV has also interfaced with the County Police, Fire, Hazardous Materials emergency responder to coordinate training and to familiarize these outside responders with the facility.

The development of the facility has resulted in a number of positive socio-economic impacts on the Island of Hawaii, including 1) the elimination of rolling blackouts, 2) public awareness of the project through contributions and participation in community activities, 3) financial contributions to the Reading is Fundamental Program at Keonepoko School, and 4) payment of royalties to the State of Hawaii in excess of \$3 million, which is distributed to the County of Hawaii and the Office of Hawaiian Affairs (OHA).

This project supports the following goals and policies of the General Plan:

Energy Element

- * Strive towards energy self-sufficiency for Hawaii County.
- * Establish the Big Island as a demonstration community for the development and use of natural energy resources.
- * The County shall encourage the development of alternate energy resources.
- * The County shall strive to assure a sufficient supply of energy to support present and future demands.
- * The County shall encourage the development of geothermal resources to meet the energy needs of the County of Hawaii.

The economic benefits and security implications of reducing Hawaii's dependence on imported fuels for energy production have been recognized for a long period of time at all levels of government. This has resulted in a general policy of support for alternative energy research and development.

Economic Element

- * Provide residents with opportunities to improve their quality of life.
- * Economic development and improvement shall be in balance with the physical and social environments of the island of Hawaii.
- * The County of Hawaii shall strive for diversity and stability in its economic system.
- * The County shall provide an economic environment which allows new, expanded, or improved economic opportunities that are compatible with the County's natural and social environment.

- * The County of Hawaii shall strive for an economic climate which provides its residents an opportunity for choice of occupation.

Land Use Element

- * Designate and allocate land uses in appropriate proportions and mix and in keeping with the social, cultural and physical environments of the County.
- * The County shall encourage the development and maintenance of communities meeting the needs of its residents in balance with the physical and social environment.

The proposed geothermal development activities would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage, school improvements, and police and fire protection. The existing project and proposed amendments have a negligible impact on public infrastructure and services. There are approximately 30 employees on the site, and no additional County services will be required. The employees are mostly Big Island residents, and the increased production capabilities will not require additional personnel, therefore adverse housing impacts are not anticipated. Traffic may increase slightly during construction phases, but the added vehicles do not significantly add to the existing high traffic levels at the intersection of Pahoa-Kapoho Road and Pahoa-Pohoiki Road. No additional infrastructure is necessary to accommodate the applicant's request, since the proposed use will be confined to the existing facility, and the applicant is requesting the amendments to incorporate regulatory standards and permit requirements that have been promulgated and issued since the permit was originally approved in 1989.

There are reasonable measures available to mitigate the unreasonable adverse effects or burdens referred to above. Mitigation measures have been established to ensure the integrity of the geothermal wells. Hydrogen Sulfide (H₂S) monitors are located in three locations at the project site. Emergency procedures have been established for dealing with any potential emergencies. Although the project is located more than 2,000 feet from Lanipuna Gardens and Pohoiki Bay Estates, and more than 3,400 feet from Leilani Estates, there are residences within a half-mile of the project site. Due to the relative proximity of the residences to the project area, the applicant has employed the most effective air and noise emission measures available, following strict standards of the Department of Health. The applicant has been and will continue to comply with all applicable regulations regarding environmental monitoring.

PGV currently utilizes three geothermal injection wells (KS-1A, KS-3 and KS-4) with a pending application for an additional well. All steam, brine and condensate generated from production wells are injected into these three injection wells at a depth of

between 3,900 and 7,300 feet. These three wells are authorized and permitted by the State Department of Health's Safe Drinking Branch. PGV also holds the State Underground Injection Permit (UH-1529) authorizing the operation of the injection wells. Air emissions are monitored by the use of H₂S and particulate matter devices. In the event the H₂S concentrations exceed the ambient air standard of 25 ppb on an hourly average basis (regulated by the State Department of Health Clean Air Branch), PGV has developed written safety procedures to mitigate any adverse health effects to the community. At the request of the State Department of Health, a monitoring station has been established at the western property boundary to monitor fugitive emissions to this area. The facility is currently permitted as a Noncovered Source Facility. The Geothermal Compliance Specialist from the State Department Health is on site daily to monitor compliance with emission standards.

Noise emissions are controlled by the use of noise abatement materials and sound engineering controls. PGV is operating with a noise permit issued by the State Department of Health Noise and Radiation Branch. PGV is classified as a Class C facility, which allows the facility to operate at a maximum level of 70 dBA, measured 24 hours a day at the property boundary. Noise is monitored by use of noise microphone devices installed at the property boundaries at Monitoring Stations A and B. An alarm system is installed in the Control Room for early detection to allow prompt action if required. The noise alarm setpoint for early warning detection is set at 65 dBA. The measurements obtained at the monitoring stations have all been within the parameters of health, workplace and other standards relating to short or long term exposure to H₂S or noise levels. Drilling muds and other wastes not reinjected are disposed of pursuant to the State Department of Solid Waste regulations. Sewage disposal is by cesspool, in accordance with the State Department of Health rules.

In the original Geothermal Resource Permit, the permittee agreed "not exceed a general noise level of 55 dBA during the daytime [7am to 7pm] and 45 dBA at night [7pm to 7 am] measured at the nearest residence." This general noise level could be exceeded by up to 10 dBA, but not for more than 10% of the time within any 20 minute period. There was also an exception for periods of venting and drilling. These standards applied only until noise regulations were adopted by the State or County. Because the DOH adopted regulations in 1996, those now apply, and the permittee is allowed to emit up to 70dBA, 24 hours per day. This is unreasonably loud and the Planning Commission believes that nearby residents are justified in seeking a stricter standard. It is also understandable that they did not expect that noise standards would be so drastically relaxed, after the permittee made representations that the noise levels would not exceed 55/45 dBA.

The permittee's noise monitoring records show that it has generally run below 55dBA during the day, but because it is a baseload facility, and runs 24 hours per day, it is not much quieter at night. While the facility itself does not greatly vary from hour to

hour in the amount of noise it emits (except for unusual events, such as steam leaks), atmospheric and wind conditions significantly affect the noise levels in the community, and to some extent, also affect the readings at the monitors.

The permittee has stated that it does not expect its increase in power generation to result in a significant increase in noise, but wants some regulatory leeway in the setting of standards. The permittee also believes that it should not be regulated more strictly than other facilities in the agricultural district.

The residents have asked that the noise levels not increase, and want the permittee to seek ways to reduce the noise impact from the facility. For these reasons, the Commission recommends that the permittee hire a qualified engineering consultant to review the present operations, as well as to advise on engineering the Best Applicable Control Technology (BACT) into new equipment to be installed at the plant.

The proposed noise levels have generally been achieved by the permittee during the January-June 2000 period. They are not meant to imply that these are levels which are "desireable" in an area like this. They have been set at a level which the facility should be able to meet, in recognition of the fact that it provides an important community benefit, and is legally operating under a much more lenient standard. At the same time, the BACT requirement means that feasible noise reduction measures must be implemented, unless the facility substantially complies with residential noise standards.

The Department does not wish to mislead the community about the purposes and level of its enforcement of the noise condition. Its role is to ensure that the facility generally runs within the permitted levels. It may spot-check the data it receives from the permittee for reliability, and it may require actual measurements of noise levels at residences, but it does not have the capability to respond to individual complaints on a daily basis.

With regards to liability, the Commission recommends that the permittee shall keep in force a general liability policy with limits of not less than \$25 million per occurrence, and shall furnish the Planning Department with a certificate of insurance annually.

The Planning Director has withdrawn the previous recommendation that the Geothermal Asset Fund be capped at \$1,000,000. It became clear from the mediation that no one is happy with the present Geothermal Asset Fund. The surrounding community is frustrated that only \$1,800 in claims have been paid from the fund. The permittee is unhappy that it contributes \$50,000 annually to a fund that has not been put to any practical use. The Director notes that the present rules make the Planning Commission function like an insurance claims manager, a role completely unlike its other responsibilities. There is, however, nothing close to a consensus about what to do about

the Fund. The Fund is a major opportunity, and the Planning Department plans to hold further discussions with the affected community about its use. A change in the rules for the fund does not have to be tied to this permit. The rules can be changed at any time. At present, however, because there is no agreement, and because the annual contribution was a result of the prior mediation, the Department does not support any reduction in the amount contributed by the permittee. The Department is willing to consider the suggestion of some community members that the opportunity for owners to participate in a voluntary buy-out program be re-opened, and perhaps expanded to a wider geographical area, and perhaps include some who built after the original permit was granted, but this requires further study, and it does not have to be tied to this permit.

The Planning Commission is comfortable with H₂S levels presently set by the State Department of Health, but to ensure that these are kept, Condition No. 17 is amended so that the permittee will not ask to increase the levels.

Based on the above, the request to amend Geothermal Resource Permit No. 2 (87-1) is consistent with the criteria contained in Section 12-6 of the Planning Commission Rule 12 and Chapter 205-5.1(e), Hawaii Revised Statutes, and the following conditions are hereby amended and renumbered accordingly (material to be deleted is bracketed, material to be added is underscored).

1. The Geothermal Resource Permit grants approval for those uses and improvements described in the "Geothermal Resource Permit Application Amendment for the Puna Geothermal Venture Project," dated March 1989, except as amended, modified, or conditioned by this Geothermal Resource Permit. Except as otherwise described in this permit, no other uses are authorized by this permit[.]. **The following uses are allowed under this Geothermal Resource Permit: turbines, generators, air coolers fans, air compressors, diesel driven pumps and motors, production wells, injection wells, steam separators and accumulators, electrical transformers, control valves, rock mufflers, H₂S abatement equipment, welding machines, drilling rigs and auxiliary equipment, designed and operated for the generation of up to 60 MW of geothermal power** and any proposed other uses of the geothermal resource or improvements to the land, whether to be conducted by the permittee or a third-party under contract to, or other agreement with, the permittee, shall be subject to prior review and approval, consistent with the applicable Rules of Practice and Procedure of the Hawaii County Planning Commission. The Planning Director may, upon written request of the permittee, approve deviations from the project layout and uses permitted under this Geothermal Resource Permit if such amendments are consistent with the uses permitted and conditions of this Geothermal Resource Permit. No action pursuant to any such request for deviation by the permittee shall be taken without the written approval of the Planning Director. Amendments to the Geothermal Resource Permit and its

conditions may be granted pursuant to Article 12-9 of the Rules of Practice and Procedure of the County of Hawaii Planning Commission.

2. The permittee, its successors, or assigns shall be responsible for complying with all of the stated conditions of approval of this Geothermal Resource Permit. Should the Planning Director determine that there is noncompliance with the Geothermal Resource Permit or its conditions, the permittee may be subject to enforcement of the Geothermal Resource Permit conditions and penalties pursuant to Sections 12-10 and 12-11 of Rule 12 of the Rules of Practice and Procedure of the County of Hawaii Planning Commission.
3. The permittee shall grant unrestricted access to the subject property(ies) to authorized governmental representatives or to consultants or contractors hired by governmental agencies for inspection, enforcement, or monitoring of activities subject to or authorized by this Geothermal Resource Permit. A designated employee shall be available at all times for purposes of supplying information and responses deemed necessary by the authorized governmental representative in connection with such work.
4. During the [period] periods of construction [of the project,] or during the drilling or testing of any well, the permittee shall submit a weekly written status report to the Planning Department which shall include:
 - a. A brief description of the work undertaken during the previous week under the Geothermal Resource Permit;
 - b. A description of the work being proposed during the next week under the Geothermal Resource Permit; and
 - c. Any other information that the Planning Department may reasonably require which addresses the immediate environmental and regulatory concerns of the County of Hawaii or the requirements of the Geothermal Resource Permit.
5. The permittee shall submit a written semiannual status report to the Planning Department by February 15 (covering the preceding period of July 1 through December 31) and August 15 (covering the preceding period of January 1 through June 30) of each year. The status report shall include, but not be limited to:
 - a. A brief summary of work undertaken during the current reporting period under the Geothermal Resource Permit;

- b. A brief summary of work being proposed over the next reporting period under the Geothermal Resource Permit;
 - c. The results and analysis of all environmental monitoring activities undertaken as required by this Geothermal Resource Permit;
 - d. A log of any complaints received by the project and the responses thereto; and
 - e. Any other information that the Planning Department may reasonably require which addresses the environmental and regulatory concerns of the County of Hawaii or the requirements of the Geothermal Resource Permit.
6. If any environmental monitoring data collected as required under this Geothermal Resource Permit indicates [that] **the** project operations are creating, or have the immediate potential of creating, excessive health or environmental effects not otherwise permitted by this Geothermal Resource Permit, the permittee shall [submit such data to the Planning Department within 48 hours of its identification.] **comply with the State of Hawaii Clean Air Branch Noncovered Source Permit (NSP) reporting requirements, and provide immediate notice to the Department of Health, provide immediate notice to the Planning Director and provide a copy of any report(s) to the Planning Department simultaneously with the Department of Health.**
7. **The permittee shall comply with the Clean Air Branch, Safe Drinking Water Branch, and Department of Noise and Radiation Branch of the Department of Health's recordkeeping requirements.** The permittee shall maintain [a record] **records** in a permanent form suitable for inspection, **regarding noise, hydrogen sulfide emissions, equipment upsets, and any other sampling or analytical results,** and shall make such record available on request to the Planning Director or his designee. [The record shall include:
- a. Occurrence and duration of any start-up, shut-down, and operation mode of each geothermal well and/or facility;
 - b. Performance testing, evaluation, calibration checks, and adjustment and maintenance of the continuous monitor(s) that have been installed; and
 - c. All measurements reported in units compatible with applicable standards/guidelines.]
8. Prior to the commencement of any grubbing or grading activity, the permittee shall:

- a. Submit a metes and bounds description of all lands to be disturbed including but not limited to all roadways, well pads, steam gathering system corridors, injection system corridors, power plant site, and transmission line corridors to Planning Director;
 - b. Mark the boundaries of these sites to be disturbed in the field; and
 - c. Comply with all requirements of Chapter 10 Erosion and Sedimentation Control, Hawaii County Code (the County grading ordinance).
9. No construction or transportation equipment shall be permitted beyond the prescribed boundaries of the areas to be disturbed.
10. Prior to commencing any geothermal well drilling, testing, production, or injection activity approved under this Geothermal Resource Permit, the permittee shall submit [to, and secure the approval of, the Planning Director of] a hydrologic monitoring program **to the State Safe Drinking Water Branch. Semi-annual testing shall be performed in accordance with the Hydrological Monitoring Program (HMP) which is described in the Hawaii State Underground Injection Control (UIC) permit. In addition thereto testing of the same wells shall be done within three (3) months after the permittee submits its Well Completion Report to the Department of Land and Natural Resources and after any event that may cause permittee's activities to contaminate the ground water. All data and reports submitted to the Safe Drinking Water Branch shall be submitted to the Planning Director.** [The program shall, at a minimum, provide for the quarterly monitoring of water levels and appropriate chemical species from existing wells completed within the shallow aquifer in those areas downgradient of the project area, including the Green Lake water supply, as well as from a well located within the project boundary and completed within the shallow aquifer. The monitoring, sampling, and analysis protocols shall be clearly defined in the program submitted to and approved by the Planning Director. The monitoring and sampling shall be conducted by a qualified contractor, and the samples analyzed by a qualified laboratory, selected by the permittee but subject to the approval of the Planning Director. The selected contractor and laboratory shall operate under contract to, and shall be funded by the permittee. The program shall monitor the shallow groundwater immediately prior to, and during, all periods of well drilling, testing, production, and injection activity approved under this Geothermal Resource Permit. The data obtained shall be submitted to the Planning Director in accordance with the requirements contained in this Geothermal Resource Permit for submittal of all collected environmental monitoring data. The County shall make random checks of the ground water supply no less than every two months.]

11. If pollution of the shallow ground water is demonstrated to be occurring from the project construction, operation or maintenance activities as determined by the Planning Director in consultation with the Department of Water Supply and the Department of Land and Natural Resources, the permittee shall immediately take those measures necessary to eliminate the source of the pollution meeting with the approval of the affected agencies. If any geothermal production or injection well demonstrates that the integrity of the well casing is lost such that the shallow groundwaters are being, or may immediately be polluted by the production or injection activity of that well, the permittee shall, as quickly as practical consistent with safety and prudent operating practices, cease the production or injection activity for that well, and the activity not resume for that well until adequate casing integrity is restored to the satisfaction of the Department of Land and Natural Resources.

- [13. In the event the Department of Water Supply determines that the existing Green Lake county water source becomes contaminated by the permittee's geothermal wellfield system, the permittee shall immediately provide alternative(s) to the water supply, including the hauling of water if necessary as a temporary alternative, which meet the approval of the County's Department of Water Supply and the State Department of Health.

- 14.]12. Only nonhazardous drilling mud additives, as recognized on the "California Department of Health Services Drilling Mud Additives Use in Nonhazardous Drilling Muds and Fluids" list, shall be used during the drilling of the geothermal wells, and which list shall be on file with the County Planning Department.

- [15.]13. All drilling mud solids and drill cuttings shall be discharged to and contained within [the well pad sump] **an impermeable containment area**. A disposal site or sites approved by the State Department of Health, prior to any disposal activity covered by this permit, shall be provided for sump **containment** contents and other waste materials to be disposed of from the drilling activity. All sumps/ponds/**containments** shall [be purged in a manner meeting with] **have** the approval of the State Department of Health. In the event there are no DOH requirements, the applicant and the Planning Department shall request for guidelines from the DOH for the purging of sumps and ponds. Said guidelines shall be available to the community.

- [16.]14. All geothermal brines, steam condensate, and noncondensable gases produced during [normal] project operations shall be [injected into the geothermal reservoir] **disposed of in accordance with the State Department of Health and Federal Underground Injection Control permit requirements**.

- [17.]15. Prior to commencing any activity approved under this Geothermal Resource Permit on the project site, the permittee shall submit **an air quality and meteorological monitoring program** to, and secure the approval of, [the Planning Director of an air quality and meteorological monitoring program. The program shall include provisions for installation, calibration, maintenance and operation of recording instruments to measure air contaminant concentrations, the specific elements to monitored, the number of stations involved, and frequency of sampling and reporting. The Planning Director shall review and approve the submitted monitoring plan in consultation with and concurrence of the State Department of Health. The monitoring and sampling shall be conducted by a qualified contractor, and the samples analyzed by a qualified laboratory, selected by the permittee but subject to the approval of the Planning Director. The selected contractor and laboratory shall operate under contract to, and shall be funded by the permittee. The program shall monitor the air quality immediately prior to, and during, all periods of well drilling, testing, production, and injection activity approved under this Geothermal Resource Permit. The data obtained shall be submitted to the Planning Director in accordance with the requirements contained in this Geothermal Resource Permit for submittal of all collected environmental monitoring data.] **the State Department of Health Clean Air Branch, and shall comply with all NSP requirements and standards. All data and reports provided to the Clean Air Branch pursuant to the NSP shall be made available to the Planning Director for inspection.**
- [18.]16. The permittee shall apply “Best Available Control Technology” (BACT), **as defined in Hawaii Administrative Rules 11-60.1-1 (as amended), and as applicable under Federal and State regulations and permits,** for air emissions to all aspects of the project to minimize air quality impacts. BACT means the maximum degree of control for air quality concerns taking into account what is known to be practical and economically viable. BACT for each aspect of the project shall be [determined by the Planning Director in consultation with other appropriate governmental agencies involved in the control or regulation of air quality from geothermal development projects. Such determination shall be made prior to issuance of any construction permit for that aspect of the project. BACT shall be subject to review by the Planning Director every five years, commencing with the date of approval of the Geothermal Resource Permit for the wellfield operations, and with the date of full power plant operation for the power plant.] **in accordance with applicable Federal and State regulations.**
- [19.]17. The permittee shall control all project emissions of hydrogen sulfide during [normal] power plant operation [so that the increase in the ambient hydrogen sulfide concentration due to these project emissions shall not exceed 5 ppb at or beyond the project boundary] **in accordance with the State Department of Health Clean Air Branch regulations and NSP requirements. The permittee**

shall comply with all provisions of the applicable NSP, and shall not request any increase in the levels of hydrogen sulfide allowed under the existing NSP. If the allowed levels of hydrogen sulfide are increased from those allowed under the present NSP, the permittee shall continue to meet the standards in the present NSP.

- [20.]18. With regard to air emissions, the permittee shall submit to the County Civil Defense and the Planning Department a map and accompanying text that describes predetermined "worst case" impacted areas.
- [21.]19. [Prior to commencing any activity approved under this Geothermal Resource Permit on the project site, the permittee shall submit to, and secure the approval of, the Planning Director of a noise monitoring program designed to adequately ensure project compliance with the noise impact limitations contained in this Geothermal Resource Permit. The program shall include the monitoring of noise immediately prior to and during all periods of activity approved under this Geothermal Resource Permit. The monitoring and sampling shall be conducted by a qualified contractor, and the samples analyzed by a qualified laboratory, selected by the permittee but subject to the approval of the Planning Director. The selected contractor and laboratory shall operate under contract to, and shall be funded by the permittee. This program should also allow the correlation of any complaints of noise from the public with the level of measured noise, the meteorological conditions, and the type of operations which occurred at the site. The data obtained shall be submitted to the Planning Director in accordance with the requirements contained in this Geothermal Resource Permit for submittal of all collected environmental monitoring data.]

The permittee shall hire a qualified engineering consultant to study noise from its existing and proposed operations. The scope of work shall include:

- a. **Determination of sound levels in the surrounding community due to the permittee's operations, and correlation of those sound levels to levels recorded at the monitoring sites on permittee's property.**
- b. **Identification of specific sources of noise from the plant site.**
- c. **Recommendation and evaluation of noise abatement methods, including possible tree planting and/or berm construction, engineering design sketches and specifications and/or catalog cut sheets, and cost estimates for the determination of feasibility and best available control technology.**

- d. Study of other ambient noise in the community and at the permittee's monitoring stations to determine the effect of ambient noise on the monitoring system.
- e. Preparation of a final report and recommended noise abatement procedures.
- f. The consultant shall meet at least twice with nearby residents, and with the Planning Director as required. The consultant's final report and recommendations shall be a public document available to the Planning Director and the general public.

[22.]20. The permittee shall apply "Best Available Control Technology" (BACT) for noise emissions to all aspects of the project to minimize project noise. BACT means the maximum degree of **noise** control [for noise concerns] taking into account what is [known to be] practical and economically [viable] **reasonable**. BACT [for each aspect of the project] shall be determined by the Planning Director [in consultation with other appropriate governmental agencies involved in the control or regulation of noise from geothermal development projects. Such determination shall be made prior to issuance of any construction permit for that aspect of the project. BACT shall be subject to review by the Planning Director every five years, commencing with the date of approval of the Geothermal Resource Permit for the wellfield operations, and with the date of full power plant operation for the power plant.] upon the recommendations of the noise consultant.

[23.]21. The permittee shall [notify the Planning Department and] comply with the State Department of Health Clean Air Branch (NSP) permit notice requirements prior to any geothermal well and pipeline cleanout utilizing geothermal steam. Permittee shall also mail notice seventy-two (72) hours prior to activities to the Planning Director and to any resident of the District of Puna who submits their name and address to the permittee requesting such notification. In addition thereto any resident within 3500 feet of the permittee's project boundary who has previously requested such notice, **shall be notified** at least [twenty-four (24) hours in advance of the open venting of each geothermal well and pipeline cleanout and] 14 days before commencement of drilling. [Initial notification to residents shall be made in writing, offering the opportunity to be placed on the notification list. Any other person may request to be on the list. The permittee shall notify the Planning Department immediately prior to the open venting of any geothermal well and pipeline cleanout. The permittee shall notify the Planning Department following completion of each geothermal well, prior to the demobilization of the drilling rig.]

[24.]22. [Until such time as noise regulations are adopted by the State or County, the permittee shall comply with the following guidelines which shall be enforced by the Planning Department:

- a. During power plant and wellfield operations, the permittee shall not exceed a general noise level of 55 dBA during daytime and 45 dBA at night at the current nearest residence. For the purposes of these guidelines, "night" is defined as the hours between 7:00 p.m. and 7:00 a.m.;
- b. The allowable noise levels may be exceeded by a maximum of 10 dBA; however, in any event, the generally allowed noise level should not be exceeded more than 10 percent of the time within any 20-minute period, and the permittee shall conduct all operations so as to minimize the occurrence, frequency, and duration of this impact noise;
- c. The noise level guidelines specified above shall be waived only for the specified duration of authorized open geothermal well venting from all wells, steam pipeline cleanout periods, and the drilling and testing of wells from well pads E and F. During these authorized periods, BACT shall be applied. In addition, during the drilling and testing of wells from well pads E and F, the permittee shall meet a general noise level of 55 dBA during the day and 50 dBA during the night at the current nearest residence; and
- d. For the purposes of these noise conditions, the "nearest residence" is hereby defined as: For three years following the date of granting of the Geothermal Resource Permit, that permanently occupied dwelling nearest the applicable noise emission point as of the date of the granting of this permit; for all following years, that permanently occupied dwelling nearest the applicable noise emission point.
- e. Sound level measurements shall be conducted using standard procedures with sound level meters using the "A" weighting and "slow" meter response unless otherwise stated.]

The permittee shall report average noise levels for each hour, and shall report a daily average and a monthly average. Except as allowed below:

- a. The average for any month shall not exceed 54 dBA;**
- b. The average for any day shall not exceed 57 dBA;**

c. The average for any hour shall not exceed 62 dBA;

d. The average for any five-minute period shall not exceed 68 dBA.

The allowable noise levels may be exceeded, at each monitoring station, by no more than 3 dBA, for the following periods: five months per year for the monthly average; five days per month for the daily average; and five hours per month for the hourly average.

During specified steam pipeline cleanout periods, construction, and testing of wells, BACT shall be applied and the allowed noise levels may be exceeded by not more than 5 dBA. During specified periods of drilling, the permittee shall comply with Department of Health's noise rules and permit requirements.

Averaging shall be done in a manner consistent with the reporting of noise data by the permittee in the January-June 2000 period. The monthly average shall be the arithmetic mean of the daily averages. The daily average shall be the arithmetic mean of the hourly averages.

The new allowable noise levels shall take effect six months after the installation of any additional generating equipment.

Noise levels shall be measured at the present monitoring stations A and B, which shall be averaged separately, and not combined. The location of the monitoring stations may be changed with the approval of the Planning Director, if recommended by the noise consultant, to make the noise level at the monitoring stations more reliably correlate with the noise levels at the nearby residences. If the location is changed, the allowed levels may be adjusted accordingly.

Data from periods in which the noise monitoring includes significant amounts of noise from sources other than the permittee's operations, such as agricultural operations, rain, wind, and traffic, shall be excluded.

The Director, using the recommendations of the consultant, shall establish standard adjustments for the effects of ambient noise on the data reported from the monitoring stations. For example, if the consultant determines that a typical daily average of 51 dBA would be 49 dBA eliminating the effect of ambient noise, the lower figure shall be considered the actual noise level. The Director, using the recommendation of the consultant, shall establish

standard adjustments for the difference between the data reported from the monitoring stations and the noise levels due to the permittee's geothermal operations at the most affected residences, so that the allowed noise levels are not exceeded at the residences which are, on the average, the most affected by noise. The purpose of the standard adjustments is to ensure that the allowed noise levels experienced at residences due to the permittee's geothermal operations are not exceeded.

Sound level measurements shall be conducted using standard procedures with sound level meters using the "A" weighting and "slow" meter response unless otherwise stated. The method of measurement shall follow H.A.R. §11-46-9.

The permittee shall have an alarm system which alerts staff if the noise level exceeds 68 dBA for more than 5 minute average.

The permittee shall record and respond to all complaints of excessive noise and forward a record of such complaints to the Planning Director monthly, along with monitoring records showing the noise levels recorded at the time of the complaint. All noise monitoring records shall be furnished monthly to the Planning Director. The permittee shall explain any exceedances of the authorized noise levels.

Before any enforcement action is taken on violations the permittee shall be given a reasonable opportunity to cure any violations. An exceedance shall not be considered a violation unless the measured noise level is more than 3 dBA above the ambient or background noise level, per H.A.R. §11-46(9) (g) and (h).

The permittee shall be conclusively deemed to be using BACT, and be in compliance with all noise standards, if the noise level solely due to its geothermal operations, at the most affected residences, substantially complies with the current State Department of Health standards for "Class A" (residential) districts. For the purposes of this paragraph, the permittee substantially complies with the standards if:

- a. The average hourly noise levels do not exceed 55 dBA during the day (7:00 a.m. to 10:00 p.m.) and 45 dBA at night (10:00 p.m. to 7:00 a.m.) more than 10% of the time with the day and night hours separately considered, and
- b. During those hours when the noise levels are exceeded, the average exceedance is not more than 5 dBA, and the average

hourly noise level never exceeds 60 dBA days and 55 dBA nights. Periods of steam pipeline cleanout, construction, well drilling, and highly unusual events shall be excluded and the standard adjustments referred to above shall apply.

If the consultant determines that a significant reduction in noise levels can be achieved, at a reasonable cost, by a vegetative screen and/or earthen berm, the permittee shall set aside an area or areas for such a screen and/or berm. The location of the vegetative screen and/or earthen berm, if recommended, shall be agreed upon between the Planning Director and the permittee, and shall not unduly interfere with the permittee's power transmission easements, access, and other aspects of the permittee's operations, and may be relocated for operational reasons to an equivalent location. The Geothermal Asset Fund may be used for the cost of planting and maintaining the vegetative screen and/or constructing the earthen berm. For the purposes of this paragraph, a "significant reduction" means one of 3 dBA or more.

- [25.]23. Pursuant to Article 12-8 of the Rules of Practice and Procedure of the County of Hawaii Planning Commission, prior to initiating construction of the project, the permittee shall submit the following to the Planning Director:
- a. Copies of approved permits and other applicable approvals for the project from other county, state, or federal agencies as applicable;
 - b. Final plans or provisions for monitoring environmental effects of the project as required by this Geothermal Resource Permit or otherwise required to ensure compliance with County rules and the rules of the State Department of Health and Board of Land and Natural Resources and other permit-issuing agencies;
 - c. A final plan of action to deal with emergency situations which may threaten the health, safety, and welfare of the employees and other persons in the vicinity of the proposed project site; and
 - d. A final site plan and elevations of proposed temporary and/or permanent structures for the project.
- [26.]24. Prior to commencing any activity approved under this Geothermal Resource Permit on the project site, the permittee shall submit to, and secure the approval of, the Hawaii County Civil Defense Director a final plan of action to deal with emergency situations which may threaten the health, safety, and welfare of the

employees and other persons in the vicinity of the proposed project site. The plan shall include but not be limited to, the following elements:

- a. A description of the project facilities and operations, with site plans identifying areas of potential hazards, such as high pressure piping and the presence, storage and transportation of flammable or hazardous materials, such as lubrication or fuel oil, isopentane, hydrogen sulfide, and sodium hydroxide;
- b. A description of emergency services available off-site to respond to any emergency;
- c. A description of the current onsite chain of command and responsibilities of project personnel in the event of an emergency; and
- d. A description of potential project emergency situations, such as loss of well control, chemical spills, hydrogen sulfide exposure, pipeline rupture, fires, contaminated solids, etc. identifying:
 - (i) technical data on the nature of the hazard (for example, the concentrations of hydrogen sulfide in the various areas and the hazard associated with these concentrations, the corrosive characteristics of the abatement chemicals), or any data regarding the possible aerial extent of each potential emergency situation;
 - (ii) the warning systems (such as hydrogen sulfide detectors) used to alert personnel of the hazard;
 - (iii) the location and use of equipment used to control the hazard (such as fire protection equipment or isolation valves) or repair hazardous equipment (such as welding equipment or casing sleeves), and safety equipment for personnel (such as respiratory packs), including identification of the personnel trained in the use of that equipment; and
 - (iv) provisions for the monitoring, detection, and inspection of wells and plant facilities for the prevention of emergency situations.
- e. Provisions to address natural hazards (such as lava flows, earthquakes, and storms) that identify warning systems, control options, steps for securing and shutting down the facility, personnel evacuation, and notification to appropriate agencies;

- f. The location and capabilities of available medical services and facilities and plans for treating and transporting injured persons;
- g. Evacuation plans, including meeting points, personnel rosters, and escape routes;
- h. Training requirements for personnel, including procedures for emergency shutdown, handling of emergency equipment, spill prevention, first aid and rescue, fire fighting procedures, and evacuation training;
- i. Provisions for periodic emergency preparedness drills for personnel;
- j. Detailed procedures to be used to facilitate coordination with appropriate federal, state, and county officials during and after any emergency situation; and
- k. Procedures to be used to identify and inform all residents within applicable distances of the project of the possible emergency situations, warnings, and responses in advance of commencement of project operations and the methods by which all individuals affected by a given emergency will be notified and evacuated, as necessary.

Copies of the emergency plan shall be made available to the public by the applicant.

- [27.]25. Reports and records of emergency situations shall be submitted to the Planning Department upon occurrence of such emergencies.
- [28.]26. Within 48 hours after an earthquake registering 6 or above on the Richter Scale and/or within 48 hours after an eruption has occurred, all wells within 10 kilometers of the epicenter or eruptive center, shall be examined for any physical changes which would alter its downhole integrity. A report of this examination shall be filed with the Planning Department within 48 hours of the examination.
- [29.]27. In the event the Hawaii County Civil Defense Agency determines that an emergency situation resulted from the permitted geothermal activity, the permittee shall bear all costs of evacuation. The Hawaii County Civil Defense Agency shall be responsible for public and media notification and evacuation of members of the public in the event the Agency deems such action necessary as a result of an emergency situation.
- [30.]28. Prior to the commencement of any surface disturbing activity, the permittee shall conduct an archaeological survey of those areas planned for surface disturbance

not previously surveyed and submit the results of this survey to the Planning Department for review and approval.

- [31.]29. If construction activities expose any cultural remains, the permittee shall immediately cease work in the area of the cultural remains and contact the Planning Department and the State Historic Preservation Office. As appropriate, a qualified archaeologist shall be retained by the permittee to implement any necessary mitigation measures and monitor further work. Work in the affected area shall not resume until such time that clearance is obtained from the Planning Department.
- [32.]30. The lighting used shall not interfere with the operations at the observatories located on Mauna Kea. To meet this requirement, the permittee shall comply with the requirements of Chapter 14, Article 9 of the Hawaii County Code, relating to outdoor lighting.
- [33.]31. All lights shall be at a minimum level consistent with the safety of operations and shall be shielded or directed away from surrounding residential or populated areas and not interfere with important biological resources in the area.
- [34.]32. The permittee shall submit to, and secure the approval of the Planning Director of a detailed landscaping and siting plan. The siting plan shall show plan and elevational views of all proposed temporary and/or permanent structures for the project. The plan shall also show the site topography, natural features and proposed berms, planting schedules, tree sizes, heights (actual size of trees to be planted), type of irrigation system, etc. Installation of approved landscaping improvements shall be commenced within three weeks from the completion of construction of each well pad, access road, or other facility. The plan shall also include:
- a. A landscaping maintenance program;
 - b. A line-of-sight analysis, being especially sensitive to views from surrounding residences, of the view planes from the site property lines, from the intersection of Leilani Avenue and the Pahoia-Pohoiki Road, for the intersection of the proposed access road and the Pahoia-Kapoho Road, from the intersection of Lauone Street and Hinalo Street in Lanipuna Gardens, and the intersection of the Kapoho-Kalapana Road and the access road to Vacationland; and
 - c. To the extent possible, the well sites and power plant shall be landscaped and sited to reflect the existing agricultural character of the area, and utilize native plantings.

- [35.]33. To the extent compatible with engineering and aesthetic considerations, all exterior surfaces shall be rough texture, with no reflective metal, and no reflective glass surfaces oriented toward surrounding residential or populated areas within line of sight. The exterior of all project structures, including fluid conveyance pipelines, shall be painted in colors so as to blend in with the surrounding environment.
- [36.]34. The permittee shall submit and secure approval of a revegetation/site reclamation plan meeting with the approval of the Planning Director in consultation with the Forestry Division of the Department of Land and Natural Resources. When construction is completed on any individual project site, or if the project area is abandoned, all denuded areas on and around the project site shall be revegetated in accordance with this plan. Said plan shall include appropriate security to assure its implementation in a timely manner.
- [37.]35. The permittee shall obtain and maintain those bonds required for project operations by the rules and regulations of the Board of Land and Natural Resources and the Department of Health.
- [38.]36. The permittee shall obtain and maintain builder's risk and comprehensive liability insurance for project construction and operation activities, **with a limit of not less than \$25 million per occurrence.**
- [39.]37. **In accordance with community notification requirements of the State Department of Health Noncovered Source Permit (NSP),** the [The] permittee shall notify each resident household within a radius of 3500 feet from any geothermal well at least twenty four (24) hours prior to[, and again the morning of,] any planned venting of [that well] **a geothermal well.** Each resident within this radius of 3500 feet shall be offered the opportunity to voluntarily leave the area during the well venting. The cost of such voluntary leaving, up to a maximum of \$100.00 per resident or \$200.00 per household, whichever is lesser, shall be borne by the permittee. Upon adequate demonstration [to the permittee] that any such resident is unable to pursue his normal, legitimate employment or business activity as a result of such voluntary leaving, the permittee shall reimburse that resident for that one day's lost income, in an amount not greater than \$150.00.
- [40.]38. Upon adequate demonstration to the permittee that any adverse alteration of the quality of the water has occurred as a result of venting to the atmosphere, the permittee shall immediately rinse the water catchment system and replace the stored water of any water catchment system within a radius of 3500 feet of any well. Upon adequate demonstration to the permittee that any agricultural crop

damage resulted directly from any of the permittee's well venting operations, the permittee shall also provide compensation to the owner of agricultural operations located within a radius of 3500 feet of that well. In either situation, compensation will only be considered if the agricultural crops and water catchment system are inventoried and registered with the permittee prior to the venting. Other requests shall be considered by permittee on a case-by-case basis.

- [41.]39. The permittee shall establish and publish a telephone number for use by local individuals for the lodging of complaints or inquiries regarding status of operations. A designated representative of the permittee shall be available, 24 hours a day, to respond to any local complaints or inquiries.
- [42.]40. Large vehicle deliveries to the project site shall be limited to daylight hours. For the purposes of this condition, daylight hours is defined as the hours between 7:00 a.m. and 7:00 p.m. This condition shall not apply for vehicles responding to emergencies.
- [43.]41. An extension of time for the performance of conditions within the permit may be granted by the Planning Director upon the following circumstances: 1) the non-performance is the result of conditions that could not have been foreseen or are beyond the control of the applicants, successors, or assigns and that are not the result of their fault or negligence; 2) granting of the time extension would not be contrary to the General Plan or Zoning Code; 3) granting of the time extension would not be contrary to the original reasons for the granting of the Geothermal Resource Permit; and 4) the time extension granted shall be for a period not to exceed one (1) year and 5) if the applicant should require an additional extension of time, the Planning Director shall submit the applicant's request to the Planning Commission for appropriate action.
- [44.]42. All other applicable rules, regulations, and requirements, including those of the State Department of Health and the State Department of Land and Natural Resources shall be complied with.
- [45.]43. The permittee shall obtain, and comply with the provisions of, permits to drill, modify use or abandon, as appropriate, from the State Board of Land and Natural Resources for each geothermal well approved under this Geothermal Resource Permit.
- [46.]44. The permittee shall obtain and comply with the provisions of, Underground Injection Control Permits, as appropriate, from the State Department of Health for all geothermal injection wells approved under this Geothermal Resource Permit. A copy of the UIC Permit and any conditions shall be available in the County Planning Department.

- [47.]45. The permittee shall obtain, and comply with the provisions of, Authorities to Construct and Permits to Operate from the State Department of Health for all applicable project operations approved under this Geothermal Resource Permit.
- [48.]46. The permittee shall secure [all necessary approvals and clearances including] **Final** Plan Approval pursuant to Chapter 25 of the Hawaii County Code, [within one (1) year from the effective date of the Geothermal Resource Permit] **prior to each incremental increase in power production.**
- [49.]47. Construction shall commence within [one (1) year] **two (2) years** from the date of receipt of Final Plan Approval **for each incremental increase in power production.**
- [50.]48. The permittee shall submit a written semiannual status report to the Planning Commission on the permittee's best efforts to address/comply with the "Other Agreements and Recommendations" as contained in Section 5 of the final report on "Mediation of Geothermal Resource Permit Application 87-1" dated August 21, 1989, **and in Section 5 "Final Report" dated December 30, 2000, on the mediation of the proposed amendments to conditions contained in the "Application For Amendment to Geothermal Resource Permit (87-1),"** regarding but not limited to the collateral agreements and commitments the permittee made during the mediation process, and which the permittee considers to be contractual obligations subject to the issuance of a satisfactory Geothermal Resource Permit. This status report shall be submitted by February 15 (covering the preceding period of July 1 through December 31) and August 15 (covering the preceding period of January 1 through June 30) of each year.
- [51.]49. Prior to the issuance of the first building/construction permit under this Geothermal Resources Permit (GRP) by the County of Hawaii, the State of Hawaii and the permittee shall each contribute towards a Geothermal Asset Fund or other appropriate existing fund for the purposes of geothermal impact mitigation efforts within the District of Puna. The permittee's initial contribution to the fund shall be a sum of \$60,00, due within thirty (30) days after the effective date of this GRP permit, and annual sums of \$50,000 due on or before the anniversary date of this GRP permit over a period of eight (8) consecutive years thereafter for a total of \$460,000. Annual contributions thereafter shall be determined between the permittee and the State of Hawaii or \$50,000 annually, whichever is greater. The State's initial annual contribution to the Geothermal Asset Fund shall be the net revenues derived from the resources generated by the HGP-A Well, or a similar amount from other State funding sources less any allocations entitled to the Office of Hawaiian Affairs and operations and maintenance costs. In the event that future enabling legislation provides for a percentage of the State's geothermal royalties to be allocated to the County, upon

concurrence with the County Council, said royalties may also be deposited to the fund. The administration and expenditure of assets from this Geothermal Asset Fund shall be in accordance with rules, regulations, and procedures developed for that purpose by the County in accordance with Chapter 91, Hawaii Revised Statutes, and with participation of Puna residents or representatives thereof, which shall include, but not be limited to, provisions and criteria to enable the first priority of distribution for temporary or permanent relocation of those property owners who are found, in accordance with criteria established in the rules, to be adversely impacted by the activities authorized, provided that such relief is applied for within a period of one (1) year of the impact. A priority list of impact mitigation projects may be established by the County Council or agency designated by the Council in conjunction with Puna residents or designated representatives thereof, with the exception of upgrading existing subdivisions in the Puna District to current subdivision standards and specifications of the County of Hawaii. Should any other district(s) of the County of Hawaii be proved to be negatively impacted by activities authorized under this or any other subsequent GRP, that district shall receive a pro rata share of the fund assets as may be determined by the County Council or agency designated by the Council with expenditures to follow a prioritized schedule determined as outlined above. The rights granted to the permittee shall not be conditioned upon any contribution or further participation by the State in the fund nor with respect to the creation, management, and operation of the fund other than set forth above.

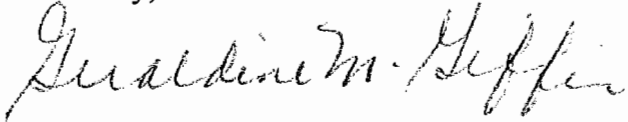
- 50. Upon termination of the operations or abandonment of any portion of the affected site, the land shall be graded to blend with the surrounding areas and revegetated. Further, the site shall be left in a nonhazardous condition. A plan for compliance with this condition shall be submitted to the Planning Director for review and approval within ninety (90) days from the date of termination or abandonment, and upon completion of the plan, notice of completion shall be given to the Planning Director.**

This approval does not, however, sanction the specific plans submitted with the application as they may be subject to change given specific code and regulatory requirements of the affected agencies.

Mr. Barry T. Mizuno
Page 27

Should you have any questions, please contact Alice Kawaha of the Planning Department at 961-8288.

Sincerely,



Geraldine M. Giffin, Chairman
Planning Commission

Lpgvgrp2pc

cc: Department of Public Works
Department of Water Supply
County Real Property Tax Division
Department of Land and Natural Resources
Kazu Hayashida, Director/DOT-Highways, Honolulu
Department of Health
Civil Defense Agency
Department of Business, Economic Development & Tourism
Mr. Jack Dean
Ms. Annie Szvetecz
Mr. Robert Kochy
Mr. Al Dettweiler
Diane and Steve Moynihan
Jennifer and Delan Perry
Mr. Steve Philips
Ms. Aurora Martinovich
Ms. Kate T. Harrison
Ms. Paula Z. Helfrich
Mr. Donald M. Thomas
Mr. Gene Thomas
Ms. Athena Peanut
Ms. Luana Jones
Ms. Marlene Dykema & Mr. Jim Rice
Ms. Rene Siracusa
Colin Love, Esq.
R. Ben Tsukazaki, Esq.

Puna Pono Alliance et al. vs. Puna Geothermal Venture et al.

Hawai`i Third Circuit Court Civil No. 15-1-0034 (Hilo) (Declaratory Judgment)

EXHIBIT B of the *First Amended Complaint*

December 16, 2014, drilling permit

from the State Department of Land and Natural Resources

to Puna Geothermal Venture for a well identified as KS-16

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

DEC 16 2014

Geothermal Well Permit
Kapoho State 16
Kapoho, Puna, Hawaii

To: Puna Geothermal Venture
P.O. Box 30
Pahoa, Hawaii 96778-0030

Your application dated November 12, 2014, for a permit to drill a geothermal well covered under the State of Hawaii, Geothermal Resource Mining Lease No. R-2 is approved.

Well Designation:	Kapoho State 16 (KS-16)
Location	TMK 1-04-01:19 (Wellpad A)
Well Coordinates	154° 53' 23.9" W 19° 28' 39" N
Geothermal Mining Lease	R-2
Leased to:	Kapoho Land Partnership
Subleased to:	Puna Geothermal Venture
Operator:	Puna Geothermal Venture
Ground Elevation:	610 feet AMSL
Projected Depth:	6,120 feet

Approval is granted in accordance with the Department of Land and Natural Resources' (Department's) Administrative Rules, Chapter 13-183, Hawaii Administrative Rules (HAR), and subject to the following conditions:

- (1) All work shall be performed in accordance with the permission and terms of the occupiers of the land, the drilling and completion program submitted with your application, the Department's Administrative Rules Chapter 13-183, HAR, and all other applicable Federal, State, and County laws, ordinances or rules;
- (2) The permittee, its successors and assigns, shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim or demand for property damage, personal injury and death arising from any act or omission of the applicant, assigns, officers, employees, contractors and agents under this permit or relating to or connected with the granting of this permit;

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

JESSE K. SOUKI
FIRST DEPUTY

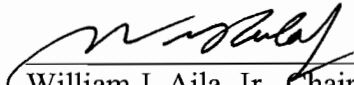
WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS


- (3) The permittee shall observe and comply with all valid requirements of County, State and Federal authorities and regulations to the land and permittee's operations including but not limited to, all water and air pollution control laws and those relating to the environment;
- (4) The well and bottom-hole location shall be located more than 100 feet from the outer boundary of the parcel of land on which the well is situated, or more than 100 feet from a public road, street or highway dedicated prior to the commencement of drilling, unless modified by the Chairperson upon request;
- (5) The permittee shall notify the Department, in writing, of the start date of drilling operations;
- (6) In the interest for the Protection of the Environment, Workers' Safety, Public Safety, and the Protection of the Resource, during operations involving the drilling, completion, and work-over of any geothermal well, there shall be highly experienced and properly trained (i.e. BOP Certified) representatives on the project and during operations for the prevention of any blow-out and or any flow event. Proper training would involve the accepted practices for the prevention of any blow-outs and also remedies for any flow event caused by a blow-out of any well. The training would also be the knowledge of the functions of the Blow-Out Prevention Equipment and the necessary utilization of the equipment in case of a blow-out or flow event.
- (7) All Blow-Out Prevention Equipment (BOPE) shall be pressure tested before commencing any other operations on the well. The minimum test pressures shall be approximately one-third the casing internal yield pressure rating, providing the test pressure shall not be less than 600 psig or greater than 2,500 psig, and shall be applied for a period of thirty minutes. The applicant shall notify the Department at least 24 hours in advance. The results of the pressure tests shall be reported on forms provided by the Department;
- (8) A real time monitoring device shall be installed for the drillers and a pit alarm system shall be included with this monitoring device. All toolpushers, drillers, and derrickmen shall be properly trained in the use of the monitoring equipment;
- (9) If changes to the proposed drilling program are contemplated, the permittee shall obtain the Chairperson's approval prior to implementing such changes;
- (10) During the use of the well for testing, monitoring, production, and/or injection purposes, the well and site shall be properly maintained until the well is plugged and abandoned in accordance with the Department's Administrative Rules, Chapter 13-183, HAR;
- (11) The permittee shall submit to the Chairperson, the results of any exploration, all drilling and testing records, down-hole surveys of the well, bottom-hole location, date of completion,

and a survey of the well location and elevation above mean sea level taken by a Hawaii Licensed surveyor within six months after completion of the well;

- (12) The completion report, an as-built drawing of the well, and the location of the well plotted on a USGS quad map shall be filed with the Department within six months after completion of the well;
- (13) The bond covering the well shall remain in full force and effect until the well is properly abandoned and the surface is restored as near as possible to its original condition; and
- (14) This permit shall expire 365 days from the date of issuance.



William J. Aila, Jr., Chairperson
Department of Land and Natural Resources



Date of Issuance

- c: Land Board Member
Hawaii County Planning Department
Department of Business, Economic Development and Tourism/Strategic Industries Division
Department of Health/Environmental Health Division
Eric Tanaka, Engineering Division, Hilo

STATE OF HAWAI'I CIRCUIT COURT OF THE THIRD CIRCUIT	SUMMONS TO ANSWER CIVIL COMPLAINT	CASE NUMBER Civil No. 15-1-0034
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PLAINTIFF vs. PUNA PONO ALLIANCE, a Hawai'i non-profit association, JON OLSON and HILLARY E. WILT	DEFENDANT PUNA GEOTHERMAL VENTURE, a Hawai'i Partnership; COUNTY OF HAWAI'I and JOHN DOES 1-10
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PLAINTIFF'S ADDRESS AND TELEPHONE NUMBER
 Gary C. Zamber 8446
 21 Waiuanueue Ave., # 3
 Hilo, HI 96720
 Phone: (808) 969-3600

TO THE ABOVE NAMED DEFENDANT(S)


You are hereby summoned and required to file with the court and serve upon Gary C. Zamber, plaintiff's attorney, whose address is 21 Waiuanueue Ave. # 3, Hilo, HI 96720 an answer to the complaint which is herewith served upon you, within 20 days after service of this summons upon you, exclusive of the date of service. If you fail to do so, judgment by default will be taken against you for the relief demanded in the complaint.

THIS SUMMONS SHALL NOT BE PERSONALLY DELIVERED BETWEEN 10:00 P.M. AND 6:00 A.M. ON PREMISES NOT OPEN TO THE GENERAL PUBLIC, UNLESS A JUDGE OF THE ABOVE-ENTITLED COURT PERMITS, IN WRITING ON THIS SUMMONS, PERSONAL DELIVERY DURING THOSE HOURS.

A FAILURE TO OBEY THIS SUMMONS MAY RESULT IN AN ENTRY OF DEFAULT AND DEFAULT JUDGMENT AGAINST THE DISOBEYING PERSON OR PARTY.

DATE ISSUED FEB 17 2015	CLERK L. GLASGOW (SEAL)	
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I do hereby certify that this is a full, true, and correct copy of the original on file in this office.	CIRCUIT COURT CLERK	
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 In accordance with the Americans with Disabilities Act and other applicable state and federal laws, if you require a reasonable accommodation for a disability, please contact the ADA Coordinator at the Circuit Court Administration Office at PHONE NO. 961-7440, FAX 961-7416, or TTY 961-7525 at least ten (10) working days prior to your hearing or appointment date.