

**EXHIBIT AA**

**ELECTRIC TRANSMISSION LINE**

0AR 345-021-0010(1)(aa)

0AR 345-024-0090(1),(2)

**TABLE OF CONTENTS**

|   | <b>Page</b> |
|---|-------------|
| AA.1 INTRODUCTION .....   | AA-1        |
| AA.2 ELECTRIC AND MAGNETIC FIELDS .....   | AA-1        |
| AA.2.1 Distance from Transmission Line Centerline to Edge of Right-of-Way .....                           | AA-1        |
| AA.2.2 Types of Occupied Structures within 200 Feet of Centerline of Proposed<br>Transmission Lines ..... | AA-1        |
| AA.2.3 Graphs of Electric and Magnetic Field Levels .....   | AA-1        |
| AA.2.3.1 Overview of EMFs Produced by Transmission Lines .....  | AA-2        |
| AA.2.3.2 EMF Calculations for 69-kV Overhead Transmission Lines .....                                     | AA-3        |
| AA.2.3.3 Overview of Corona Audible Noise Produced by Transmission<br>Lines.....                          | AA-6        |
| AA.2.3.4 Measures Proposed to Reduce EMF Levels .....   | AA-6        |
| AA.2.3.5 Assumptions and Methods Used in EMF Analyses.....  | AA-6        |
| AA.2.3.6 Monitoring Program.....  | AA-7        |
| AA.3 ALTERNATING CURRENT ELECTRIC FIELDS .....  | AA-7        |
| AA.4 INDUCED VOLTAGE AND CURRENT .....  | AA-7        |
| AA.4.1 Analysis of Induced Voltage and Current.....   | AA-7        |
| AA.4.1.1 Induced Voltage .....  | AA-7        |
| AA.4.1.2 Induced Current .....  | AA-8        |
| AA.5 RADIO AND TV INTERFERENCE .....  | AA-8        |
| AA.6 CONCLUSION.....  | AA-8        |
| AA.7 REFERENCE.....   | AA-8        |

**ATTACHMENT**

AA-1 Results of the EPRI EMF Workstation: ENVIRO Program for 69-kV Overhead  
Transmission Line

**TABLE**

AA-1 Calculated Magnetic and Electric Field Values for 69-kV Overhead  
Transmission Line..... AA-4

**FIGURES**

AA-1 Typical Overhead 69-kV Single-Circuit, H-Frame Support Structure ..... AA-4  
 AA-2 Magnetic Field Profile for 69-kV Single-Circuit, H-Frame Support Structure ..... AA-5  
 AA-3 Electric Field Profile for 69-kV Single-Circuit, H-Frame Support Structure..... AA-5



## AA.1 INTRODUCTION

Klamath Falls Bioenergy, LLC (Applicant) proposes to construct the Klamath Falls Bioenergy Facility (Facility) near the City of Klamath Falls, Oregon (City). The proposed Facility will produce a total of 42 megawatts (MW), of which 37 MW will be exported to the electric grid. The site is zoned for heavy industrial land use and currently is used as pastureland.

**OAR 345-021-0010(1)(aa)** *If the proposed facility includes an electric transmission line:*

**Response:** The proposed Facility includes an approximately 0.65-mile long, 69-kilovolt (kV), overhead, wood pole transmission line from the Facility's substation north, generally parallel to the Facility access road, to a new switchyard near Highway 66.

## AA.2 ELECTRIC AND MAGNETIC FIELDS

**OAR 345-021-0010(1)(aa)(A)** *Information about the expected electric and magnetic fields (EMFs), including:*

### AA.2.1 Distance from Transmission Line Centerline to Edge of Right-of-Way

- (i) *The distance in feet from the proposed center line of each proposed transmission line to the edge of the right-of-way;*

**Response:** The transmission line route is entirely within the Facility site. As a result, there will not be an explicit right-of-way for this line.

### AA.2.2 Types of Occupied Structures within 200 Feet of Centerline of Proposed Transmission Lines

- (ii) *The type of each occupied structure, including but not limited to residences, commercial establishments, industrial facilities, schools, daycare centers and hospitals, within 200 feet on each side of the proposed center line of each proposed transmission line;*
- (iii) *The approximate distance in feet from the proposed center line to each structure identified in (A);*

**Response:** There are no known occupied buildings, residences, or other sensitive receptors currently within 200 feet on either side of the centerline of the proposed transmission line route. The power island and scale house may be constructed within 200 feet (but greater than 50 feet) of the centerline of the proposed transmission line route. It should also be noted that the area around the transmission line route is not accessible to the public; it is on private property with restricted access.

### AA.2.3 Graphs of Electric and Magnetic Field Levels

- (iv) *At representative locations along each proposed transmission line, a graph of the predicted electric and magnetic fields levels from the proposed center line to 200 feet on each side of the proposed center line;*

**Response:****AA.2.3.1 Overview of EMFs Produced by Transmission Lines**

All electric utility wires and devices generate alternating electric and magnetic fields (EMFs). The earth itself generates steady state EMFs. The EMF produced by the alternating current (AC) electrical power system in the United States has a frequency of 60 hertz (Hz), meaning that the fields change from positive to negative and back to positive, 60 times per second.

In AC power systems, voltage swings positive to negative and back to positive, a 360-degree cycle, 60 times every second. Current follows the voltage, flowing forward, reversing direction, and returning to the forward direction, again a 360-degree cycle, 60 times every second. Each AC three-phase circuit carries power over three conductors. One phase of the circuit is carried by each of the three conductors. The AC voltage and current in each phase conductor is out of sync with the other two phases by 120 degrees, or one-third of the 360-degree cycle. The fields from these conductors tend to cancel out because of the phase difference. However, when a person stands under a transmission line or over a buried circuit of underground lines, one conductor is always significantly closer and will most likely contribute a net uncanceled field at the person's location, assuming the three-phase currents are equal.

**Electric Fields**

Electric fields around transmission lines are produced by electrical charges, measured as voltage, on the energized conductor. Electric field strength is directly proportional to the line's voltage; that is, increased voltage produces a stronger electric field. The electric field is inversely proportional to the distance a sensor is from the conductors, so that the electric field strength decreases as the distance from the conductor increases. For this transmission line, the voltage and electric field alternate at a frequency of 60 Hz. The strength of the electric field is measured in units of kilovolts per meter (kV/m). The voltage, and therefore the electric field, around a transmission line remains practically steady and is not affected by the common daily and seasonal fluctuations in usage of electricity by customers.

**Magnetic Fields**

Magnetic fields around transmission lines are produced by the electrical load, or the amount of current flow through the conductors measured in terms of amperage. Like the electric field, the magnetic field alternates at a frequency of 60 Hz. The magnetic field strength is directly proportional to the amperage; that is, increased power flow results in increased amperage which produces a stronger magnetic field. The magnetic field is inversely proportional to the sensor's distance from the conductors. Also, like the electric field, the magnetic field strength decreases as the distance from the conductor increases. Magnetic fields are expressed in units of milli Gauss (mG). However, unlike voltage, the amperage and therefore the magnetic field around a transmission line fluctuate hourly and daily as the amount of current flow varies. The strength of the magnetic field depends on the current in the conductor, the geometry of the construction, the degree of cancellation from other conductors, and the distance from the conductors or cables.

### AA.2.3.2 EMF Calculations for 69-kV Overhead Transmission Lines

Figure AA-1 illustrates the typical wood H-frame overhead structural configuration for the proposed 69-kV single-circuit transmission line.

#### **Line Loads for EMF Calculation**

It is important that any discussion of EMFs includes the assumptions used to calculate these fields. It is also important to remember that the EMF in the vicinity of the transmission lines varies with regard to line design, line loading, distance from the line, and other factors. The electric field depends on line voltage, which remains nearly constant for a transmission line in normal operation. The magnetic field is proportional to line loading (amperage), which varies as power generation is changed by the intensity of the Facility. Maximum magnetic fields are produced at the maximum (peak) conductor currents.

The entire 69-kV transmission line in this study is rated for a nominal voltage of 69 kV measured phase to phase. The peak line loading value assumed for each overhead circuit is 350 amperes per phase conductor. The conductor assumed for each conductor and both grounds is a single conductor per phase of 397.5 thousand circular-mil aluminum-conductor-steel-reinforced “Ibis” with a diameter of 0.783 inch.

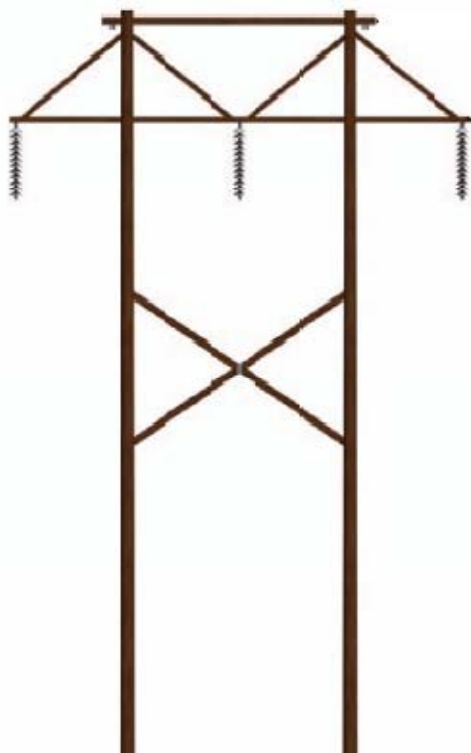
#### **Calculation Methods**

The calculation methods used for the analysis are provided in Chapter 8 of the *Transmission Line Reference Book, 345-kV and Above* (EPRI, 1985).

The software tool program used for the H-frame overhead 69-kV analysis, called “EMF Workstation: ENVIRO (Version 3.52),” is a new Windows-based model developed by EPRI that uses the same Bonneville Power Administration calculation algorithms as the Corona and Field Effect Program, with a friendlier interface. The results of the ENVIRO Program are provided in Attachment AA-1.

To estimate the maximum fields, calculations are performed at mid-span where the conductor has sagged to its lowest point between structures (the estimated maximum sag point). This section addresses the estimates of the maximum possible 60-Hz AC EMF strengths that will be produced by the proposed 69-kV overhead facilities. These estimates are computed for a height of 1 meter (3.3 feet) above the ground on the proposed line route.

Figure AA-1 Typical Overhead 69-kV Single-Circuit, H-Frame Support Structure



**Results of 69-kV Overhead EMF Calculations**

Table AA-1 presents the calculated values of the EMF at 200 feet either side of the centerline of the transmission line and the maximum calculated value. The values are computed with conductors at maximum sag (minimum conductor ground clearance). The actual magnetic field values vary as load varies hourly, daily, seasonally, and as conductor sag changes with ambient temperature. Also, field values vary depending on the receptor’s location between the transmission line structures (the magnetic fields will be less at the structures because the conductors will be higher off the ground). The levels shown represent the highest magnetic fields expected for the proposed project. Average fields along the ground between poles and over a year’s time would be considerably less than the peak or even the typical values shown.

Table AA-1. Calculated Magnetic and Electric Field Values for 69-kV Overhead Transmission Line

| Reference Figure AA-2 Magnetic Field (mG) |         |                                     | Reference Figure AA-3 Electric Field (kV/m) |         |                                     |
|---|---------|-------------------------------------|---|---------|-------------------------------------|
| Left Side of the Centerline (200')        | Maximum | Right Side of the Centerline (200') | Left Side of the Centerline (200')          | Maximum | Right Side of the Centerline (200') |
| 0.69                                      | 33.61   | 0.56                                | 0.004                                       | 0.39    | 0.004                               |

The maximum calculated magnetic field shown in Table AA-1 occurs at the centerline of the proposed 69-kV overhead transmission line. The maximum calculated electric field shown in Table AA-1 occurs approximately 14 feet to the left and to the right of the

centerline because of the structural configuration of the proposed 69-kV overhead transmission line.

The results are plotted on the graphs shown in Figures AA-2 and AA-3.

Figure AA-2 Magnetic Field Profile for 69-kV Single-Circuit, H-Frame Support Structure

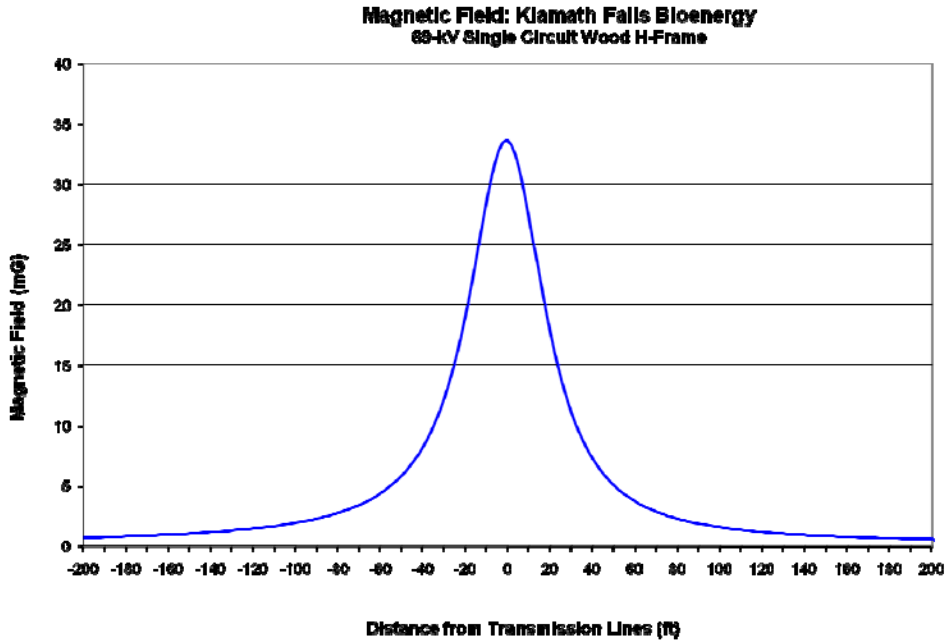
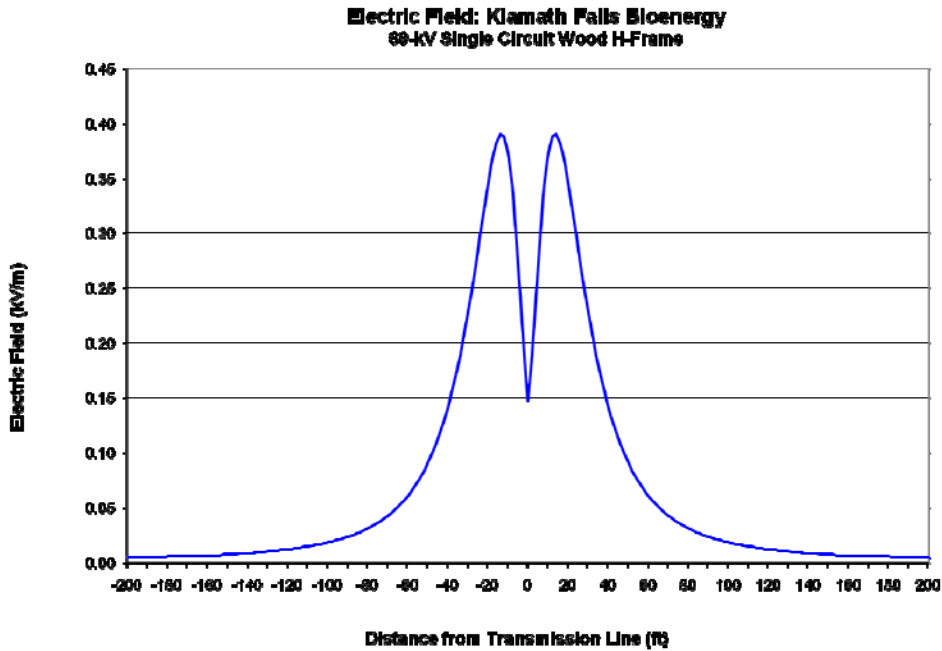


Figure AA-3 Electric Field Profile for 69-kV Single-Circuit, H-Frame Support Structure



### AA.2.3.3 Overview of Corona Audible Noise Produced by Transmission Lines

Corona is the electrical ionization of the air that occurs near the surface of the energized conductor and suspension hardware because of very high electric field strength. Corona may result in audible noise being produced by the transmission lines.

The amount of corona produced by an overhead transmission line is a function of the voltage of the line, the diameter of the conductors, the locations of the conductors in relation to each other, the elevation of the line above sea level, the condition of the conductors and hardware, and the local weather conditions. Power flow does not affect the amount of corona produced by a transmission line. Corona typically becomes a design concern for transmission lines at 345 kV and above but is less noticeable from lines like this 69-kV transmission line, which will operate at lower voltages.

Corona also increases at higher elevations, where the atmosphere is less dense than at sea level. Audible noise will vary with elevation with the relationship of  $A/300$ , where A is the elevation of the line above sea level measured in meters (EPRI, 1985). Audible noise at 600 meters elevation will be twice the audible noise at 300 meters, all other things being equal. The 69-kV transmission line was modeled with an elevation of 4,000 feet.

Raindrops, snow, fog, hoarfrost, and condensation accumulated on the conductor surface are also sources of surface irregularities that can increase corona. During fair weather, the number of these condensed water droplets or ice crystals is usually small and the corona effect is also small. However, during wet weather, the number of these sources increases (such as when rain drops stand on the conductor) and corona effects are therefore greater. During wet or foul weather conditions, the conductor will produce the greatest amount of corona noise. However, during heavy rain, the noise generated by the falling rain drops hitting the ground will typically be greater than the noise generated by corona and thus will mask the audible noise from the transmission line.

The audible noise from the proposed transmission line was predicted using EMF Workstation: ENVIRO (Version 3.52), the same program used for the EMF analyses. The results of the ENVIRO Program are provided in Attachment AA-1. The calculated noise values in fair weather and foul weather are so low that the model did not register them; therefore, the calculated noise from the 69-kV transmission line is considered negligible and is not discussed further in this section.

### AA.2.3.4 Measures Proposed to Reduce EMF Levels

(v) *Any measures the applicant proposes to reduce electric or magnetic field levels;*

**Response:** The proposed 69-kV single circuit transmission line will be located as far as possible from occupied buildings, within a minimum distance of 50 feet. As shown in Figure AA-2, at a distance of 50 feet from the line, the magnetic field is approximately 5 mG, which is an acceptable level of magnetic field that can be found inside a typical residence. As shown in Figure AA-3, the electric field at 50 feet will be 0.05 kV meter, which also is an acceptable level that can be found in a typical residence.

### AA.2.3.5 Assumptions and Methods Used in EMF Analyses

(vi) *The assumptions and methods used in the electric and magnetic field analysis, including the current in amperes on each proposed transmission line;*

**Response:** See Section AA.1.3.2. Attachment AA-1 shows data inputs and assumptions used in the EMF and audible noise analysis conducted using the EPRI EMF Workstation: ENVIRO (Version 3.52) program.

**AA.2.3.6 Monitoring Program**

(vii) *The applicant’s proposed monitoring program, if any, for actual electric and magnetic field levels;*

**Response:** The Applicant is not proposing to conduct a post-construction monitoring program for EMFs.

**AA.3 ALTERNATING CURRENT ELECTRIC FIELDS**

**OAR 345-024-0090** *To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:*

(1) *Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;*

**Response:** The electric fields calculated for the proposed 69-kV single circuit transmission line do not exceed 9 kV per meter (see Figure AA-3). This figure demonstrates that the maximum electric field modeled is less than 0.4 kV per meter, which is less than the 9-kV-per-meter standard set forth in OAR 345-024-0090(1). Note that the transmission line route is not accessible to the public. It is on private property with restricted access.

**AA.4 INDUCED VOLTAGE AND CURRENT**

**OAR 345-024-0090** *To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:*

\*\*\*

(2) *Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.*

**Response:** The Applicant has designed the transmission line so that induced currents will be as low as reasonably achievable. Below is an analysis of the risk of induced currents from the proposed overhead line.

Note that the transmission line route is not accessible to the public. It is on private property with restricted access.

**AA.4.1 Analysis of Induced Voltage and Current**

**AA.4.1.1 Induced Voltage**

Voltage is the electrical pressure that pushes current through a conducting wire or object. An object such as a bird, person, vehicle, or barbed-wire fence that is insulated from ground and in an electric field will possess an induced voltage. A bird flying through the field is safe because the induced voltage cannot make current flow through the bird, unless there is a conducting path for the current. Induced voltages can only be a hazard

when the object is shorted to ground, allowing a path for current to flow. The conductivity of the air around the overhead conductor will determine the upper limit of the current that can flow when the object is shorted to ground.

A common induced voltage hazard occurs on wire fences that parallel overhead transmission lines. If the fence is ungrounded, it possesses the voltage of the net electric field of the overhead conductors at the location of the fence. A person touching such a fence becomes a conducting path for the current and will feel a momentary shock. The AC static voltage on the fence bleeds off quickly but can be annoying. This hazard is easily removed by bonding the fence wires along the length of the fence to grounding rods that are driven into the soil.

#### AA.4.1.2 Induced Current

A current carrying conductor will induce a current to flow in another conductor that is parallel to it. Induced currents result from the net AC magnetic field. In the common case cited above, grounded fences create electrical loops in which induced currents can flow. The value of the induced current will depend on the magnetic field strength, the size and shape of the conducting object, and the object-to-ground resistance.

Induced currents are not a hazard to people because almost no voltage is involved. However, induced currents are a concern for railroad communications and for pipeline cathodic protection systems that parallel transmission lines.

Sufficient distance between such facilities and the proposed transmission line exists, so induced current will not be an issue.

#### AA.5 RADIO AND TV INTERFERENCE

**OAR 345-021-0010(1)(aa)(B)** *An evaluation of alternate methods and costs of reducing radio interference likely to be caused by the transmission line in the primary reception area near interstate, U.S. and state highways;*

**Response:** Not applicable. Overhead transmission lines can generate random corona radiation during wet weather as a result of raindrops on the wire or to a lesser amount in dry weather as a result of dust, insects, or sharp points on the conductors or suspension hardware that would result in radio and TV interference. However, at a voltage of 69 kV, the proposed transmission line is not expected to generate any radio or TV interference. In addition, no known occupied buildings, residences, or other sensitive receptors are within 200 feet on either side of the centerline of the proposed transmission line route.

#### AA.6 CONCLUSION

Based on the above information, the Applicant has satisfied the requirement of OAR 345-021-0010(1)(aa), and the Council may find that the standards contained in OAR 345-024-0090 have been satisfied.

#### AA.7 REFERENCE

Electric Power Research Institute. 1985. *Transmission Line Reference Book, 345-kV and Above*. Third Edition.

**ATTACHMENT AA-1**

**Results of the EPRI EMF Workstation: ENVIRO  
Program for 69-kV Overhead Transmission Line**



KFALLBI 0

RESULTS OF ENVI RO PROGRAM

STUDY FILE NAME: X:\ENVI RO\KFALLBI 0. I 01

DATE: 6/16/2010 TIME: 9:24

KI amath Falls Bi oenergy

```
*****
*                                     BUNDLE I NFORMATI ON                                     *
*****
| BNDL | CI RC | VOLTAGE | VOLTAGE | LOAD | CURRENT | # | COORDI NATES | PHASE |
| # | # | (kV) | ANGLE | (AMPS) | ANGLE | OF | X | Y |
| * | * | * | (DEG) | * | (DEG) | COND | (FT) | (FT) | *
| * | * | * | * | * | * | * | * | * | *
| 1 | 1 | 69.0 | .0 | 350.0 | .0 | 1 | -4.0 | 24.0 | A |
| 2 | 1 | 69.0 | 240.0 | 350.0 | 120.0 | 1 | .0 | 24.0 | B |
| 3 | 1 | 69.0 | 120.0 | 350.0 | 240.0 | 1 | 4.0 | 24.0 | C |
| 4 | 2 | .0 | .0 | .0 | .0 | 1 | -2.0 | 26.0 | GND |
| 5 | 3 | .0 | .0 | .0 | .0 | 1 | 2.0 | 26.0 | GND |
| * | * | * | * | * | * | * | * | * | *
*                                     MI NI MUM GROUND CLEARANCE = 24.000 FT.                                     *
*****
```

```
*****
*                                     SUBCONDUCTOR I NFORMATI ON - REGULAR BUNDLES                                     *
*****
| BNDL | DI AMETER | SPACI NG | DC RESI ST. | AC RESI ST. | AC REACT. |
| # | (I N) | (I N) | (OHMS/MI) | (OHMS/MI) | (OHMS/MI) |
| * | * | * | * | * | * |
| 1 | .783 | .000 | .23060 | .23100 | .441000 |
| 2 | .783 | .000 | .23060 | .23100 | .441000 |
| 3 | .783 | .000 | .23060 | .23100 | .441000 |
| 4 | .783 | .000 | .23060 | .23100 | .441000 |
| 5 | .783 | .000 | .23060 | .23100 | .441000 |
| * | * | * | * | * | * |
*****
```

```
*****
*                                     *
* MAXI MUM SURFACE GRADI ENT (kV/cm) *
*                                     *
*****
```

| BNDL # | Type         | ACrms | PEAK(+) | PEAK(-) |
|--------|--------------|-------|---------|---------|
| 1      | AC           | 7.84  | 11.09   | -11.09  |
| 2      | AC           | 8.77  | 12.40   | -12.40  |
| 3      | AC           | 7.84  | 11.09   | -11.09  |
| 4      | Ground Wi re | 1.13  | 1.59    | -1.59   |
| 5      | Ground Wi re | 1.13  | 1.59    | -1.59   |

♀

```
*****
*                                     *
* AC ELECTRI C FIE LD PROFILE *
* at 3.28 feet above ground *
*                                     *
*****
```

|   |                              |   |                     |                       |                             |
|---|------------------------------|---|---------------------|-----------------------|-----------------------------|
| LATERAL<br>DI STANCE<br>(feet) (meters) | MAXI MUM<br>FIE LD<br>(kV/m) | MI NOR/MAJOR<br>ELLI PSE AXES<br>(rati o) | VERTI CAL<br>(kV/m) | HORI ZONTAL<br>(kV/m) | SPACE<br>POTENTI AL<br>(kV) |
|---|------------------------------|---|---------------------|-----------------------|-----------------------------|

KFALLBI 0

|        |        |      |      |      |      |      |
|--------|--------|------|------|------|------|------|
| -200.0 | -60.96 | .004 | .007 | .004 | .000 | .004 |
| -198.0 | -60.35 | .004 | .007 | .004 | .000 | .004 |
| -196.0 | -59.74 | .004 | .007 | .004 | .000 | .004 |
| -194.0 | -59.13 | .004 | .007 | .004 | .000 | .004 |
| -192.0 | -58.52 | .004 | .007 | .004 | .000 | .004 |
| -190.0 | -57.91 | .004 | .007 | .004 | .000 | .004 |
| -188.0 | -57.30 | .004 | .007 | .004 | .000 | .004 |
| -186.0 | -56.69 | .004 | .007 | .004 | .000 | .004 |
| -184.0 | -56.08 | .004 | .008 | .004 | .000 | .004 |
| -182.0 | -55.47 | .004 | .008 | .004 | .000 | .004 |
| -180.0 | -54.86 | .005 | .008 | .005 | .000 | .005 |
| -178.0 | -54.25 | .005 | .008 | .005 | .000 | .005 |
| -176.0 | -53.64 | .005 | .008 | .005 | .000 | .005 |
| -174.0 | -53.04 | .005 | .008 | .005 | .000 | .005 |
| -172.0 | -52.43 | .005 | .008 | .005 | .000 | .005 |
| -170.0 | -51.82 | .005 | .008 | .005 | .000 | .005 |
| -168.0 | -51.21 | .005 | .009 | .005 | .000 | .005 |
| -166.0 | -50.60 | .005 | .009 | .005 | .000 | .005 |
| -164.0 | -49.99 | .006 | .009 | .006 | .000 | .006 |
| -162.0 | -49.38 | .006 | .009 | .006 | .000 | .006 |
| -160.0 | -48.77 | .006 | .009 | .006 | .000 | .006 |
| -158.0 | -48.16 | .006 | .009 | .006 | .000 | .006 |
| -156.0 | -47.55 | .006 | .009 | .006 | .000 | .006 |
| -154.0 | -46.94 | .006 | .009 | .006 | .000 | .006 |
| -152.0 | -46.33 | .007 | .010 | .007 | .000 | .007 |
| -150.0 | -45.72 | .007 | .010 | .007 | .000 | .007 |
| -148.0 | -45.11 | .007 | .010 | .007 | .000 | .007 |
| -146.0 | -44.50 | .007 | .010 | .007 | .000 | .007 |
| -144.0 | -43.89 | .008 | .010 | .008 | .000 | .008 |
| -142.0 | -43.28 | .008 | .010 | .008 | .000 | .008 |
| -140.0 | -42.67 | .008 | .010 | .008 | .000 | .008 |
| -138.0 | -42.06 | .008 | .011 | .008 | .000 | .008 |
| -136.0 | -41.45 | .009 | .011 | .009 | .000 | .009 |
| -134.0 | -40.84 | .009 | .011 | .009 | .001 | .009 |
| -132.0 | -40.23 | .009 | .011 | .009 | .001 | .009 |
| -130.0 | -39.62 | .010 | .011 | .010 | .001 | .010 |
| -128.0 | -39.01 | .010 | .011 | .010 | .001 | .010 |
| -126.0 | -38.40 | .010 | .011 | .010 | .001 | .010 |
| -124.0 | -37.80 | .011 | .012 | .011 | .001 | .011 |
| -122.0 | -37.19 | .011 | .012 | .011 | .001 | .011 |
| -120.0 | -36.58 | .012 | .012 | .012 | .001 | .012 |
| -118.0 | -35.97 | .012 | .012 | .012 | .001 | .012 |
| -116.0 | -35.36 | .013 | .012 | .013 | .001 | .013 |
| -114.0 | -34.75 | .013 | .012 | .013 | .001 | .013 |
| -112.0 | -34.14 | .014 | .013 | .014 | .001 | .014 |
| -110.0 | -33.53 | .014 | .013 | .014 | .001 | .014 |
| -108.0 | -32.92 | .015 | .013 | .015 | .001 | .015 |
| -106.0 | -32.31 | .016 | .013 | .016 | .001 | .016 |
| -104.0 | -31.70 | .016 | .013 | .016 | .001 | .016 |
| -102.0 | -31.09 | .017 | .013 | .017 | .001 | .017 |
| -100.0 | -30.48 | .018 | .014 | .018 | .001 | .018 |
| -98.0  | -29.87 | .019 | .014 | .019 | .002 | .019 |
| -96.0  | -29.26 | .020 | .014 | .020 | .002 | .020 |
| -94.0  | -28.65 | .021 | .014 | .021 | .002 | .021 |
| -92.0  | -28.04 | .022 | .014 | .022 | .002 | .022 |
| -90.0  | -27.43 | .023 | .014 | .023 | .002 | .023 |
| -88.0  | -26.82 | .024 | .015 | .024 | .002 | .024 |
| -86.0  | -26.21 | .026 | .015 | .026 | .002 | .026 |
| -84.0  | -25.60 | .027 | .015 | .027 | .003 | .027 |
| -82.0  | -24.99 | .029 | .015 | .029 | .003 | .029 |
| -80.0  | -24.38 | .031 | .015 | .031 | .003 | .031 |
| -78.0  | -23.77 | .033 | .015 | .033 | .003 | .033 |
| -76.0  | -23.16 | .035 | .015 | .035 | .004 | .035 |
| -74.0  | -22.56 | .037 | .015 | .037 | .004 | .037 |
| -72.0  | -21.95 | .040 | .016 | .039 | .004 | .040 |

KFALLBI 0

|       |        |      |      |      |      |      |
|-------|--------|------|------|------|------|------|
| -70.0 | -21.34 | .042 | .016 | .042 | .005 | .042 |
| -68.0 | -20.73 | .045 | .016 | .045 | .005 | .045 |
| -66.0 | -20.12 | .049 | .016 | .048 | .006 | .048 |
| -64.0 | -19.51 | .052 | .016 | .052 | .006 | .052 |
| -62.0 | -18.90 | .056 | .016 | .056 | .007 | .056 |
| -60.0 | -18.29 | .060 | .016 | .060 | .008 | .060 |
| -58.0 | -17.68 | .065 | .016 | .065 | .008 | .065 |
| -56.0 | -17.07 | .071 | .016 | .070 | .009 | .071 |
| -54.0 | -16.46 | .077 | .016 | .076 | .010 | .076 |
| -52.0 | -15.85 | .083 | .016 | .082 | .011 | .083 |
| -50.0 | -15.24 | .091 | .015 | .090 | .013 | .090 |
| -48.0 | -14.63 | .099 | .015 | .098 | .014 | .098 |
| -46.0 | -14.02 | .108 | .015 | .107 | .016 | .108 |
| -44.0 | -13.41 | .118 | .015 | .117 | .018 | .118 |
| -42.0 | -12.80 | .129 | .015 | .128 | .020 | .129 |
| -40.0 | -12.19 | .142 | .014 | .140 | .022 | .141 |
| -38.0 | -11.58 | .156 | .014 | .154 | .024 | .155 |
| -36.0 | -10.97 | .171 | .014 | .169 | .027 | .171 |
| -34.0 | -10.36 | .188 | .013 | .186 | .029 | .188 |
| -32.0 | -9.75  | .207 | .013 | .205 | .032 | .206 |
| -30.0 | -9.14  | .228 | .012 | .225 | .035 | .227 |
| -28.0 | -8.53  | .250 | .012 | .247 | .037 | .248 |
| -26.0 | -7.92  | .274 | .011 | .271 | .039 | .271 |
| -24.0 | -7.32  | .298 | .010 | .295 | .039 | .295 |
| -22.0 | -6.71  | .322 | .009 | .320 | .038 | .319 |
| -20.0 | -6.10  | .346 | .007 | .344 | .035 | .341 |
| -18.0 | -5.49  | .366 | .005 | .365 | .028 | .360 |
| -16.0 | -4.88  | .382 | .001 | .381 | .017 | .374 |
| -14.0 | -4.27  | .390 | .005 | .390 | .002 | .380 |
| -12.0 | -3.66  | .388 | .014 | .387 | .020 | .375 |
| -10.0 | -3.05  | .373 | .031 | .370 | .045 | .356 |
| -8.0  | -2.44  | .343 | .061 | .336 | .073 | .322 |
| -6.0  | -1.83  | .300 | .117 | .284 | .101 | .272 |
| -4.0  | -1.22  | .245 | .227 | .219 | .125 | .210 |
| -2.0  | -.61   | .188 | .456 | .151 | .141 | .149 |
| .0    | .00    | .147 | .789 | .116 | .147 | .119 |
| 2.0   | .61    | .188 | .456 | .151 | .141 | .149 |
| 4.0   | 1.22   | .245 | .227 | .219 | .125 | .210 |
| 6.0   | 1.83   | .300 | .117 | .284 | .101 | .272 |
| 8.0   | 2.44   | .343 | .061 | .336 | .073 | .322 |
| 10.0  | 3.05   | .373 | .031 | .370 | .045 | .356 |
| 12.0  | 3.66   | .388 | .014 | .387 | .020 | .375 |
| 14.0  | 4.27   | .390 | .005 | .390 | .002 | .380 |
| 16.0  | 4.88   | .382 | .001 | .381 | .017 | .374 |
| 18.0  | 5.49   | .366 | .005 | .365 | .028 | .360 |
| 20.0  | 6.10   | .346 | .007 | .344 | .035 | .341 |
| 22.0  | 6.71   | .322 | .009 | .320 | .038 | .319 |
| 24.0  | 7.32   | .298 | .010 | .295 | .039 | .295 |
| 26.0  | 7.92   | .274 | .011 | .271 | .039 | .271 |
| 28.0  | 8.53   | .250 | .012 | .247 | .037 | .248 |
| 30.0  | 9.14   | .228 | .012 | .225 | .035 | .226 |
| 32.0  | 9.75   | .207 | .013 | .205 | .032 | .206 |
| 34.0  | 10.36  | .188 | .013 | .186 | .029 | .188 |
| 36.0  | 10.97  | .171 | .014 | .169 | .027 | .171 |
| 38.0  | 11.58  | .156 | .014 | .154 | .024 | .155 |
| 40.0  | 12.19  | .142 | .014 | .140 | .022 | .141 |
| 42.0  | 12.80  | .129 | .015 | .128 | .020 | .129 |
| 44.0  | 13.41  | .118 | .015 | .117 | .018 | .118 |
| 46.0  | 14.02  | .108 | .015 | .107 | .016 | .108 |
| 48.0  | 14.63  | .099 | .015 | .098 | .014 | .098 |
| 50.0  | 15.24  | .091 | .015 | .090 | .013 | .090 |
| 52.0  | 15.85  | .083 | .016 | .082 | .011 | .083 |
| 54.0  | 16.46  | .077 | .016 | .076 | .010 | .076 |
| 56.0  | 17.07  | .071 | .016 | .070 | .009 | .071 |
| 58.0  | 17.68  | .065 | .016 | .065 | .008 | .065 |
| 60.0  | 18.29  | .060 | .016 | .060 | .008 | .060 |

KFALLBI 0

|       |       |      |      |      |      |      |
|-------|-------|------|------|------|------|------|
| 62.0  | 18.90 | .056 | .016 | .056 | .007 | .056 |
| 64.0  | 19.51 | .052 | .016 | .052 | .006 | .052 |
| 66.0  | 20.12 | .049 | .016 | .048 | .006 | .048 |
| 68.0  | 20.73 | .045 | .016 | .045 | .005 | .045 |
| 70.0  | 21.34 | .042 | .016 | .042 | .005 | .042 |
| 72.0  | 21.95 | .040 | .016 | .039 | .004 | .040 |
| 74.0  | 22.56 | .037 | .015 | .037 | .004 | .037 |
| 76.0  | 23.16 | .035 | .015 | .035 | .004 | .035 |
| 78.0  | 23.77 | .033 | .015 | .033 | .003 | .033 |
| 80.0  | 24.38 | .031 | .015 | .031 | .003 | .031 |
| 82.0  | 24.99 | .029 | .015 | .029 | .003 | .029 |
| 84.0  | 25.60 | .027 | .015 | .027 | .003 | .027 |
| 86.0  | 26.21 | .026 | .015 | .026 | .002 | .026 |
| 88.0  | 26.82 | .024 | .015 | .024 | .002 | .024 |
| 90.0  | 27.43 | .023 | .014 | .023 | .002 | .023 |
| 92.0  | 28.04 | .022 | .014 | .022 | .002 | .022 |
| 94.0  | 28.65 | .021 | .014 | .021 | .002 | .021 |
| 96.0  | 29.26 | .020 | .014 | .020 | .002 | .020 |
| 98.0  | 29.87 | .019 | .014 | .019 | .002 | .019 |
| 100.0 | 30.48 | .018 | .014 | .018 | .001 | .018 |
| 102.0 | 31.09 | .017 | .013 | .017 | .001 | .017 |
| 104.0 | 31.70 | .016 | .013 | .016 | .001 | .016 |
| 106.0 | 32.31 | .016 | .013 | .016 | .001 | .016 |
| 108.0 | 32.92 | .015 | .013 | .015 | .001 | .015 |
| 110.0 | 33.53 | .014 | .013 | .014 | .001 | .014 |
| 112.0 | 34.14 | .014 | .013 | .014 | .001 | .014 |
| 114.0 | 34.75 | .013 | .012 | .013 | .001 | .013 |
| 116.0 | 35.36 | .013 | .012 | .013 | .001 | .013 |
| 118.0 | 35.97 | .012 | .012 | .012 | .001 | .012 |
| 120.0 | 36.58 | .012 | .012 | .012 | .001 | .012 |
| 122.0 | 37.19 | .011 | .012 | .011 | .001 | .011 |
| 124.0 | 37.80 | .011 | .012 | .011 | .001 | .011 |
| 126.0 | 38.40 | .010 | .011 | .010 | .001 | .010 |
| 128.0 | 39.01 | .010 | .011 | .010 | .001 | .010 |
| 130.0 | 39.62 | .010 | .011 | .010 | .001 | .010 |
| 132.0 | 40.23 | .009 | .011 | .009 | .001 | .009 |
| 134.0 | 40.84 | .009 | .011 | .009 | .001 | .009 |
| 136.0 | 41.45 | .009 | .011 | .009 | .000 | .009 |
| 138.0 | 42.06 | .008 | .011 | .008 | .000 | .008 |
| 140.0 | 42.67 | .008 | .010 | .008 | .000 | .008 |
| 142.0 | 43.28 | .008 | .010 | .008 | .000 | .008 |
| 144.0 | 43.89 | .008 | .010 | .008 | .000 | .008 |
| 146.0 | 44.50 | .007 | .010 | .007 | .000 | .007 |
| 148.0 | 45.11 | .007 | .010 | .007 | .000 | .007 |
| 150.0 | 45.72 | .007 | .010 | .007 | .000 | .007 |
| 152.0 | 46.33 | .007 | .010 | .007 | .000 | .007 |
| 154.0 | 46.94 | .006 | .009 | .006 | .000 | .006 |
| 156.0 | 47.55 | .006 | .009 | .006 | .000 | .006 |
| 158.0 | 48.16 | .006 | .009 | .006 | .000 | .006 |
| 160.0 | 48.77 | .006 | .009 | .006 | .000 | .006 |
| 162.0 | 49.38 | .006 | .009 | .006 | .000 | .006 |
| 164.0 | 49.99 | .006 | .009 | .006 | .000 | .006 |
| 166.0 | 50.60 | .005 | .009 | .005 | .000 | .005 |
| 168.0 | 51.21 | .005 | .009 | .005 | .000 | .005 |
| 170.0 | 51.82 | .005 | .008 | .005 | .000 | .005 |
| 172.0 | 52.43 | .005 | .008 | .005 | .000 | .005 |
| 174.0 | 53.04 | .005 | .008 | .005 | .000 | .005 |
| 176.0 | 53.64 | .005 | .008 | .005 | .000 | .005 |
| 178.0 | 54.25 | .005 | .008 | .005 | .000 | .005 |
| 180.0 | 54.86 | .005 | .008 | .005 | .000 | .005 |
| 182.0 | 55.47 | .004 | .008 | .004 | .000 | .004 |
| 184.0 | 56.08 | .004 | .008 | .004 | .000 | .004 |
| 186.0 | 56.69 | .004 | .007 | .004 | .000 | .004 |
| 188.0 | 57.30 | .004 | .007 | .004 | .000 | .004 |
| 190.0 | 57.91 | .004 | .007 | .004 | .000 | .004 |
| 192.0 | 58.52 | .004 | .007 | .004 | .000 | .004 |

| KFALLBI 0 |       |      |      |      |      |      |
|-----------|-------|------|------|------|------|------|
| 194.0     | 59.13 | .004 | .007 | .004 | .000 | .004 |
| 196.0     | 59.74 | .004 | .007 | .004 | .000 | .004 |
| 198.0     | 60.35 | .004 | .007 | .004 | .000 | .004 |
| 200.0     | 60.96 | .004 | .007 | .004 | .000 | .004 |

♀

-----  
AC CURRENTS IN EACH BUNDLE:  
-----

| BNDL # | ----- AC CURRENTS (Amperes) ----- |           |        | BUNDLE POSITION |         |
|--------|-----------------------------------|-----------|--------|-----------------|---------|
|        | REAL                              | IMAGINARY | TOTAL  | X-COORD         | Y-COORD |
| 1      | 350.00                            | .00       | 350.00 | -4.00           | 24.00   |
| 2      | -175.00                           | 303.11    | 350.00 | .00             | 24.00   |
| 3      | -175.00                           | -303.11   | 350.00 | 4.00            | 24.00   |
| 4      | -23.75                            | -40.96    | 47.35  | -2.00           | 26.00   |
| 5      | 33.71                             | 29.40     | 44.73  | 2.00            | 26.00   |

♀

\*\*\*\*\*  
\*  
\* MAGNETIC FIELD PROFILE \*  
\* at 3.28 feet above ground \*  
\*  
\*\*\*\*\*

| <----- AC MAGNETIC FIELD -----> |          |            |                      |                    |                      |                    |
|---------------------------------|----------|------------|----------------------|--------------------|----------------------|--------------------|
| LATERAL DISTANCE                |          | MAJOR AXIS | MINOR/ MAJOR (RATIO) | VERTICAL COMP (mG) | HORIZONTAL COMP (mG) | RMS RESULTANT (mG) |
| (feet)                          | (meters) | (mG)       |                      | (mG)               | (mG)                 | (mG)               |
| -200.0                          | -60.96   | .69        | .051                 | .67                | .15                  | .69                |
| -198.0                          | -60.35   | .69        | .051                 | .68                | .15                  | .70                |
| -196.0                          | -59.74   | .70        | .051                 | .69                | .15                  | .71                |
| -194.0                          | -59.13   | .71        | .051                 | .70                | .16                  | .72                |
| -192.0                          | -58.52   | .72        | .051                 | .71                | .16                  | .73                |
| -190.0                          | -57.91   | .74        | .051                 | .72                | .16                  | .74                |
| -188.0                          | -57.30   | .75        | .051                 | .73                | .17                  | .75                |
| -186.0                          | -56.69   | .76        | .051                 | .74                | .17                  | .76                |
| -184.0                          | -56.08   | .77        | .051                 | .75                | .17                  | .77                |
| -182.0                          | -55.47   | .78        | .051                 | .76                | .18                  | .78                |
| -180.0                          | -54.86   | .79        | .051                 | .77                | .18                  | .79                |
| -178.0                          | -54.25   | .81        | .051                 | .79                | .18                  | .81                |
| -176.0                          | -53.64   | .82        | .051                 | .80                | .19                  | .82                |
| -174.0                          | -53.04   | .83        | .051                 | .81                | .19                  | .83                |
| -172.0                          | -52.43   | .85        | .051                 | .82                | .20                  | .85                |
| -170.0                          | -51.82   | .86        | .051                 | .84                | .20                  | .86                |
| -168.0                          | -51.21   | .87        | .051                 | .85                | .21                  | .88                |
| -166.0                          | -50.60   | .89        | .052                 | .86                | .21                  | .89                |
| -164.0                          | -49.99   | .91        | .052                 | .88                | .22                  | .91                |
| -162.0                          | -49.38   | .92        | .052                 | .89                | .22                  | .92                |
| -160.0                          | -48.77   | .94        | .052                 | .91                | .23                  | .94                |
| -158.0                          | -48.16   | .96        | .052                 | .93                | .24                  | .96                |
| -156.0                          | -47.55   | .97        | .052                 | .94                | .24                  | .97                |
| -154.0                          | -46.94   | .99        | .053                 | .96                | .25                  | .99                |
| -152.0                          | -46.33   | 1.01       | .053                 | .98                | .26                  | 1.01               |
| -150.0                          | -45.72   | 1.03       | .053                 | 1.00               | .26                  | 1.03               |
| -148.0                          | -45.11   | 1.05       | .053                 | 1.02               | .27                  | 1.05               |
| -146.0                          | -44.50   | 1.07       | .054                 | 1.04               | .28                  | 1.07               |
| -144.0                          | -43.89   | 1.09       | .054                 | 1.06               | .29                  | 1.10               |
| -142.0                          | -43.28   | 1.12       | .054                 | 1.08               | .30                  | 1.12               |
| -140.0                          | -42.67   | 1.14       | .054                 | 1.10               | .31                  | 1.14               |
| -138.0                          | -42.06   | 1.17       | .055                 | 1.12               | .32                  | 1.17               |

KFALLBI 0

|        |        |       |      |       |       |       |
|--------|--------|-------|------|-------|-------|-------|
| -136.0 | -41.45 | 1.19  | .055 | 1.15  | .33   | 1.19  |
| -134.0 | -40.84 | 1.22  | .055 | 1.17  | .34   | 1.22  |
| -132.0 | -40.23 | 1.25  | .056 | 1.20  | .35   | 1.25  |
| -130.0 | -39.62 | 1.27  | .056 | 1.22  | .37   | 1.28  |
| -128.0 | -39.01 | 1.31  | .057 | 1.25  | .38   | 1.31  |
| -126.0 | -38.40 | 1.34  | .057 | 1.28  | .39   | 1.34  |
| -124.0 | -37.80 | 1.37  | .057 | 1.31  | .41   | 1.37  |
| -122.0 | -37.19 | 1.40  | .058 | 1.34  | .43   | 1.41  |
| -120.0 | -36.58 | 1.44  | .058 | 1.37  | .44   | 1.44  |
| -118.0 | -35.97 | 1.48  | .059 | 1.41  | .46   | 1.48  |
| -116.0 | -35.36 | 1.52  | .059 | 1.44  | .48   | 1.52  |
| -114.0 | -34.75 | 1.56  | .060 | 1.48  | .50   | 1.56  |
| -112.0 | -34.14 | 1.60  | .060 | 1.52  | .52   | 1.61  |
| -110.0 | -33.53 | 1.65  | .061 | 1.56  | .55   | 1.65  |
| -108.0 | -32.92 | 1.70  | .061 | 1.60  | .57   | 1.70  |
| -106.0 | -32.31 | 1.75  | .062 | 1.64  | .60   | 1.75  |
| -104.0 | -31.70 | 1.80  | .062 | 1.69  | .63   | 1.80  |
| -102.0 | -31.09 | 1.85  | .063 | 1.74  | .66   | 1.86  |
| -100.0 | -30.48 | 1.91  | .064 | 1.79  | .70   | 1.92  |
| -98.0  | -29.87 | 1.98  | .064 | 1.84  | .73   | 1.98  |
| -96.0  | -29.26 | 2.04  | .065 | 1.90  | .77   | 2.05  |
| -94.0  | -28.65 | 2.11  | .065 | 1.95  | .81   | 2.12  |
| -92.0  | -28.04 | 2.18  | .066 | 2.01  | .86   | 2.19  |
| -90.0  | -27.43 | 2.26  | .067 | 2.08  | .91   | 2.27  |
| -88.0  | -26.82 | 2.35  | .067 | 2.15  | .96   | 2.35  |
| -86.0  | -26.21 | 2.43  | .068 | 2.22  | 1.02  | 2.44  |
| -84.0  | -25.60 | 2.53  | .068 | 2.29  | 1.08  | 2.53  |
| -82.0  | -24.99 | 2.63  | .069 | 2.37  | 1.15  | 2.63  |
| -80.0  | -24.38 | 2.73  | .070 | 2.45  | 1.23  | 2.74  |
| -78.0  | -23.77 | 2.85  | .070 | 2.54  | 1.31  | 2.86  |
| -76.0  | -23.16 | 2.97  | .071 | 2.63  | 1.40  | 2.98  |
| -74.0  | -22.56 | 3.10  | .072 | 2.73  | 1.49  | 3.11  |
| -72.0  | -21.95 | 3.24  | .072 | 2.83  | 1.60  | 3.25  |
| -70.0  | -21.34 | 3.39  | .073 | 2.93  | 1.72  | 3.40  |
| -68.0  | -20.73 | 3.56  | .073 | 3.05  | 1.85  | 3.56  |
| -66.0  | -20.12 | 3.73  | .074 | 3.16  | 1.99  | 3.74  |
| -64.0  | -19.51 | 3.92  | .074 | 3.29  | 2.15  | 3.93  |
| -62.0  | -18.90 | 4.13  | .075 | 3.42  | 2.33  | 4.14  |
| -60.0  | -18.29 | 4.35  | .075 | 3.55  | 2.53  | 4.36  |
| -58.0  | -17.68 | 4.59  | .076 | 3.69  | 2.75  | 4.61  |
| -56.0  | -17.07 | 4.86  | .076 | 3.84  | 2.99  | 4.87  |
| -54.0  | -16.46 | 5.15  | .076 | 3.99  | 3.27  | 5.16  |
| -52.0  | -15.85 | 5.46  | .076 | 4.15  | 3.58  | 5.48  |
| -50.0  | -15.24 | 5.81  | .076 | 4.30  | 3.92  | 5.82  |
| -48.0  | -14.63 | 6.19  | .076 | 4.46  | 4.32  | 6.21  |
| -46.0  | -14.02 | 6.61  | .076 | 4.61  | 4.76  | 6.63  |
| -44.0  | -13.41 | 7.07  | .076 | 4.76  | 5.26  | 7.09  |
| -42.0  | -12.80 | 7.58  | .075 | 4.89  | 5.82  | 7.61  |
| -40.0  | -12.19 | 8.15  | .075 | 5.01  | 6.46  | 8.18  |
| -38.0  | -11.58 | 8.78  | .074 | 5.09  | 7.19  | 8.81  |
| -36.0  | -10.97 | 9.49  | .073 | 5.12  | 8.01  | 9.51  |
| -34.0  | -10.36 | 10.27 | .072 | 5.09  | 8.95  | 10.30 |
| -32.0  | -9.75  | 11.14 | .070 | 4.98  | 10.00 | 11.17 |
| -30.0  | -9.14  | 12.12 | .068 | 4.74  | 11.18 | 12.14 |
| -28.0  | -8.53  | 13.20 | .066 | 4.34  | 12.50 | 13.23 |
| -26.0  | -7.92  | 14.41 | .063 | 3.74  | 13.95 | 14.44 |
| -24.0  | -7.32  | 15.75 | .060 | 2.87  | 15.52 | 15.78 |
| -22.0  | -6.71  | 17.23 | .057 | 1.74  | 17.17 | 17.26 |
| -20.0  | -6.10  | 18.85 | .053 | 1.03  | 18.85 | 18.88 |
| -18.0  | -5.49  | 20.61 | .048 | 2.71  | 20.45 | 20.63 |
| -16.0  | -4.88  | 22.48 | .043 | 5.46  | 21.83 | 22.50 |
| -14.0  | -4.27  | 24.43 | .037 | 8.90  | 22.77 | 24.45 |
| -12.0  | -3.66  | 26.41 | .031 | 12.95 | 23.03 | 26.42 |
| -10.0  | -3.05  | 28.33 | .026 | 17.45 | 22.33 | 28.34 |
| -8.0   | -2.44  | 30.10 | .020 | 22.12 | 20.43 | 30.11 |
| -6.0   | -1.83  | 31.62 | .015 | 26.54 | 17.18 | 31.62 |

KFALLBI 0

|       |       |       |      |       |       |       |
|-------|-------|-------|------|-------|-------|-------|
| -4.0  | -1.22 | 32.76 | .011 | 30.23 | 12.64 | 32.76 |
| -2.0  | -.61  | 33.45 | .009 | 32.70 | 7.05  | 33.45 |
| .0    | .00   | 33.61 | .009 | 33.60 | .92   | 33.61 |
| 2.0   | .61   | 33.23 | .011 | 32.80 | 5.34  | 33.23 |
| 4.0   | 1.22  | 32.34 | .015 | 30.44 | 10.94 | 32.35 |
| 6.0   | 1.83  | 31.01 | .021 | 26.86 | 15.52 | 31.02 |
| 8.0   | 2.44  | 29.34 | .028 | 22.54 | 18.80 | 29.35 |
| 10.0  | 3.05  | 27.44 | .035 | 17.98 | 20.76 | 27.46 |
| 12.0  | 3.66  | 25.42 | .043 | 13.57 | 21.53 | 25.45 |
| 14.0  | 4.27  | 23.38 | .050 | 9.60  | 21.35 | 23.41 |
| 16.0  | 4.88  | 21.39 | .057 | 6.23  | 20.49 | 21.42 |
| 18.0  | 5.49  | 19.49 | .064 | 3.54  | 19.21 | 19.53 |
| 20.0  | 6.10  | 17.73 | .070 | 1.66  | 17.69 | 17.77 |
| 22.0  | 6.71  | 16.11 | .075 | 1.35  | 16.10 | 16.16 |
| 24.0  | 7.32  | 14.64 | .080 | 2.20  | 14.53 | 14.69 |
| 26.0  | 7.92  | 13.32 | .084 | 2.99  | 13.03 | 13.37 |
| 28.0  | 8.53  | 12.14 | .088 | 3.57  | 11.65 | 12.19 |
| 30.0  | 9.14  | 11.08 | .091 | 3.96  | 10.40 | 11.13 |
| 32.0  | 9.75  | 10.14 | .094 | 4.20  | 9.27  | 10.18 |
| 34.0  | 10.36 | 9.29  | .097 | 4.33  | 8.27  | 9.34  |
| 36.0  | 10.97 | 8.54  | .099 | 4.37  | 7.39  | 8.58  |
| 38.0  | 11.58 | 7.87  | .100 | 4.35  | 6.61  | 7.91  |
| 40.0  | 12.19 | 7.27  | .102 | 4.28  | 5.92  | 7.31  |
| 42.0  | 12.80 | 6.73  | .103 | 4.19  | 5.31  | 6.76  |
| 44.0  | 13.41 | 6.25  | .104 | 4.07  | 4.78  | 6.28  |
| 46.0  | 14.02 | 5.81  | .104 | 3.94  | 4.31  | 5.84  |
| 48.0  | 14.63 | 5.42  | .105 | 3.81  | 3.89  | 5.45  |
| 50.0  | 15.24 | 5.06  | .105 | 3.67  | 3.53  | 5.09  |
| 52.0  | 15.85 | 4.74  | .105 | 3.53  | 3.20  | 4.76  |
| 54.0  | 16.46 | 4.45  | .105 | 3.39  | 2.91  | 4.47  |
| 56.0  | 17.07 | 4.18  | .104 | 3.26  | 2.65  | 4.20  |
| 58.0  | 17.68 | 3.94  | .104 | 3.13  | 2.43  | 3.96  |
| 60.0  | 18.29 | 3.72  | .103 | 3.00  | 2.22  | 3.74  |
| 62.0  | 18.90 | 3.51  | .103 | 2.88  | 2.04  | 3.53  |
| 64.0  | 19.51 | 3.33  | .102 | 2.77  | 1.87  | 3.34  |
| 66.0  | 20.12 | 3.15  | .101 | 2.66  | 1.73  | 3.17  |
| 68.0  | 20.73 | 3.00  | .100 | 2.56  | 1.59  | 3.01  |
| 70.0  | 21.34 | 2.85  | .099 | 2.46  | 1.47  | 2.86  |
| 72.0  | 21.95 | 2.71  | .098 | 2.36  | 1.36  | 2.73  |
| 74.0  | 22.56 | 2.59  | .097 | 2.27  | 1.26  | 2.60  |
| 76.0  | 23.16 | 2.47  | .095 | 2.19  | 1.17  | 2.48  |
| 78.0  | 23.77 | 2.37  | .094 | 2.11  | 1.09  | 2.38  |
| 80.0  | 24.38 | 2.27  | .092 | 2.03  | 1.02  | 2.27  |
| 82.0  | 24.99 | 2.17  | .091 | 1.96  | .95   | 2.18  |
| 84.0  | 25.60 | 2.08  | .089 | 1.89  | .89   | 2.09  |
| 86.0  | 26.21 | 2.00  | .088 | 1.83  | .83   | 2.01  |
| 88.0  | 26.82 | 1.93  | .086 | 1.77  | .78   | 1.93  |
| 90.0  | 27.43 | 1.85  | .084 | 1.71  | .73   | 1.86  |
| 92.0  | 28.04 | 1.79  | .083 | 1.66  | .69   | 1.79  |
| 94.0  | 28.65 | 1.72  | .081 | 1.60  | .65   | 1.73  |
| 96.0  | 29.26 | 1.66  | .079 | 1.56  | .61   | 1.67  |
| 98.0  | 29.87 | 1.61  | .077 | 1.51  | .57   | 1.61  |
| 100.0 | 30.48 | 1.56  | .075 | 1.46  | .54   | 1.56  |
| 102.0 | 31.09 | 1.51  | .073 | 1.42  | .51   | 1.51  |
| 104.0 | 31.70 | 1.46  | .071 | 1.38  | .48   | 1.46  |
| 106.0 | 32.31 | 1.41  | .069 | 1.34  | .46   | 1.42  |
| 108.0 | 32.92 | 1.37  | .067 | 1.30  | .43   | 1.37  |
| 110.0 | 33.53 | 1.33  | .065 | 1.27  | .41   | 1.33  |
| 112.0 | 34.14 | 1.29  | .063 | 1.24  | .39   | 1.30  |
| 114.0 | 34.75 | 1.26  | .061 | 1.20  | .37   | 1.26  |
| 116.0 | 35.36 | 1.22  | .059 | 1.17  | .35   | 1.23  |
| 118.0 | 35.97 | 1.19  | .057 | 1.14  | .33   | 1.19  |
| 120.0 | 36.58 | 1.16  | .055 | 1.12  | .32   | 1.16  |
| 122.0 | 37.19 | 1.13  | .052 | 1.09  | .30   | 1.13  |
| 124.0 | 37.80 | 1.10  | .050 | 1.06  | .29   | 1.10  |
| 126.0 | 38.40 | 1.07  | .048 | 1.04  | .28   | 1.08  |

KFALLBI 0

|       |       |      |      |      |     |      |
|-------|-------|------|------|------|-----|------|
| 128.0 | 39.01 | 1.05 | .046 | 1.02 | .26 | 1.05 |
| 130.0 | 39.62 | 1.02 | .044 | .99  | .25 | 1.03 |
| 132.0 | 40.23 | 1.00 | .042 | .97  | .24 | 1.00 |
| 134.0 | 40.84 | .98  | .040 | .95  | .23 | .98  |
| 136.0 | 41.45 | .96  | .038 | .93  | .22 | .96  |
| 138.0 | 42.06 | .94  | .036 | .91  | .21 | .94  |
| 140.0 | 42.67 | .92  | .033 | .89  | .20 | .92  |
| 142.0 | 43.28 | .90  | .031 | .88  | .20 | .90  |
| 144.0 | 43.89 | .88  | .029 | .86  | .19 | .88  |
| 146.0 | 44.50 | .86  | .027 | .84  | .18 | .86  |
| 148.0 | 45.11 | .84  | .025 | .83  | .17 | .84  |
| 150.0 | 45.72 | .83  | .023 | .81  | .17 | .83  |
| 152.0 | 46.33 | .81  | .021 | .80  | .16 | .81  |
| 154.0 | 46.94 | .80  | .019 | .78  | .16 | .80  |
| 156.0 | 47.55 | .78  | .017 | .77  | .15 | .78  |
| 158.0 | 48.16 | .77  | .015 | .75  | .15 | .77  |
| 160.0 | 48.77 | .75  | .013 | .74  | .14 | .75  |
| 162.0 | 49.38 | .74  | .011 | .73  | .14 | .74  |
| 164.0 | 49.99 | .73  | .009 | .72  | .13 | .73  |
| 166.0 | 50.60 | .72  | .007 | .71  | .13 | .72  |
| 168.0 | 51.21 | .70  | .005 | .69  | .12 | .70  |
| 170.0 | 51.82 | .69  | .003 | .68  | .12 | .69  |
| 172.0 | 52.43 | .68  | .001 | .67  | .12 | .68  |
| 174.0 | 53.04 | .67  | .001 | .66  | .11 | .67  |
| 176.0 | 53.64 | .66  | .003 | .65  | .11 | .66  |
| 178.0 | 54.25 | .65  | .005 | .64  | .11 | .65  |
| 180.0 | 54.86 | .64  | .006 | .63  | .10 | .64  |
| 182.0 | 55.47 | .63  | .008 | .62  | .10 | .63  |
| 184.0 | 56.08 | .62  | .010 | .61  | .10 | .62  |
| 186.0 | 56.69 | .61  | .012 | .61  | .10 | .61  |
| 188.0 | 57.30 | .61  | .014 | .60  | .09 | .61  |
| 190.0 | 57.91 | .60  | .015 | .59  | .09 | .60  |
| 192.0 | 58.52 | .59  | .017 | .58  | .09 | .59  |
| 194.0 | 59.13 | .58  | .019 | .57  | .09 | .58  |
| 196.0 | 59.74 | .57  | .021 | .57  | .09 | .57  |
| 198.0 | 60.35 | .57  | .022 | .56  | .08 | .57  |
| 200.0 | 60.96 | .56  | .024 | .55  | .08 | .56  |

```

*****
*
*          AUDI BLE NOI SE
*    GENERATED ACOUSTI C POWER
*          (dB above 1uW/m)
*
*****

```

| BNDL # | Type         | Summer Fai r | L5<br>RAIN | L50<br>RAIN |
|--------|--------------|--------------|------------|-------------|
| 1      | AC           | *****        | -96.09     | *****       |
| 2      | AC           | *****        | -87.85     | *****       |
| 3      | AC           | *****        | -96.09     | *****       |
| 4      | Ground Wi re | *****        | *****      | *****       |
| 5      | Ground Wi re | *****        | *****      | *****       |

♀

```

*****
*
*          AUDI BLE NOI SE
*
* Mi crophone is 5.00 feet above ground
*          Al ti tude 4000. ft
*
*****

```

<----- HVTRC CALCULATI ON METHOD ----->

| LATERAL DISTANCE |          | KFALLBI 0        |                 |                  |                 |             |
|------------------|----------|------------------|-----------------|------------------|-----------------|-------------|
| (feet)           | (meters) | L50 FAIR (dB(A)) | L5 RAIN (dB(A)) | L50 RAIN (dB(A)) | Leq(24) (dB(A)) | Ldn (dB(A)) |
| -200.0           | -60.96   | .0               | 8.5             | .0               | .0              | .0          |
| -198.0           | -60.35   | .0               | 8.6             | .0               | .0              | .0          |
| -196.0           | -59.74   | .0               | 8.6             | .0               | .0              | .0          |
| -194.0           | -59.13   | .0               | 8.7             | .0               | .0              | .0          |
| -192.0           | -58.52   | .0               | 8.7             | .0               | .0              | .0          |
| -190.0           | -57.91   | .0               | 8.8             | .0               | .0              | .0          |
| -188.0           | -57.30   | .0               | 8.8             | .0               | .0              | .0          |
| -186.0           | -56.69   | .0               | 8.9             | .0               | .0              | .0          |
| -184.0           | -56.08   | .0               | 9.0             | .0               | .0              | .0          |
| -182.0           | -55.47   | .0               | 9.0             | .0               | .0              | .0          |
| -180.0           | -54.86   | .0               | 9.1             | .0               | .0              | .0          |
| -178.0           | -54.25   | .0               | 9.1             | .0               | .0              | .0          |
| -176.0           | -53.64   | .0               | 9.2             | .0               | .0              | .0          |
| -174.0           | -53.04   | .0               | 9.3             | .0               | .0              | .0          |
| -172.0           | -52.43   | .0               | 9.3             | .0               | .0              | .0          |
| -170.0           | -51.82   | .0               | 9.4             | .0               | .0              | .0          |
| -168.0           | -51.21   | .0               | 9.4             | .0               | .0              | .0          |
| -166.0           | -50.60   | .0               | 9.5             | .0               | .0              | .0          |
| -164.0           | -49.99   | .0               | 9.6             | .0               | .0              | .0          |
| -162.0           | -49.38   | .0               | 9.6             | .0               | .0              | .0          |
| -160.0           | -48.77   | .0               | 9.7             | .0               | .0              | .0          |
| -158.0           | -48.16   | .0               | 9.8             | .0               | .0              | .0          |
| -156.0           | -47.55   | .0               | 9.8             | .0               | .0              | .0          |
| -154.0           | -46.94   | .0               | 9.9             | .0               | .0              | .0          |
| -152.0           | -46.33   | .0               | 10.0            | .0               | .0              | .0          |
| -150.0           | -45.72   | .0               | 10.0            | .0               | .0              | .0          |
| -148.0           | -45.11   | .0               | 10.1            | .0               | .0              | .0          |
| -146.0           | -44.50   | .0               | 10.2            | .0               | .0              | .0          |
| -144.0           | -43.89   | .0               | 10.2            | .0               | .0              | .0          |
| -142.0           | -43.28   | .0               | 10.3            | .0               | .0              | .0          |
| -140.0           | -42.67   | .0               | 10.4            | .0               | .0              | .0          |
| -138.0           | -42.06   | .0               | 10.5            | .0               | .0              | .0          |
| -136.0           | -41.45   | .0               | 10.5            | .0               | .0              | .0          |
| -134.0           | -40.84   | .0               | 10.6            | .0               | .0              | .0          |
| -132.0           | -40.23   | .0               | 10.7            | .0               | .0              | .0          |
| -130.0           | -39.62   | .0               | 10.8            | .0               | .0              | .0          |
| -128.0           | -39.01   | .0               | 10.8            | .0               | .0              | .0          |
| -126.0           | -38.40   | .0               | 10.9            | .0               | .0              | .0          |
| -124.0           | -37.80   | .0               | 11.0            | .0               | .0              | .0          |
| -122.0           | -37.19   | .0               | 11.1            | .0               | .0              | .0          |
| -120.0           | -36.58   | .0               | 11.2            | .0               | .0              | .0          |
| -118.0           | -35.97   | .0               | 11.3            | .0               | .0              | .0          |
| -116.0           | -35.36   | .0               | 11.3            | .0               | .0              | .0          |
| -114.0           | -34.75   | .0               | 11.4            | .0               | .0              | .0          |
| -112.0           | -34.14   | .0               | 11.5            | .0               | .0              | .0          |
| -110.0           | -33.53   | .0               | 11.6            | .0               | .0              | .0          |
| -108.0           | -32.92   | .0               | 11.7            | .0               | .0              | .0          |
| -106.0           | -32.31   | .0               | 11.8            | .0               | .0              | .0          |
| -104.0           | -31.70   | .0               | 11.9            | .0               | .0              | .0          |
| -102.0           | -31.09   | .0               | 12.0            | .0               | .0              | .0          |
| -100.0           | -30.48   | .0               | 12.1            | .0               | .0              | .0          |
| -98.0            | -29.87   | .0               | 12.2            | .0               | .0              | .0          |
| -96.0            | -29.26   | .0               | 12.3            | .0               | .0              | .0          |
| -94.0            | -28.65   | .0               | 12.4            | .0               | .0              | .0          |
| -92.0            | -28.04   | .0               | 12.5            | .0               | .0              | .0          |
| -90.0            | -27.43   | .0               | 12.6            | .0               | .0              | .0          |
| -88.0            | -26.82   | .0               | 12.7            | .0               | .0              | .0          |
| -86.0            | -26.21   | .0               | 12.8            | .0               | .0              | .0          |
| -84.0            | -25.60   | .0               | 12.9            | .0               | .0              | .0          |
| -82.0            | -24.99   | .0               | 13.0            | .0               | .0              | .0          |
| -80.0            | -24.38   | .0               | 13.1            | .0               | .0              | .0          |
| -78.0            | -23.77   | .0               | 13.2            | .0               | .0              | .0          |

KFALLBI 0

|       |        |    |      |    |    |    |
|-------|--------|----|------|----|----|----|
| -76.0 | -23.16 | .0 | 13.3 | .0 | .0 | .0 |
| -74.0 | -22.56 | .0 | 13.5 | .0 | .0 | .0 |
| -72.0 | -21.95 | .0 | 13.6 | .0 | .0 | .0 |
| -70.0 | -21.34 | .0 | 13.7 | .0 | .0 | .0 |
| -68.0 | -20.73 | .0 | 13.8 | .0 | .0 | .0 |
| -66.0 | -20.12 | .0 | 14.0 | .0 | .0 | .0 |
| -64.0 | -19.51 | .0 | 14.1 | .0 | .0 | .0 |
| -62.0 | -18.90 | .0 | 14.2 | .0 | .0 | .0 |
| -60.0 | -18.29 | .0 | 14.4 | .0 | .0 | .0 |
| -58.0 | -17.68 | .0 | 14.5 | .0 | .0 | .0 |
| -56.0 | -17.07 | .0 | 14.7 | .0 | .0 | .0 |
| -54.0 | -16.46 | .0 | 14.8 | .0 | .0 | .0 |
| -52.0 | -15.85 | .0 | 15.0 | .0 | .0 | .0 |
| -50.0 | -15.24 | .0 | 15.1 | .0 | .0 | .0 |
| -48.0 | -14.63 | .0 | 15.3 | .0 | .0 | .0 |
| -46.0 | -14.02 | .0 | 15.5 | .0 | .0 | .0 |
| -44.0 | -13.41 | .0 | 15.7 | .0 | .0 | .0 |
| -42.0 | -12.80 | .0 | 15.8 | .0 | .0 | .0 |
| -40.0 | -12.19 | .0 | 16.0 | .0 | .0 | .0 |
| -38.0 | -11.58 | .0 | 16.2 | .0 | .0 | .0 |
| -36.0 | -10.97 | .0 | 16.4 | .0 | .0 | .0 |
| -34.0 | -10.36 | .0 | 16.6 | .0 | .0 | .0 |
| -32.0 | -9.75  | .0 | 16.8 | .0 | .0 | .0 |
| -30.0 | -9.14  | .0 | 17.0 | .0 | .0 | .0 |
| -28.0 | -8.53  | .0 | 17.3 | .0 | .0 | .0 |
| -26.0 | -7.92  | .0 | 17.5 | .0 | .0 | .0 |
| -24.0 | -7.32  | .0 | 17.7 | .0 | .0 | .0 |
| -22.0 | -6.71  | .0 | 17.9 | .0 | .0 | .0 |
| -20.0 | -6.10  | .0 | 18.2 | .0 | .0 | .0 |
| -18.0 | -5.49  | .0 | 18.4 | .0 | .0 | .0 |
| -16.0 | -4.88  | .0 | 18.7 | .0 | .0 | .0 |
| -14.0 | -4.27  | .0 | 18.9 | .0 | .0 | .0 |
| -12.0 | -3.66  | .0 | 19.1 | .0 | .0 | .0 |
| -10.0 | -3.05  | .0 | 19.3 | .0 | .0 | .0 |
| -8.0  | -2.44  | .0 | 19.5 | .0 | .0 | .0 |
| -6.0  | -1.83  | .0 | 19.6 | .0 | .0 | .0 |
| -4.0  | -1.22  | .0 | 19.7 | .0 | .0 | .0 |
| -2.0  | -.61   | .0 | 19.8 | .0 | .0 | .0 |
| .0    | .00    | .0 | 19.8 | .0 | .0 | .0 |
| 2.0   | .61    | .0 | 19.8 | .0 | .0 | .0 |
| 4.0   | 1.22   | .0 | 19.7 | .0 | .0 | .0 |
| 6.0   | 1.83   | .0 | 19.6 | .0 | .0 | .0 |
| 8.0   | 2.44   | .0 | 19.5 | .0 | .0 | .0 |
| 10.0  | 3.05   | .0 | 19.3 | .0 | .0 | .0 |
| 12.0  | 3.66   | .0 | 19.1 | .0 | .0 | .0 |
| 14.0  | 4.27   | .0 | 18.9 | .0 | .0 | .0 |
| 16.0  | 4.88   | .0 | 18.7 | .0 | .0 | .0 |
| 18.0  | 5.49   | .0 | 18.4 | .0 | .0 | .0 |
| 20.0  | 6.10   | .0 | 18.2 | .0 | .0 | .0 |
| 22.0  | 6.71   | .0 | 17.9 | .0 | .0 | .0 |
| 24.0  | 7.32   | .0 | 17.7 | .0 | .0 | .0 |
| 26.0  | 7.92   | .0 | 17.5 | .0 | .0 | .0 |
| 28.0  | 8.53   | .0 | 17.3 | .0 | .0 | .0 |
| 30.0  | 9.14   | .0 | 17.0 | .0 | .0 | .0 |
| 32.0  | 9.75   | .0 | 16.8 | .0 | .0 | .0 |
| 34.0  | 10.36  | .0 | 16.6 | .0 | .0 | .0 |
| 36.0  | 10.97  | .0 | 16.4 | .0 | .0 | .0 |
| 38.0  | 11.58  | .0 | 16.2 | .0 | .0 | .0 |
| 40.0  | 12.19  | .0 | 16.0 | .0 | .0 | .0 |
| 42.0  | 12.80  | .0 | 15.8 | .0 | .0 | .0 |
| 44.0  | 13.41  | .0 | 15.7 | .0 | .0 | .0 |
| 46.0  | 14.02  | .0 | 15.5 | .0 | .0 | .0 |
| 48.0  | 14.63  | .0 | 15.3 | .0 | .0 | .0 |
| 50.0  | 15.24  | .0 | 15.1 | .0 | .0 | .0 |
| 52.0  | 15.85  | .0 | 15.0 | .0 | .0 | .0 |
| 54.0  | 16.46  | .0 | 14.8 | .0 | .0 | .0 |

KFALLBI 0

|       |       |    |      |    |    |    |
|-------|-------|----|------|----|----|----|
| 56.0  | 17.07 | .0 | 14.7 | .0 | .0 | .0 |
| 58.0  | 17.68 | .0 | 14.5 | .0 | .0 | .0 |
| 60.0  | 18.29 | .0 | 14.4 | .0 | .0 | .0 |
| 62.0  | 18.90 | .0 | 14.2 | .0 | .0 | .0 |
| 64.0  | 19.51 | .0 | 14.1 | .0 | .0 | .0 |
| 66.0  | 20.12 | .0 | 14.0 | .0 | .0 | .0 |
| 68.0  | 20.73 | .0 | 13.8 | .0 | .0 | .0 |
| 70.0  | 21.34 | .0 | 13.7 | .0 | .0 | .0 |
| 72.0  | 21.95 | .0 | 13.6 | .0 | .0 | .0 |
| 74.0  | 22.56 | .0 | 13.5 | .0 | .0 | .0 |
| 76.0  | 23.16 | .0 | 13.3 | .0 | .0 | .0 |
| 78.0  | 23.77 | .0 | 13.2 | .0 | .0 | .0 |
| 80.0  | 24.38 | .0 | 13.1 | .0 | .0 | .0 |
| 82.0  | 24.99 | .0 | 13.0 | .0 | .0 | .0 |
| 84.0  | 25.60 | .0 | 12.9 | .0 | .0 | .0 |
| 86.0  | 26.21 | .0 | 12.8 | .0 | .0 | .0 |
| 88.0  | 26.82 | .0 | 12.7 | .0 | .0 | .0 |
| 90.0  | 27.43 | .0 | 12.6 | .0 | .0 | .0 |
| 92.0  | 28.04 | .0 | 12.5 | .0 | .0 | .0 |
| 94.0  | 28.65 | .0 | 12.4 | .0 | .0 | .0 |
| 96.0  | 29.26 | .0 | 12.3 | .0 | .0 | .0 |
| 98.0  | 29.87 | .0 | 12.2 | .0 | .0 | .0 |
| 100.0 | 30.48 | .0 | 12.1 | .0 | .0 | .0 |
| 102.0 | 31.09 | .0 | 12.0 | .0 | .0 | .0 |
| 104.0 | 31.70 | .0 | 11.9 | .0 | .0 | .0 |
| 106.0 | 32.31 | .0 | 11.8 | .0 | .0 | .0 |
| 108.0 | 32.92 | .0 | 11.7 | .0 | .0 | .0 |
| 110.0 | 33.53 | .0 | 11.6 | .0 | .0 | .0 |
| 112.0 | 34.14 | .0 | 11.5 | .0 | .0 | .0 |
| 114.0 | 34.75 | .0 | 11.4 | .0 | .0 | .0 |
| 116.0 | 35.36 | .0 | 11.3 | .0 | .0 | .0 |
| 118.0 | 35.97 | .0 | 11.3 | .0 | .0 | .0 |
| 120.0 | 36.58 | .0 | 11.2 | .0 | .0 | .0 |
| 122.0 | 37.19 | .0 | 11.1 | .0 | .0 | .0 |
| 124.0 | 37.80 | .0 | 11.0 | .0 | .0 | .0 |
| 126.0 | 38.40 | .0 | 10.9 | .0 | .0 | .0 |
| 128.0 | 39.01 | .0 | 10.8 | .0 | .0 | .0 |
| 130.0 | 39.62 | .0 | 10.8 | .0 | .0 | .0 |
| 132.0 | 40.23 | .0 | 10.7 | .0 | .0 | .0 |
| 134.0 | 40.84 | .0 | 10.6 | .0 | .0 | .0 |
| 136.0 | 41.45 | .0 | 10.5 | .0 | .0 | .0 |
| 138.0 | 42.06 | .0 | 10.5 | .0 | .0 | .0 |
| 140.0 | 42.67 | .0 | 10.4 | .0 | .0 | .0 |
| 142.0 | 43.28 | .0 | 10.3 | .0 | .0 | .0 |
| 144.0 | 43.89 | .0 | 10.2 | .0 | .0 | .0 |
| 146.0 | 44.50 | .0 | 10.2 | .0 | .0 | .0 |
| 148.0 | 45.11 | .0 | 10.1 | .0 | .0 | .0 |
| 150.0 | 45.72 | .0 | 10.0 | .0 | .0 | .0 |
| 152.0 | 46.33 | .0 | 10.0 | .0 | .0 | .0 |
| 154.0 | 46.94 | .0 | 9.9  | .0 | .0 | .0 |
| 156.0 | 47.55 | .0 | 9.8  | .0 | .0 | .0 |
| 158.0 | 48.16 | .0 | 9.8  | .0 | .0 | .0 |
| 160.0 | 48.77 | .0 | 9.7  | .0 | .0 | .0 |
| 162.0 | 49.38 | .0 | 9.6  | .0 | .0 | .0 |
| 164.0 | 49.99 | .0 | 9.6  | .0 | .0 | .0 |
| 166.0 | 50.60 | .0 | 9.5  | .0 | .0 | .0 |
| 168.0 | 51.21 | .0 | 9.4  | .0 | .0 | .0 |
| 170.0 | 51.82 | .0 | 9.4  | .0 | .0 | .0 |
| 172.0 | 52.43 | .0 | 9.3  | .0 | .0 | .0 |
| 174.0 | 53.04 | .0 | 9.3  | .0 | .0 | .0 |
| 176.0 | 53.64 | .0 | 9.2  | .0 | .0 | .0 |
| 178.0 | 54.25 | .0 | 9.1  | .0 | .0 | .0 |
| 180.0 | 54.86 | .0 | 9.1  | .0 | .0 | .0 |
| 182.0 | 55.47 | .0 | 9.0  | .0 | .0 | .0 |
| 184.0 | 56.08 | .0 | 9.0  | .0 | .0 | .0 |
| 186.0 | 56.69 | .0 | 8.9  | .0 | .0 | .0 |

| KFALLBI 0 |       |    |     |    |    |    |
|-----------|-------|----|-----|----|----|----|
| 188.0     | 57.30 | .0 | 8.8 | .0 | .0 | .0 |
| 190.0     | 57.91 | .0 | 8.8 | .0 | .0 | .0 |
| 192.0     | 58.52 | .0 | 8.7 | .0 | .0 | .0 |
| 194.0     | 59.13 | .0 | 8.7 | .0 | .0 | .0 |
| 196.0     | 59.74 | .0 | 8.6 | .0 | .0 | .0 |
| 198.0     | 60.35 | .0 | 8.6 | .0 | .0 | .0 |
| 200.0     | 60.96 | .0 | 8.5 | .0 | .0 | .0 |

**EXHIBIT BB**  
**OTHER INFORMATION**  
OAR 345-021-0010(1)(bb)

**TABLE OF CONTENTS**

|  | <b>Page</b> |
|--|-------------|
| BB.1 INTRODUCTION .....  | BB-1        |
| BB.2 INFORMATION REQUESTED IN PROJECT ORDER.....   | BB-1        |
| <b>TABLE</b>   |             |
| BB-1 Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility ..... | BB-3        |

**ATTACHMENT**

BB-1 Evidence of Consultation with Tribes



**EXHIBIT BB****OTHER INFORMATION**

OAR 345-021-0010(1)(bb)

**BB.1 INTRODUCTION**

Klamath Falls Bioenergy, LLC (Applicant) proposes to construct the Klamath Falls Bioenergy Facility (Facility) near the City of Klamath Falls, Oregon (City). The proposed Facility will produce a total of 42 megawatts (MW), of which 37 MW will be exported to the electric grid. The site is zoned for heavy industrial land use and currently is used as pastureland.

**BB.2 INFORMATION REQUESTED IN PROJECT ORDER**

**OAR 345-021-0010(1)(bb)** *Any other information that the Department requests in the project order or in a notification regarding expedited review;*

**Response:** The Project Order was issued by the Oregon Department of Energy (ODOE) on July 22, 2010. It establishes the following:

- 1) *State statutes and rules that must be met for the Council to issue a Site Certificate for the Facility, including:*
  - a. *OAR Chapter 345, Divisions 21, 22, 24, 26, and 27;*
  - b. *Oregon Department of Agriculture rules regarding threatened and endangered species;*
  - c. *Air Quality regulations managed by the Oregon Department of Environmental Quality;*
  - d. *Water Quality regulations managed by the Oregon Department of Environmental Quality;*
  - e. *Land Quality (Hazardous Waste) regulations managed by the Oregon Department of Environmental Quality;*
  - f. *Noise Control regulations managed by the Oregon Department of Environmental Quality;*
  - g. *Oregon Department of Fish and Wildlife regulations regarding wildlife and fish management and protection;*
  - h. *Oregon Department of Geology and Mineral Industries rules regarding geology and soils;*

- i. *Oregon Parks and Recreation Department statutes and rules regarding cultural and archaeological sites, and recreation*
- j. *Oregon Department of State Lands statute and rule regarding removal and fill of material within Waters of Oregon;*
- k. *Oregon Water Resources Department statute and rule regarding water rights;*
- l. *Federal and state permit requirements relative to discharge of dredged or fill material in Oregon waters.*

**Response:** The Applicant will comply with these requirements, as demonstrated by the information provided in the various Exhibits to this Application for Site Certificate.

- 2) *Requirement for evidence of consultation with affected tribes;*

**Response:** Refer to Attachment BB-1, a set of letters to the affected Tribes requesting consultation. These letters were sent by certified mail. The Applicant followed the letters with phone calls to the Tribes. No responses have been received to either the letters or the voice messages.

- 3) *Applicable Local Government Ordinances*

*Applicable substantive criteria from the Klamath County code and comprehensive plan;*

**Response:** Refer to comprehensive discussion and responses to these criteria in Exhibit K.

- 4) *Applicable requirements from OAR Chapter 345, Division 21:*

- a. *All exhibits apply except N and Y.*

**Response:** Refer to the Exhibits of the Application for Site Certificate.

- 5) *Analysis areas for the Proposed Facility.*

**Response:** The Project Order summarized comments from the public. Responses to these summary comments are provided in Table BB-1 below as well as in other Exhibits contained in this Application. Comments from agency reviewers, which were provided separately to the Applicant, have been reviewed and addressed in the applicable Exhibits.

The Project Order also determined that the Notice of Intent for this Facility will expire on April 5, 2012. This Application for Site Certificate is submitted in advance of the expiration date.

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment   | Response   |
|---|--|
| <b>Comments Related to Impacts to Agricultural Lands</b>  |  |
| <p>There will be negative impacts to nearby agricultural lands.</p>   | <p>Facility construction will directly impact lands zoned heavy industrial. The lands abutting the site are also zoned heavy industrial. The site and abutting lands are currently used for pasture and this use of the site will end. The Facility does not impact any lands zoned for agricultural use; there are no impacts to nearby agricultural lands.</p> <p>Detailed public comments specifically express concerns about ensuring that the land can be converted back to agricultural use when biomass fuel is no longer available. In compliance with Oregon law, the Applicant will be required to post a bond or letter of credit in an amount sufficient to restore the Facility “to a useful, nonhazardous condition,” as described in Exhibit W of this Application. The Applicant’s cost estimate for Facility restoration includes the cost of removal of Facility components to a “useful, nonhazardous condition.” Exhibit W provides additional detail about site restoration.</p>                  |
| <p>The water usage of the facility will negatively impact availability of water to farmers in the Klamath Basin.</p>                          | <p>The Facility’s water use, 648 acre-feet per year, is roughly comparable to irrigated crop use on the same amount of property; typical agricultural use in the Klamath Basin of about 450 to 500 acre-feet for a 100-acre field. Water for the Facility will be purchased from Collins Timber Company and the City of Klamath Falls, both of whom have existing water rights that are sized for this amount of withdrawal from their respective deep wells. These wells are subject to regulation by the State of Oregon. Verification (well testing) of the pumping rate of the Collins Well 6 and the impacts of this higher pumping rate on nearby wells, including Lawanda Hills wells, is being done. As soon as the results are known, they will be provided.</p> <p>No water is being withdrawn from the Klamath River. No water is being discharged to the Klamath River. Farmers in the Klamath Basin will not be negatively impacted.</p> <p>Please see additional information on water use Exhibit O.</p> |
| <b>1. Comments Related to Environmental and Cultural Impacts</b>  |  |
| <p>There will be negative impacts to air quality, from the proposed facility as well as increased diesel truck traffic (PM<sub>2.5</sub>)</p> | <p>The Facility will comply with all applicable federal, state, and local air quality standards. These stringent standards have been developed to ensure that air quality is maintained at a high standard for all users, while allowing beneficial economic development in the community. The Facility is being designed and equipment selected to meet or exceed (better than) the expected PM<sub>2.5</sub> rule requirements.</p> <p>Facility air permits do not address the emissions from the fuel delivery trucks. This truck traffic does not represent an extraordinary increase in truck traffic on Highway 66 or in the Klamath Falls Basin. Refer to the traffic analysis done in support of Exhibit U for a discussion of relative traffic levels on Highway 66. Over time, truck traffic on Highway 66, as well as other regional roads, can be expected to increase whether the Facility is constructed or not.</p>   |
| <p>The facility will emit toxic chemicals</p>   | <p>The Facility’s emissions must meet all federal, state and local requirements. All Facility emissions will be below the standards set by federal and state regulatory authorities.</p>   |
| <p>There will be air pollution from ash and sawdust.</p>  | <p>As stated above, the Facility’s emissions must meet all federal, state and local requirements with regard to emissions. All Facility emissions will be below the standards set by federal and state regulatory authorities.</p>   |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment  | Response  |
|--|---|
|  | <p>As discussed in Exhibit B, General Information About the Proposed Facility, the Facility is being equipped with a pulse jet fabric filter to limit emissions to less than one percent of the uncontrolled levels to ensure compliance with federal and state emissions requirements. That said, there will be incremental emissions increases in emissions of pollutants as a result of the Facility. Bottom ash will be wetted and handled in enclosed containers to virtually eliminate emissions.</p> <p>Boiler fly ash production, which is an air pollutant, will be much lower than if a similar quantity of wood were burned in the forest or in small residential wood stoves.</p> <p>The wood to be burned will be chipped into 4-inch size chips before delivery to the Facility. These chips would not normally be considered “sawdust” and no offsite impacts from the storage pile are anticipated.</p> |
| <p>The facility is adjacent to a non-attainment area for PM<sub>2.5</sub>; increased truck traffic will contribute to this existing problem.</p> | <p>It is correct that Klamath Falls is a non-attainment area for PM<sub>2.5</sub>. When EPA announced that a portion of Klamath Falls would be designated non-attainment, EPA stated that “Technical analysis by both State &amp; EPA indicates that residential home heating, using wood burning appliances, is the main contributor to the area’s fine particle pollution.” The Facility location is outside of this non-attainment area, and neither the Facility itself nor the trucks serving it are expected to have a significant impact on the non-attainment area. In fact, the Applicant has pledged \$10,000 toward wood stove replacements in Klamath Falls (the Klamath Lake Wood Stove Replacement Program run by the South Central Oregon Economic Development District). This will reduce emissions from the primary source of high PM<sub>2.5</sub> concentrations.</p>                                |
| <p>There will be negative impacts to migratory wildlife, including birds and deer.</p>   | <p>Specific concerns expressed in public comment letters included concerns about noise and light impacts on wildlife and birds; and concerns about potential impacts on birds from the power line and smokestack.</p> <p>Noise would be minimized and mitigated as discussed in Exhibit X.</p> <p>Nighttime lighting would be minimized as described in Exhibit R.</p> <p>The Facility would not have a significant impact on wildlife, as described in detail in Exhibit P.</p> <p>Potential impacts on migratory birds from the presence of the power line will be minimized and mitigated as described in Exhibit P. It should be noted that there are a number of overhead power lines in the area and that migratory bird populations have adapted to their presence.</p>  |
| <p>There will be negative impacts to nearby Miller Island State Wildlife refuge.</p>   | <p>Specific concerns expressed in the public comment letters are essentially the same as those described above for migratory wildlife; specifically, noise and air pollution. The Facility does not have any direct impacts on the Miller Island Wildlife Area. Potential indirect Facility impacts on Miller Island would be limited in scale and scope and would be mitigated as described in Exhibits P and X.</p>   |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment  | Response   |
|--|--|
| There will be negative impacts to water quality.                                 | <p>The Facility will not have a negative impact on water quality. The Facility will be required to comply with federal, state, and local regulations protecting surface water and groundwater. Some public comment letters expressed concerns about potential impacts on the Klamath River from cooling tower water discharges. There will be no wastewater discharges from the site; evaporation ponds will be used as described in Exhibits B and V. Sanitary wastewater will be treated using a septic system. Stormwater will be retained and allowed to infiltrate into the groundwater.</p> <p>For further discussion refer to Exhibit B, General Information About the Proposed Facility, and Exhibit V, Waste Minimization.</p>  |
| There is potential for spread of noxious weeds.                                  | <p>Some comments expressed concern about potential noxious weeds that could be spread from the forest where the wood originates, to the vicinity of the plant site. It is unlikely, but possible, that some noxious weed seeds may be present in the fuel transported to the site. The seeds contained in the fuel will be burned as part of the fuel. The fuel trucks will be covered.</p> <p>All fuel will be handled in paved areas and portions of the site where no vegetation will be present. If noxious weeds start to grow within the Facility, they will be controlled with approved herbicides. To the extent noxious weed seeds remain on the fuel trucks, there is some chance they will fall off along roads. That said, this is not expected to be a significant concern. See Exhibit P for a more detailed discussion of potential Facility impacts on nearby habitat.</p> |
| Slash removal may have negative impacts on forest habitat.                       | Slash is typically removed from managed forests by open burning and is not left to naturally decay, as might be the case for an old-growth or wilderness forest. Operation of the Facility will change the method of removal from burning to offsite transfer but will not change the fact that slash will not be allowed to remain unburned in the managed forest area.   |
| There will be impacts to six wildlife refuges in the Klamath Basin.              | The Facility will result in limited to no impact on any protected areas. Potential impacts to Protected Areas, including wildlife refuges, are discussed in detail in Exhibit L of this Application.   |
| The facility's water use will reduce flows in the Klamath River.                 | The Facility will not obtain any water from the Klamath River or other surface water bodies and therefore will not change flow rates in any surface water bodies. Refer to Exhibit O, Water Resources.   |
| Water pollution from the facility will negatively impact birds and bird habitat. | There will be no water pollution from the Facility. Management of stormwater and wastewater is described in Exhibit V. The Facility will not have a significant impact on wildlife, as described in detail in Exhibit P. Potential impacts on migratory birds from the presence of the transmission line will be minimized and mitigated as described in Exhibit P.  |
| There will be negative impacts to salmon habitat.                                | The Facility will not affect salmon habitat. See Exhibit P for a discussion of potential Facility impacts on wildlife habitat, and Exhibit Q for a detailed analysis of potential impacts on threatened and endangered species.  |
| Local tribal entities should be involved with this project.                      | Local tribal entities have been invited to participate in evaluating and minimizing, as appropriate, potential impacts of the Facility on their areas of interest. The Klamath Indian Tribe has expressed an interest in being present during initial site disturbing activities. The Applicant will invite the Tribe to be present.   |
| The facility is located on a Native American grave site.                         | The Facility is not located on a Native American grave site. An extensive literature review and site cultural investigation was conducted and is documented in the confidential report attached to Exhibit S. The investigation included shovel probes throughout the area of the site intended for Facility construction. Neither the literature review   |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment  | Response  |
|--|---|
|  | nor the site investigation identified any prehistoric cultural or archaeological finds at or near the site. The confidential cultural report will be reviewed by the State Historic Preservation Office. See Exhibit S for additional detail.   |
| There is a historic gravesite on the proposed project site.  | There is no historic gravesite on the Facility site. The detailed literature review and site investigation provided as an attachment to Exhibit S found no evidence of any historic cultural sites at the location of the Facility, with the exception of a portion of a site related to the former Weyerhaeuser Mill as described in Exhibit S.  |
| The proposed facility location is within a wetland or floodplain.  | The Facility is not within a floodplain. Federal Emergency Management Agency (FEMA) mapping, as confirmed by the Klamath County Planning Department, indicates that the Facility is not within the 100-year floodplain. Some wetlands, primarily related to irrigation of farmland in the area, were identified on the Facility site. The Facility will have limited impacts on these wetlands and these impacts will be mitigated as described in Exhibit J. |
| The facility will pollute the Klamath River.   | The Facility will not release water to the Klamath River; it will not pollute the Klamath River. The Facility must comply with state and federal regulations regarding water releases from the site. All residual water used in Facility processes will be sent to onsite evaporation ponds, and stormwater will be handled in onsite infiltration ponds. Exhibit V provides a detailed description of waste handling procedures.                             |
| Light pollution from the facility will affect wildlife.  | Exhibit P presents a discussion of potential Facility impacts on wildlife habitat, and Exhibit Q details the potential impacts on threatened and endangered species. Light from the Facility will be shielded and directed to limit its visibility outside the Facility boundary.   |
| <b>2. Comments Related to Waste</b>  |   |
| Wastewater from the site may not be treated and disposed of appropriately, causing water pollution.                                | The Facility will be required to abide by laws and regulations governing the safe handling and disposal of wastewater. Facility-created wastewater will be contained in ponds and evaporated. No wastewater will leave the Facility site. Exhibit V provides details of how the Applicant will construct the Facility to ensure that no adverse effects to the environment will occur from wastewater handling and disposal.                                  |
| Will the facility be able to properly dispose of the ash generated?  | The Facility will be required to dispose of all solid waste in accordance with applicable laws and regulations. Exhibit V describes how the Applicant plans to handle ash generated by the Facility. The Applicant notes that in earlier times, wood ash was considered a valuable soil amendment.  |
| Disposal of facility waste will affect the Klamath River and adjacent wildlife area.   | As described in Exhibit V, no waste will be discharged or allowed to flow into the Klamath River or any adjacent areas. Facility waste will have no adverse impacts on the Klamath River or adjacent wildlife areas. The site will be fenced to prevent wildlife from entering.   |
| <b>3. Comments Related to Public Services, Safety, and Wellbeing</b>   |   |
| NO <sub>x</sub> , SO <sub>x</sub> and CO <sub>2</sub> emissions will decrease air quality and negatively impact residents' health. | Air emissions are strictly governed by federal and state regulations. The Facility will be required to abide by regulations limiting emissions of NO <sub>x</sub> and SO <sub>x</sub> . Maximum predicted ambient concentrations of NO <sub>x</sub> , SO <sub>x</sub> , and CO are well below standards established to protect human health and welfare.  |
| There needs to be a plan for traffic control.  | Traffic and transportation planning are described in Exhibit U. A traffic study is included as an Attachment to Exhibit U. In preparing this study, Oregon Department of Transportation (ODOT) was consulted regarding Highway 66 safety  |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment   | Response   |
|---|--|
|   | issues. During the upgrades to Highway 66 for the Facility access road intersection, traffic control will be provided as required by ODOT. Once this intersection is improved, no further traffic control measures are anticipated.  |
| There will be negative impacts to groundwater supply; availability of water to residents' wells will be affected. | The Facility will use existing water rights to provide the necessary water for Facility operation. Because the water will come from the City of Klamath Falls and from an existing deep (1,200-foot) well at Collins, no impacts to more shallow residential wells are anticipated. Exhibit O describes water use in detail. A well test is being conducted on the Collins well to determine if the higher pumping rates will have an effect on wells in the Lawanda Hills. As soon as the results of this testing are known, they will be submitted.  |
| Additional traffic on Hwy 66 will present a safety hazard.  | Highway 66 is a state highway designed and built for heavy use, including truck traffic. As described in Exhibits B, C, and U, a new access road to Highway 66 will need to be constructed. This access road will be required to meet ODOT design standards as described in Exhibit U to ensure safe flow of traffic. A traffic study is included as an Attachment to Exhibit U.   |
| Slash piles stored at the facility will be a fire hazard.   | <p>The fuel will be processed into chips before being brought to the Facility; it will not be "slash."</p> <p>Potential fire hazard from the Facility's fuel piles will be minimized by limiting the size of the piles, and by rotating stock regularly so biodegradation does not degrade the quality of the fuel or allow heat to build up in the pile. Additionally, the Facility will maintain fire suppression equipment for the unlikely case where fire might occur. The fuel will be purchased by the Facility and every effort will be made to avoid inventory losses. Fire prevention and suppression are described in Exhibits B and U.</p>   |
| There will be traffic safety impacts/congestion on Hwy 66 from increased truck traffic.                           | Highway 66 is a state highway designed and built for heavy use, including truck traffic. As described in Exhibits B, C, and U, a new access road to Highway 66 will need to be constructed. This access road will be required to meet ODOT design standards as described in Exhibit U to ensure safe flow of traffic. A traffic study is included as an Attachment to Exhibit U.   |
| There needs to be a plan for fire protection.   | <p>Final Facility design will incorporate fire protection and suppression systems as suggested by the National Fire Protection Association (NFPA) for similar facilities. The requirements of the Oregon State Fire Marshal, to the extent they exceed the NFPA guidelines and requirements will also be met.</p> <p>Potential fire hazard from fuel piles at the Facility will be minimized by limiting the size of the piles, and by rotating stock regularly so biodegradation does not degrade the quality of the fuel or allow heat to build up in the pile. Additional, the Facility will maintain fire suppression equipment for the unlikely case where fire might occur. It must be kept in mind that the fuel will be purchased by the Facility; every effort will be made to avoid inventory losses. Fire prevention and suppression are described in Exhibits B and U.</p> |
| The slash piles will present a safety hazard.   | <p>The fuel will be processed into chips before being brought to the Facility; it will not be "slash." The resulting consistency of materials will reduce the hazards associated with handling irregular materials.</p> <p>The Facility's fuel handling systems will meet or exceed OSHA requirements. The fuel piles will be maintained as described above to limit the potential for fire. Other safety hazards will be managed carefully in accordance with OSHA requirements to ensure worker safety.</p>  |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment   | Response   |
|---|--|
| <p>The facility will create noxious odors.</p>  | <p>No noxious odors are anticipated at the Facility. There are no applicable regulations specifically limiting noxious odors.</p> <p>The wastewater being evaporated in the ponds is well water, which naturally has a high concentration of minerals. The Facility will be operating all the time so there will be no stagnant water on the site. Water flowing to the boiler and cooling tower will be treated, which will eliminate odor generation. If wastewater odors should develop, the Facility water treatment contractor will provide treatments to eliminate them.</p> <p>The fuel pile is another potential source of odors. Since most of the fuel will be chipped thinnings and branches, the great majority of the fuel will be fiber instead of bark. In general, wood fiber piles do not generate odors. Bark in piles that are several years old can start to compost and generate odors. The longest that fuel should be stored in the fuel pile will be approximately 6 months; more typically, it will be 4 months. As a result, the opportunity for fuel to begin to decompose is limited, minimizing the potential for damage to the Facility.</p> |
| <p>The proposed baghouse is a fire/explosion hazard.</p>  | <p>The initial application of baghouses to hog fueled boilers did result in fires as burning embers were carried over from the boiler into the baghouse. The majority of the hog fueled boilers were of grate or Dutch oven configuration which allowed burning embers to escape. The fluidized bed boiler minimizes carryover of large embers. In addition, over the years this carry-over problem has been resolved through hardware changes in the boiler passes to eliminate ember carry over from conventional hog fueled boilers. The baghouse will be constructed to meet the latest safety standards and fire prevention standards. It is in the Applicant's best interest to prevent fires and explosions to ensure the safety of its workers.</p>  |
| <p>The cooling tower is a possible source of Legionnaire's disease.</p>   | <p>The proposed Facility is not a hazard for Legionnaires disease. The potential for Legionnaire's disease occurs when evaporative cooling is used for air conditioning in enclosed spaces occupied by people and where biocides are not used in the cooling water. At the Facility, air passed through the evaporative cooler will be discharged to the atmosphere and not to an enclosed space. Further, a biocide will be used in the cooling water to inhibit the growth of biological material in the cooling system.</p>   |
| <p><b>4. Comments Related to Noise</b></p>  |  |
| <p>Noise from the facility will have a negative impact on nearby properties.</p>                                | <p>The Facility will comply with the applicable State of Oregon noise standards, which include regulation of both Facility-related noise (such as truck traffic) and potential noise increases due to the proposed Facility. Potential noise impacts from Facility construction and operation, along with proposed mitigation measures, are described in Exhibit X.</p>  |
| <p>There will be noise impacts to neighboring properties from increased truck traffic serving the facility.</p> | <p>The Facility will comply with the applicable State of Oregon noise standards. Noise from Facility-related truck traffic was included in the analysis of potential noise increases, which is regulated by the State of Oregon. Potential noise impacts from Facility construction and operation, along with proposed mitigation measures, are described in Exhibit X.</p>  |
| <p>There will be negative impacts to wildlife from increased noise from facility operation.</p>                 | <p>The Facility will comply with the applicable State of Oregon noise standards. Potential impacts on wildlife from Facility construction and operation are described in Exhibits P and Q.</p>   |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment  | Response   |
|--|--|
| <b>5. Comments Related to Economic Development</b>                                       |  |
| The facility will decrease tourism and cause negative economic impacts to the community. | The Facility will have a positive economic impact on the community; the impact on tourism is very difficult to assess. An economic analysis of the Facility concluded there will be a net positive economic benefit to the community, through jobs, taxes, and energy supplied to the area. Economic impacts from Facility operation are described in Exhibit U. Recreational impacts are described in Exhibit T.  |
| The facility will have negative impacts on commercial fishing on the Oregon coast.       | The Facility will not impact fish or fishing in the Klamath River or on the Oregon coast. See Exhibit P for potential impacts on wildlife habitat.   |
| <b>6. Comments Related to Aesthetic and Scenic Values</b>                                |  |
| Fuel/slash storage piles will cause visual impacts.                                      | The Facility's fuel piles will have a visual impact. However, this impact will not conflict with the policies or goals of planning documents published by local governments or state protected areas and is consistent with County zoning requirements. These impacts will be mitigated through planting of trees and shrubs to screen the Facility from all sides. The impacts will be similar to those from the Collins Timber Company facilities and from the two Iberdrola generation projects nearby. Site landscaping and visual screening will be well beyond Klamath County requirements. Unused land on the Facility site will be planted with evergreen trees to provide additional screening. |
| The proposed facility will adversely affect views.                                       | The Facility will have a visual impact on the surrounding area and views from several properties in the Lawanda Hills area. However, this impact will not conflict with the policies or goals of planning documents published by local governments or state protected areas and will not intrude on any views identified in planning documents. Visual impacts will be minimized through planting of vegetation in accordance with Klamath County regulations. Unused land on the Facility site will be planted with evergreen trees to provide additional screening.  |
| There will be light pollution from the proposed facility.                                | Nighttime lighting will be the minimum needed for safe operation of the Facility and will be directed downward and shielded where possible. Visual screening will mitigate for some of this impact.  |
| There will be visual impacts to the Volcanic Legacy National Scenic Byway.               | Facility visual impacts to the Volcanic Legacy National Scenic Byway are described in Exhibit R. Impacts will be consistent with guidance in planning documents for the National Scenic Byway. At its closest to the Facility, the Byway (U.S. 97) is 2.5 miles away. U.S. 97 is the major north-south route between central Oregon and California. Federal Highway Administration designation does not result in land use controls adjacent to the Byway and certainly not on property over 2 miles away.   |
| A massive steam cloud from the facility will cause visual impacts.                       | As described in Exhibit Z, there will be a visible steam plume from the cooling towers 96.4 percent of the time. The plume from the exhaust stack will be visible about 16 percent of the time. The extent and height of these plumes will vary. Visual impacts from steam plumes will be much smaller than those from the adjacent Iberdrola gas turbine cogeneration plant because this facility is much smaller than Iberdrola facility. See Exhibits R and Z for additional detail.  |
| The proposed facility will ruin the scenic and aesthetic value of the basin.             | Exhibit R describes visual impacts and proposed mitigation measures for the Facility. Although there will be an impact, this impact will be consistent with the IH zoning of the planned location. The scenic and aesthetic value of the basin will not be ruined.   |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment  | Response   |
|--|--|
| Above ground steam transmission pipes will negatively affect the surrounding area. | There will be no above-ground steam transmission pipes.  |
| <b>7. Comments Suggesting Alternate Locations</b>                                  |  |
| The old Weyerhaeuser Mill Site is a better location for this project.              | Site location selection is a complex process involving multiple parties, fuel transport, access to transmission lines, land availability, and zoning. The current proposed location was selected following extensive research into these variables.  |
| There are better locations for this project in Chiloquin.                          | Site location selection is a complex process involving multiple parties, fuel transport, access to transmission lines, land availability, and zoning. The current proposed location was selected following extensive research into these variables. Locating the Facility in Chiloquin would have resulted in longer fuel transport distances.   |
| Bly Mountain is a possible alternative location for this plant.                    | Site location selection is a complex process involving multiple parties, fuel transport, access to transmission lines, land availability, and zoning. The current proposed location was selected following extensive research into these variables. Locating the Facility in Bly would have resulted in longer fuel transport distances.   |
| <b>8. Other Comments</b>   |  |
| This company does not have a track record building biomass plants.                 | Klamath Falls Bioenergy is an associated company entirely owned by NESCO. NESCO or its associated companies has been building, owning and operating forest products and energy facilities since 1937. See Exhibit D.   |
| What is this company's safety record?  | NESCO and its associated companies have been operating since 1937. There have been no serious accidents at any NESCO facilities.   |
| The proposed facility is being built on a fault line.                              | No known or active faults are mapped within the facility boundary. Exhibit H presents a detailed analysis of potential seismic activity in the site vicinity and the potential impact on plant structure and safety if an earthquake was to occur, as well as proposed mitigation measures to ensure the plant is designed and constructed to meet earthquake safety standards. The Facility design will comply with current building codes and standards. Any seismic related damage to the Facility will not result in the release of harmful pollutants or emissions. |
| The proposed facility will cause an increase in soil erosion.                      | The potential for soil erosion is evaluated in Exhibit I. Soil erosion can occur during construction of any facility but will be minimized through implementation of erosion and sediment control procedures as described in Attachment I-1.   |
| The project site is in a residential area, uses are incompatible.                  | The Facility site has been zoned Heavy Industrial since 1984; it is not in a residential area. Construction of an energy facility burning wood is a compatible use in this land use zone.  |
| Where will the facility get the large amount of water required?                    | Water will be obtained from the existing Well 6 at the Collins Products facility and from the City of Klamath Falls. Exhibit O provides details of water use and sources. The amount of water that will be used is not, when compared to agricultural uses, a "large amount of water." The expected water use of 648 acre feet per year is approximately the water required to irrigate 100 acres of alfalfa. The Facility will convert pasture to industry. Overall water use will not be significantly impacted.   |

Table BB-1. Summary of Public Comments and Applicant Responses on the Proposed Klamath Falls Bioenergy Facility

| Comment   | Response  |
|---|---|
| <b>9. Other Comments Without Standards</b>  |   |
| Increased traffic will result in increased public road maintenance costs.   | Highway 66 is designed and constructed to support truck traffic. Trucks traveling to and from the Facility will be within applicable weight and size limits and will not place an undue burden on roadways. The fuel taxes paid by the fuel trucks will help to pay for the road maintenance costs. The trucks and fuel loads will meet the applicable weight restrictions.                           |
| There are concerns about decreased property values.   | The Applicant is taking measures to mitigate visual and noise impacts and described in Exhibits R and X. As discussed in Exhibit U, economic benefits to the community will far outweigh costs. That said, there is no objective measure to forecast potential impacts to property values, nor has the Department of Energy established any standards regarding potential impacts to property values. |
| The operation of the facility may prevent locals from burning wood for heat.  | Facility operation will not prevent local residents from burning wood for heat.   |
| Does the proposed fuel source meet the intent of Oregon SB 838 and qualify for the renewable portfolio standard provided by SB 838? | Yes, the proposed fuel source can be used to comply with Oregon’s Renewable Energy Standard, established by SB 838. According to the definition of renewable energy contained in the legislation, “Electricity derived from biomass and biomass products can be used to comply ... when grown on land described in ORS 321.267 (3) (private, managed, timber lands)...”                               |



**ATTACHMENT BB-1**

**Evidence of Consultation with Tribes**



# ***Klamath Falls Bioenergy, LLC***

---

10800 NE 8<sup>th</sup> Street • Suite 320 • Bellevue, Washington 98004 • Fax 425-803-6902 • Phone 425-889-1000

August 5, 2010

Mr. Perry Chooktoot  
**THE KLAMATH TRIBES**  
P.O. Box 436  
Chiloquin, OR 97624

**SUBJECT: PROPOSED KLAMATH BIOENERGY 35 MW POWER PROJECT  
AND REQUEST FOR CONSULTATION**

Dear Mr. Chooktoot:

Klamath Falls Bioenergy, LLC (KFB) is proposing to develop a 35 megawatt wood-fired power plant in the Klamath Falls area. KFB filed a **Notice of Intent** with the Oregon Energy Facility Siting Council (EFSC) on April 5, 2010. You previously received a copy of the document. The resulting EFSC **Project Order** issued on July 22, 2010 is attached. Further information about the Project can be found at EFSC's website at the link below.

[http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath Falls Bioenergy](http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath_Falls_Bioenergy)

The site, zoned heavy industrial, is approximately two miles south of the existing Klamath Falls Generation Facility in Klamath County. A preliminary site layout, including the interconnecting power line and water supply line and a vicinity map are attached. The fuel would be purchased and come from timberland thinning in the general Klamath Falls area on privately held timberlands. The project will use water from existing wells in the area. It will not impact the Klamath River.

KFB is preparing an **Application For Site Certificate (ASC)** to the Oregon Energy Facility Siting Council (EFSC) and expects to submit it about September 1, 2010. It is also preparing a **Standard Air Contaminant Discharge Permit (ACDP)** for the Oregon Department of Environmental Quality and expects to submit the air permit application concurrently with the EFSC **ASC**. As part of the **ASC** preparation, we have consulted with the interested State agencies and conducted site resource surveys for historic, cultural, and archeological resources, wetlands, fish and wildlife, and threatened and endangered species. As soon as these and other resource reports are completed, we will share them with you.

With this letter, we request any comments or feedback your Tribe might have regarding the project. The proposed project will be beneficial to the Klamath Falls area air quality and economy. You may contact me by calling 425-457-7484 or by email at [brucet@thenescogroup.com](mailto:brucet@thenescogroup.com).

Mr. Perry Chooktoot

August 5, 2010

Page 2

Thank you for your attention to this matter.

Respectfully,



Bruce Thompson

Senior Vice President

**ENCLOSURES:** (1) OEFSC Project Order  
(2) KFB Site Plan, C-2 Overview Of Site  
(3) KFB Vicinity Map

cc: Curt Bagnall, CH2MHill  
Duane Kilsdonk, Oregon Department of Energy  
KFB Project Team

US/PS: Certified Mail Return Receipt

# ***Klamath Falls Bioenergy, LLC***

---

10800 NE 8<sup>th</sup> Street • Suite 320 • Bellevue, Washington 98004 • Fax 425-803-6902 • Phone 425-889-1000

August 5, 2010

Mr. Erik Thorsgard

**THE CONFEDERATED TRIBES OF GRAND RONDE**

9615 Grand Ronde Road

Grand Ronde, OR 97347

**SUBJECT: PROPOSED KLAMATH BIOENERGY 35 MW POWER PROJECT  
AND REQUEST FOR CONSULTATION**

Dear Mr. Thorsgard:

Klamath Falls Bioenergy, LLC (KFB) is proposing to develop a 35 megawatt wood-fired power plant in the Klamath Falls area. KFB filed a **Notice of Intent** with the Oregon Energy Facility Siting Council (EFSC) on April 5, 2010. You previously received a copy of the document. The resulting EFSC **Project Order** issued on July 22, 2010 is attached. Further information about the Project can be found at EFSC's website at the link below.

[http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath Falls Bioenergy](http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath_Falls_Bioenergy)

The site, zoned heavy industrial, is approximately two miles south of the existing Klamath Falls Generation Facility in Klamath County. A preliminary site layout, including the interconnecting power line and water supply line and a vicinity map are attached. The fuel would be purchased and come from timberland thinning in the general Klamath Falls area on privately held timberlands. The project will use water from existing wells in the area. It will not impact the Klamath River.

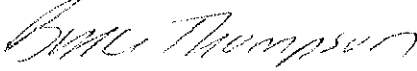
KFB is preparing an **Application For Site Certificate (ASC)** to the Oregon Energy Facility Siting Council (EFSC) and expects to submit it about September 1, 2010. It is also preparing a **Standard Air Contaminant Discharge Permit (ACDP)** for the Oregon Department of Environmental Quality and expects to submit the air permit application concurrently with the EFSC **ASC**. As part of the **ASC** preparation, we have consulted with the interested State agencies and conducted site resource surveys for historic, cultural, and archeological resources, wetlands, fish and wildlife, and threatened and endangered species. As soon as these and other resource reports are completed, we will share them with you.

With this letter, we request any comments or feedback your Tribe might have regarding the project. The proposed project will be beneficial to the Klamath Falls area air quality and economy. You may contact me by calling 425-457-7484 or by email at [brucet@thenescogroup.com](mailto:brucet@thenescogroup.com).

Mr. Erik Thorsgard  
August 5, 2010  
Page 2

Thank you for your attention to this matter.

Respectfully,



Bruce Thompson  
Senior Vice President

**ENCLOSURES:** (1) OEFSC Project Order  
(2) **KFB Site Plan, C-2 Overview Of Site**  
(3) **KFB Vicinity Map**

cc: Curt Bagnall, CH2MHill  
Duane Kilsdonk, Oregon Department of Energy  
KFB Project Team

US/PS: Certified Mail Return Receipt

# ***Klamath Falls Bioenergy, LLC***

---

10800 NE 8<sup>th</sup> Street • Suite 320 • Bellevue, Washington 98004 • Fax 425-803-6902 • Phone 425-889-1000

August 5, 2010

Mr. Robert Kentta  
**THE CONFEDERATED TRIBES OF SILETZ INDIANS**  
P.O. Box 549  
Siletz, OR 97380

**SUBJECT: PROPOSED KLAMATH BIOENERGY 35 MW POWER PROJECT  
AND REQUEST FOR CONSULTATION**

Dear Mr. Kentta:

Klamath Falls Bioenergy, LLC (KFB) is proposing to develop a 35 megawatt wood-fired power plant in the Klamath Falls area. KFB filed a **Notice of Intent** with the Oregon Energy Facility Siting Council (EFSC) on April 5, 2010. You previously received a copy of the document. The resulting EFSC **Project Order** issued on July 22, 2010 is attached. Further information about the Project can be found at EFSC's website at the link below.

[http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath Falls Bioenergy](http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath_Falls_Bioenergy)

The site, zoned heavy industrial, is approximately two miles south of the existing Klamath Falls Generation Facility in Klamath County. A preliminary site layout, including the interconnecting power line and water supply line and a vicinity map are attached. The fuel would be purchased and come from timberland thinning in the general Klamath Falls area on privately held timberlands. The project will use water from existing wells in the area. It will not impact the Klamath River.

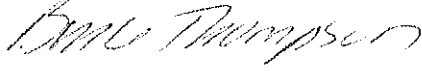
KFB is preparing an **Application For Site Certificate (ASC)** to the Oregon Energy Facility Siting Council (EFSC) and expects to submit it about September 1, 2010. It is also preparing a **Standard Air Contaminant Discharge Permit (ACDP)** for the Oregon Department of Environmental Quality and expects to submit the air permit application concurrently with the EFSC **ASC**. As part of the **ASC** preparation, we have consulted with the interested State agencies and conducted site resource surveys for historic, cultural, and archeological resources, wetlands, fish and wildlife, and threatened and endangered species. As soon as these and other resource reports are completed, we will share them with you.

With this letter, we request any comments or feedback your Tribe might have regarding the project. The proposed project will be beneficial to the Klamath Falls area air quality and economy. You may contact me by calling 425-457-7484 or by email at [brucet@thenescogroup.com](mailto:brucet@thenescogroup.com).

Mr. Robert Kentta  
August 5, 2010  
Page 2

Thank you for your attention to this matter.

Respectfully,



Bruce Thompson  
Senior Vice President

**ENCLOSURES: (1) OEFSC Project Order**  
**(2) KFB Site Plan, C-2 Overview Of Site**  
**(3) KFB Vicinity Map**

cc: Curt Bagnall, CH2MHill  
Duane Kilsdonk, Oregon Department of Energy  
KFB Project Team

US/PS: Certified Mail Return Receipt

# ***Klamath Falls Bioenergy, LLC***

---

10800 NE 8<sup>th</sup> Street • Suite 320 • Bellevue, Washington 98004 • Fax 425-803-6902 • Phone 425-889-1000

August 5, 2010

Ms. Theresa Peck  
**THE BURNS PAIUTE TRIBE**  
100 Pasigo Street  
Burns, OR 97720

**SUBJECT: PROPOSED KLAMATH BIOENERGY 35 MW POWER PROJECT  
AND REQUEST FOR CONSULTATION**

Dear Ms. Peck:

Klamath Falls Bioenergy, LLC (KFB) is proposing to develop a 35 megawatt wood-fired power plant in the Klamath Falls area. KFB filed a **Notice of Intent** with the Oregon Energy Facility Siting Council (EFSC) on April 5, 2010. You previously received a copy of the document. The resulting EFSC **Project Order** issued on July 22, 2010 is attached. Further information about the Project can be found at EFSC's website at the link below.

[http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath Falls Bioenergy](http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath_Falls_Bioenergy)

The site, zoned heavy industrial, is approximately two miles south of the existing Klamath Falls Generation Facility in Klamath County. A preliminary site layout, including the interconnecting power line and water supply line and a vicinity map are attached. The fuel would be purchased and come from timberland thinning in the general Klamath Falls area on privately held timberlands. The project will use water from existing wells in the area. It will not impact the Klamath River.

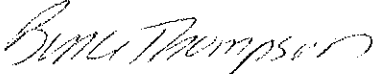
KFB is preparing an **Application For Site Certificate (ASC)** to the Oregon Energy Facility Siting Council (EFSC) and expects to submit it about September 1, 2010. It is also preparing a **Standard Air Contaminant Discharge Permit (ACDP)** for the Oregon Department of Environmental Quality and expects to submit the air permit application concurrently with the EFSC **ASC**. As part of the **ASC** preparation, we have consulted with the interested State agencies and conducted site resource surveys for historic, cultural, and archeological resources, wetlands, fish and wildlife, and threatened and endangered species. As soon as these and other resource reports are completed, we will share them with you.

With this letter, we request any comments or feedback your Tribe might have regarding the project. The proposed project will be beneficial to the Klamath Falls area air quality and economy. You may contact me by calling 425-457-7484 or by email at [brucet@thenescogroup.com](mailto:brucet@thenescogroup.com).

Ms. Theresa Peck  
August 5, 2010  
Page 2

Thank you for your attention to this matter.

Respectfully,



Bruce Thompson  
Senior Vice President

**ENCLOSURES: (1) OEFSC Project Order**  
**(2) KFB Site Plan, C-2 Overview Of Site**  
**(3) KFB Vicinity Map**

cc: Curt Bagnall, CH2MHill  
Duane Kilsdonk, Oregon Department of Energy  
KFB Project Team

US/PS: Certified Mail Return Receipt

# ***Klamath Falls Bioenergy, LLC***

---

10800 NE 8<sup>th</sup> Street • Suite 320 • Bellevue, Washington 98004 • Fax 425-803-6902 • Phone 425-889-1000

August 5, 2010

Ms. Sally Bird  
**WARM SPRINGS GEO VISIONS**  
**THE CONFEDERATED TRIBES OF WARM SPRINGS**  
1233 Veterans Street  
Warm Springs, OR 97661

**SUBJECT: PROPOSED KLAMATH BIOENERGY 35 MW POWER PROJECT  
AND REQUEST FOR CONSULTATION**

Dear Ms. Bird:

Klamath Falls Bioenergy, LLC (KFB) is proposing to develop a 35 megawatt wood-fired power plant in the Klamath Falls area. KFB filed a **Notice of Intent** with the Oregon Energy Facility Siting Council (EFSC) on April 5, 2010. You previously received a copy of the document. The resulting EFSC **Project Order** issued on July 22, 2010 is attached. Further information about the Project can be found at EFSC's website at the link below.

[http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath Falls Bioenergy](http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath_Falls_Bioenergy)

The site, zoned heavy industrial, is approximately two miles south of the existing Klamath Falls Generation Facility in Klamath County. A preliminary site layout, including the interconnecting power line and water supply line and a vicinity map are attached. The fuel would be purchased and come from timberland thinning in the general Klamath Falls area on privately held timberlands. The project will use water from existing wells in the area. It will not impact the Klamath River.

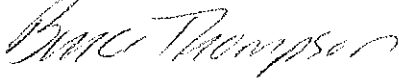
KFB is preparing an **Application For Site Certificate (ASC)** to the Oregon Energy Facility Siting Council (EFSC) and expects to submit it about September 1, 2010. It is also preparing a **Standard Air Contaminant Discharge Permit (ACDP)** for the Oregon Department of Environmental Quality and expects to submit the air permit application concurrently with the EFSC **ASC**. As part of the **ASC** preparation, we have consulted with the interested State agencies and conducted site resource surveys for historic, cultural, and archeological resources, wetlands, fish and wildlife, and threatened and endangered species. As soon as these and other resource reports are completed, we will share them with you.

With this letter, we request any comments or feedback your Tribe might have regarding the project. The proposed project will be beneficial to the Klamath Falls area air quality and economy. You may contact me by calling 425-457-7484 or by email at [brucet@thenescogroup.com](mailto:brucet@thenescogroup.com).

Ms. Sally Bird  
August 5, 2010  
Page 2

Thank you for your attention to this matter.

Respectfully,



Bruce Thompson  
Senior Vice President

**ENCLOSURES: (1) OEFSC Project Order  
(2) KFB Site Plan, C-2 Overview Of Site  
(3) KFB Vicinity Map**

cc: Curt Bagnall, CH2MHill  
Duane Kilsdonk, Oregon Department of Energy  
KFB Project Team

US/PS: Certified Mail Return Receipt

# ***Klamath Falls Bioenergy, LLC***

---

10800 NE 8<sup>th</sup> Street • Suite 320 • Bellevue, Washington 98004 • Fax 425-803-6902 • Phone 425-889-1000

August 5, 2010

Tribal Council  
**THE CONFEDERATED TRIBES OF WARM SPRINGS**  
1233 Veterans Street  
Warm Springs, OR 97661

**SUBJECT: PROPOSED KLAMATH BIOENERGY 35 MW POWER PROJECT  
AND REQUEST FOR CONSULTATION**

Dear Tribal Council:

Klamath Falls Bioenergy, LLC (KFB) is proposing to develop a 35 megawatt wood-fired power plant in the Klamath Falls area. KFB filed a **Notice of Intent** with the Oregon Energy Facility Siting Council (EFSC) on April 5, 2010. You previously received a copy of the document. The resulting EFSC **Project Order** issued on July 22, 2010 is attached. Further information about the Project can be found at EFSC's website at the link below.

[http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath Falls Bioenergy](http://www.oregon.gov/ENERGY/SITING/review.shtml#Klamath_Falls_Bioenergy)

The site, zoned heavy industrial, is approximately two miles south of the existing Klamath Falls Generation Facility in Klamath County. A preliminary site layout, including the interconnecting power line and water supply line and a vicinity map are attached. The fuel would be purchased and come from timberland thinning in the general Klamath Falls area on privately held timberlands. The project will use water from existing wells in the area. It will not impact the Klamath River.

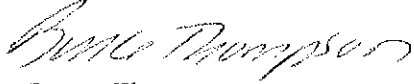
KFB is preparing an **Application For Site Certificate (ASC)** to the Oregon Energy Facility Siting Council (EFSC) and expects to submit it about September 1, 2010. It is also preparing a **Standard Air Contaminant Discharge Permit (ACDP)** for the Oregon Department of Environmental Quality and expects to submit the air permit application concurrently with the EFSC **ASC**. As part of the **ASC** preparation, we have consulted with the interested State agencies and conducted site resource surveys for historic, cultural, and archeological resources, wetlands, fish and wildlife, and threatened and endangered species. As soon as these and other resource reports are completed, we will share them with you.

With this letter, we request any comments or feedback your Tribe might have regarding the project. The proposed project will be beneficial to the Klamath Falls area air quality and economy. You may contact me by calling 425-457-7484 or by email at [brucet@thenescogroup.com](mailto:brucet@thenescogroup.com).

**Tribal Council**  
**August 5, 2010**  
**Page 2**

Thank you for your attention to this matter.

Respectfully,

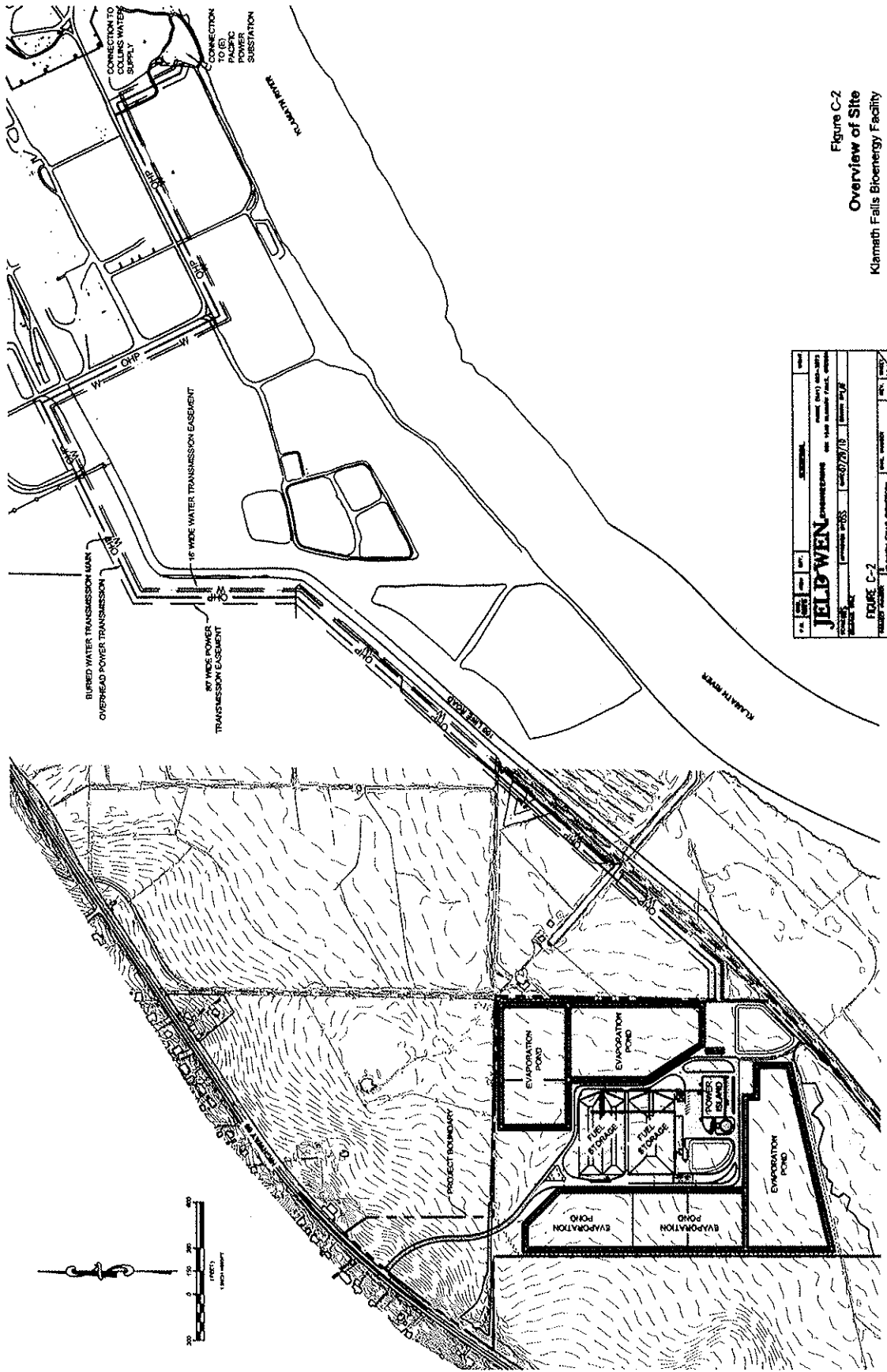


Bruce Thompson  
Senior Vice President

**ENCLOSURES: (1) OEFSC Project Order**  
**(2) KFB Site Plan, C-2 Overview Of Site**  
**(3) KFB Vicinity Map**

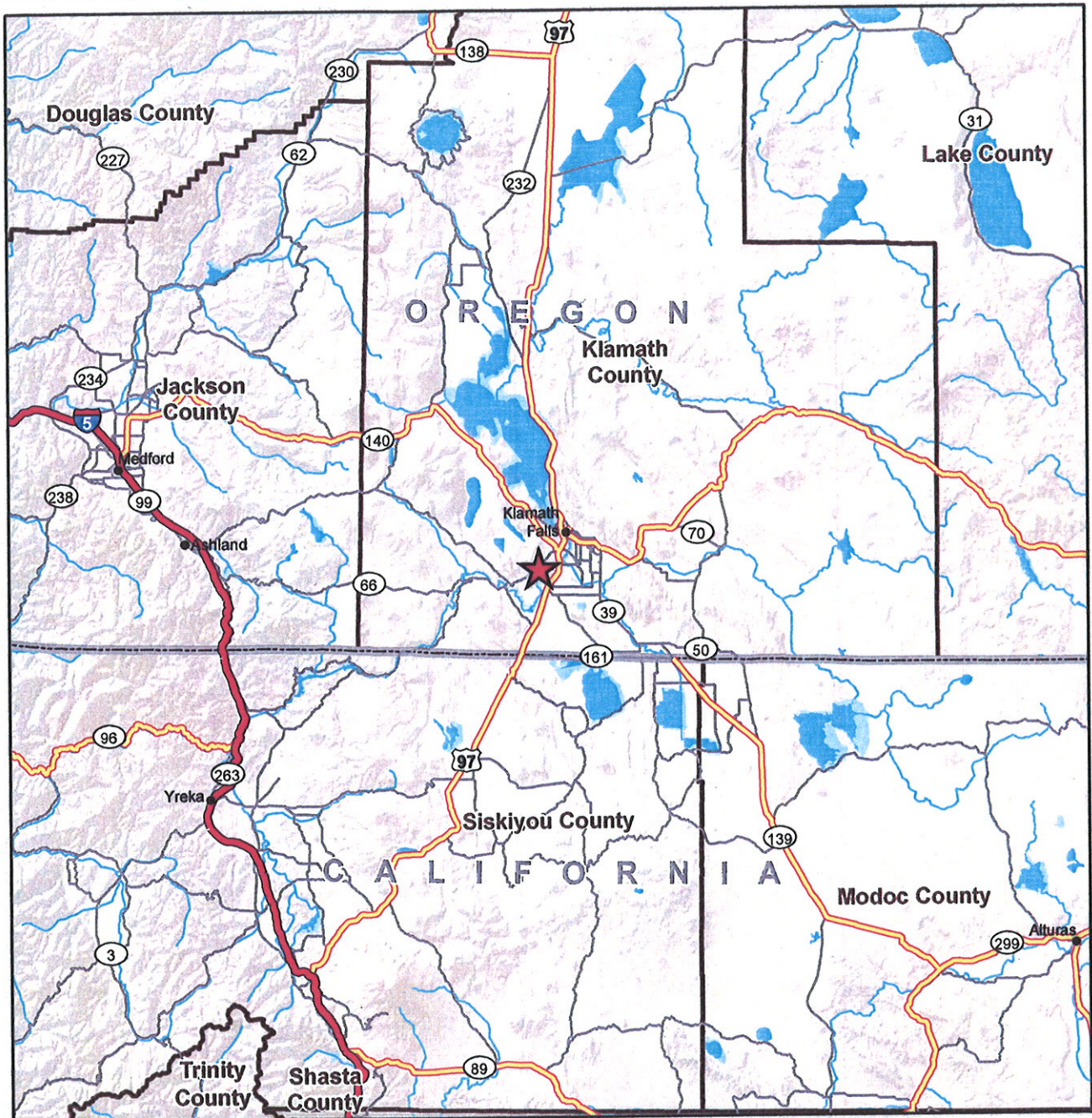
cc: Curt Bagnall, CH2MHill  
Duane Kilsdonk, Oregon Department of Energy  
KFB Project Team

US/PS: Certified Mail Return Receipt

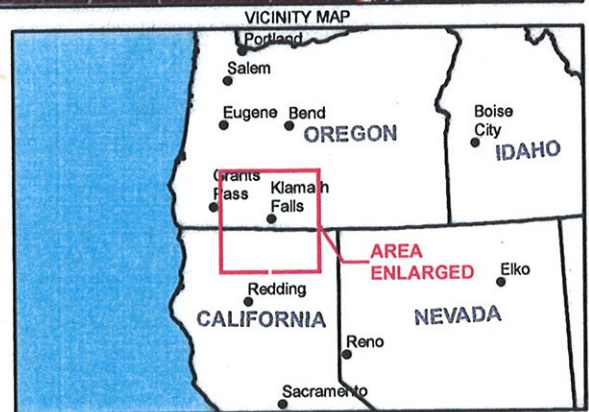


|          |     |                       |      |         |
|----------|-----|-----------------------|------|---------|
| DATE     | NO. | DESCRIPTION           | BY   | CHECKED |
| 10/10/00 | 1   | ISSUED FOR PERMITTING | JELB | JELB    |
| 10/10/00 | 2   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 3   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 4   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 5   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 6   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 7   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 8   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 9   | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 10  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 11  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 12  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 13  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 14  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 15  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 16  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 17  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 18  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 19  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 20  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 21  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 22  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 23  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 24  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 25  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 26  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 27  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 28  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 29  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 30  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 31  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 32  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 33  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 34  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 35  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 36  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 37  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 38  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 39  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 40  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 41  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 42  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 43  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 44  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 45  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 46  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 47  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 48  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 49  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 50  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 51  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 52  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 53  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 54  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 55  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 56  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 57  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 58  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 59  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 60  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 61  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 62  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 63  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 64  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 65  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 66  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 67  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 68  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 69  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 70  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 71  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 72  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 73  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 74  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 75  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 76  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 77  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 78  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 79  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 80  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 81  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 82  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 83  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 84  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 85  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 86  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 87  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 88  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 89  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 90  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 91  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 92  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 93  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 94  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 95  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 96  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 97  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 98  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 99  | REVISED PER COMMENTS  | JELB | JELB    |
| 10/10/00 | 100 | REVISED PER COMMENTS  | JELB | JELB    |

Figure C-2  
 Overview of Site  
 Klamath Falls Bioenergy Facility

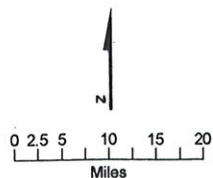


- LEGEND**
- ★ Facility Site
  - City
  - ↗ Interstate Highway
  - ↘ Highway
  - Local Road
  - ~ River
  - ☪ Water
  - ▭ County Boundary
  - ▭ State Boundary



**FIGURE G-1**  
**Vicinity Map**  
 Klamath Falls Bioenergy  
 Notice of Intent

Source:  
 1. Environmental Systems  
 Research Institute (ESRI)



**CH2MHILL**



# Oregon

Theodore R. Kulongoski, Governor



OREGON  
DEPARTMENT OF  
ENERGY

July 22, 2010

Bruce Thompson  
Senior Vice President  
Klamath Falls Bioenergy  
10800 NE 8<sup>th</sup> Street, Suite 320  
Bellevue, WA 98004-4467

Eastern Oregon Office  
395 E. Highland Ave.  
Hermiston, OR 97838  
  
Phone: (541) 567-3840  
Toll Free: 1-800-221-8035  
FAX: (541) 567-6861  
[www.energy.state.or.us](http://www.energy.state.or.us)

RE: Transmittal of the Project Order for the Proposed  
Klamath Falls Bioenergy Facility  
[ODOE Letter Log No. 65]

Dear Mr. Thompson:

Enclosed is the Project Order for the proposed Klamath Falls Bioenergy Facility, to be located in Klamath County, Oregon. This Project Order is issued pursuant to OAR 345-015-0160 and is based on the Notice of Intent (NOI) for the Klamath Falls Bioenergy Facility received by the Department on April 5, 2010.

On April 13, and again on May 25 and 26, 2010, the Department issued a public notice of the NOI to the Energy Facility Siting Council mailing list and to adjacent property owners as defined at Oregon Administrative Rule (OAR) 345-020-0011(1)(f). The comment period on the NOI closed at 5:00 pm on June 30, 2010. On or about April 23, 2010 KFB distributed the NOI to the reviewing agencies identified by the Department. In accordance with OAR 345-020-0040, the NOI was sent with a memorandum from the Department requesting comments from the reviewing agencies no later than May 14, 2010. Comments received from the public and the reviewing agencies are discussed in Section VII of the Project Order.

The Project Order is intended to serve as guidance for the preparation of an Application for Site Certificate (ASC) for the Klamath Falls Bioenergy Facility. The Project Order is not a final Order and may be revised because of additional comments received from the reviewing agencies or questions or comments from Klamath Falls Bioenergy.

Please feel free to contact me at 541-567-3840 (ext. 224) or by e-mail at [duane.kilsdonk@state.or.us](mailto:duane.kilsdonk@state.or.us) if you have any questions or require further information.

Sincerely yours,

Duane Kilsdonk  
Energy Facility Siting Officer

Enclosure: Project Order for the proposed Klamath Falls Bioenergy Facility

1  
2

**OREGON DEPARTMENT OF ENERGY**

Regarding Statutes, Administrative Rules,  
and Other Requirements Applicable to the  
Proposed  
**KLAMATH FALLS BIOENERGY FACILITY**

)  
)  
)

**PROJECT ORDER**

3  
4

**BACKGROUND**

5 On April 5, 2010, Klamath Falls Bioenergy, LLC (KFB) submitted to the Oregon  
6 Department of Energy (ODOE or the “Department”) a Notice of Intent (NOI) to file an  
7 Application for a Site Certificate (ASC) for a proposed biomass-fired generating plant. The  
8 proposed facility, named the Klamath Falls Bioenergy Facility, would be located within Klamath  
9 County about two miles southwest of Klamath Falls, Oregon, and as described in the NOI, would  
10 have a peak generating capacity of up to 38.5 megawatts (MW) of electrical power. The facility  
11 will require a site certificate from the Oregon Energy Facility Siting Council (EFSC or the  
12 “Council”).

13 On April 13, 2010, the Department issued a public notice of the NOI to the EFSC mailing  
14 list and to adjacent property owners as defined at Oregon Administrative Rule (OAR) 345-020-  
15 0011(1)(f). The Department also published the notice on April 23 and 29, 2010, in the *Klamath*  
16 *Falls Herald and News* newspaper. The public notice included announcement of a public  
17 information meeting to be held May 5, 2010 in Klamath Falls, Oregon, and requested public  
18 comments on the NOI by 5:00 pm on May 14, 2010. The meeting on May 5, 2010 was heavily  
19 attended. Following the close of the public comment period on May 14, 2010 the Department  
20 noted that not all stakeholders were adequately notified of the project. As a result, the  
21 Department decided to re-notify stakeholders of another public comment period that would end  
22 June 30, 2010. A public notice of the NOI was mailed to the EFSC mailing list and to adjacent  
23 property owners as defined at Oregon Administrative Rule (OAR) 345-020-0011(1)(f), on May  
24 25 and 26, 2010. The Department also published the notice in the *Klamath Falls Herald and*  
25 *News* newspaper on June 6 and June 10, 2010. The public notice included announcement of a  
26 public information meeting to be held June 15, 2010 in Klamath Falls, Oregon and requested  
27 public comments on the NOI by 5:00 pm on June 30, 2010. On June 15, 2010, prior to the public  
28 meeting commencement, Klamath Falls Bioenergy submitted a written change to the Notice of  
29 Intent information. The change is as follows: in the NOI, Exhibit K, Land Use, Klamath Falls  
30 Bioenergy stated that it would satisfy the Council’s land use standard by obtaining local land use  
31 approval from Klamath County under ORS 469.501 (1)(a); the revised document stated they  
32 have reconsidered and will instead be seeking a land use determination from the Council under  
33 ORS 469.501(1)(b). This written change was signed by Klamath Falls Bioenergy’s Project  
34 Manager, John Rivers. This change was announced at the June 15, meeting, which was heavily  
35 attended. Many public comments were received by the end of the public comment period.  
36 Public comments are discussed further in Section VII.

1 On or about April 23, 2010 KFB distributed the NOI to the reviewing agencies identified  
 2 by the Department. In accordance with OAR 345-020-0040, the NOI was sent with a  
 3 memorandum from the Department requesting comments from reviewing agencies no later than  
 4 May 14, 2010. At the close of the comment period the Department had received comments from  
 5 the Oregon Department of Agriculture, Oregon Parks and Recreation Department, Oregon  
 6 Department of Environmental Quality (Water Quality Section), Oregon Public Utilities  
 7 Commission, Klamath County Planning Department, and the Keno Fire District. Comments  
 8 received from reviewing agencies are also discussed in Section VII.

9 The Department issues this project order in accordance with OAR 345-015-0160, which  
 10 requires the Department to specify the state statutes, administrative rules, and local, state, and  
 11 tribal permitting requirements applicable to the construction and operation of the proposed  
 12 facility (see Sections I through V). This project order specifies the analysis areas for the  
 13 proposed facility (Section VI) and discusses comments received by the Department from  
 14 reviewing agencies and members of the public that address matters within the jurisdiction of the  
 15 Council that the applicant shall consider and discuss in the ASC (Section VII). This project  
 16 order also includes sections concerning the expiration date of the Notice of Intent (Section VIII),  
 17 discussion of project order amendments (Section IX) and the applicant's duty to comply with  
 18 applicable requirements (Section X).

19 Oregon Revised Statute (ORS) 469.401(4) provides that a site certificate issued by the  
 20 Council does not govern certain matters. This project order does not consider matters outside the  
 21 Council's jurisdiction. The applicant must nevertheless comply with all statutes, regulations, and  
 22 local ordinances applicable to the proposed facility.

23 As provided in ORS 469.330(4), the Department or the Council may amend this project  
 24 order at any time. The definitions in ORS 469.300 and OAR 345-001-0010 apply to the terms  
 25 used in this project order, except where otherwise stated or where the context indicates  
 26 otherwise.

27 Therefore, pursuant to ORS 469.330(3) and OAR 345-015-0160(1), the Department  
 28 issues this project order establishing the requirements for an ASC for the Klamath Falls  
 29 Bioenergy Facility.

30  
 31 **PROPOSED FACILITY: KLAMATH FALLS BIOENERGY FACILITY**  
 32 **PROJECT ORDER**  
 33 **TABLE OF CONTENTS**  
 34

35 **I. STATUTES, ADMINISTRATIVE RULES, AND RELATED PERMIT REQUIREMENTS**  
 36 **APPLICABLE TO THE PROPOSED FACILITY .....4**

37 (A) ENERGY FACILITY SITING COUNCIL.....4  
 38 (B) OREGON DEPARTMENT OF AGRICULTURE, PLANT DIVISION — NATIVE PLANT CONSERVATION PROGRAM ...4  
 39 (C) OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY — AIR QUALITY DIVISION.....5  
 40 (D) OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY — WATER QUALITY DIVISION.....7  
 41 (E) OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY — LAND QUALITY DIVISION .....8  
 42 (F) OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY — NOISE CONTROL REGULATIONS.....9  
 43 (G) OREGON DEPARTMENT OF FISH AND WILDLIFE .....9  
 44 (H) OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES.....10  
 45 (I) OREGON PARKS AND RECREATION DEPARTMENT.....11

|    |              |   |           |
|----|--------------|---|-----------|
| 1  | (J)          | OREGON DEPARTMENT OF STATE LANDS — REMOVAL-FILL AUTHORIZATIONS .....          | 11        |
| 2  | (K)          | OREGON WATER RESOURCES DEPARTMENT — WATER RIGHTS/ADJUDICATIONS DIVISION ..... | 12        |
| 3  | (L)          | U.S. ARMY CORPS OF ENGINEERS.....   | 12        |
| 4  | <b>II.</b>   | <b>NATIVE AMERICAN TRIBES .....</b>   | <b>13</b> |
| 5  | <b>III.</b>  | <b>APPLICABLE LOCAL GOVERNMENT ORDINANCES.....</b>                            | <b>13</b> |
| 6  | <b>IV.</b>   | <b>OTHER CONSTRUCTION-RELATED REGULATIONS.....</b>                            | <b>14</b> |
| 7  | <b>V.</b>    | <b>APPLICABLE REQUIREMENTS FROM OAR CHAPTER 345, DIVISION 21.....</b>         | <b>14</b> |
| 8  | (A)          | EXHIBIT A – GENERAL INFORMATION ABOUT THE APPLICANT .....                     | 14        |
| 9  | (B)          | EXHIBIT B – GENERAL INFORMATION ABOUT THE PROPOSED FACILITY .....             | 14        |
| 10 | (C)          | EXHIBIT C – LOCATION.....   | 15        |
| 11 | (D)          | EXHIBIT D – ORGANIZATIONAL EXPERTISE .....                                    | 15        |
| 12 | (E)          | EXHIBIT E – PERMITS.....  | 15        |
| 13 | (F)          | EXHIBIT F – PROPERTY OWNERS.....  | 15        |
| 14 | (G)          | EXHIBIT G – MATERIALS ANALYSIS .....  | 15        |
| 15 | (H)          | EXHIBIT H – GEOLOGY .....   | 16        |
| 16 | (I)          | EXHIBIT I – SOILS.....  | 16        |
| 17 | (J)          | EXHIBIT J – JURISDICTIONAL WATERS .....                                       | 16        |
| 18 | (K)          | EXHIBIT K – LAND USE (STATEWIDE PLANNING GOALS) .....                         | 17        |
| 19 | (L)          | EXHIBIT L – PROTECTED AREAS .....   | 17        |
| 20 | (M)          | EXHIBIT M – FINANCIAL CAPABILITY .....  | 17        |
| 21 | (N)          | EXHIBIT N – NEED FOR THE FACILITY .....                                       | 17        |
| 22 | (O)          | EXHIBIT O – WATER USE.....  | 17        |
| 23 | (P)          | EXHIBIT P – FISH AND WILDLIFE HABITAT .....                                   | 17        |
| 24 | (Q)          | EXHIBIT Q – THREATENED AND ENDANGERED SPECIES.....                            | 17        |
| 25 | (R)          | EXHIBIT R – SCENIC RESOURCES .....  | 17        |
| 26 | (S)          | EXHIBIT S – HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES.....              | 17        |
| 27 | (T)          | EXHIBIT T – RECREATION .....  | 17        |
| 28 | (U)          | EXHIBIT U – PUBLIC SERVICES .....   | 17        |
| 29 | (V)          | EXHIBIT V – SOLID WASTE AND WASTEWATER.....                                   | 18        |
| 30 | (W)          | EXHIBIT W – FACILITY RETIREMENT .....   | 18        |
| 31 | (X)          | EXHIBIT X – NOISE .....   | 18        |
| 32 | (Y)          | EXHIBIT Y – CARBON DIOXIDE EMISSIONS .....                                    | 18        |
| 33 | (Z)          | EXHIBIT Z – COOLING TOWER IMPACTS.....  | 18        |
| 34 | (AA)         | EXHIBIT AA – ELECTRIC AND MAGNETIC FIELDS .....                               | 18        |
| 35 | (BB)         | EXHIBIT BB – OTHER INFORMATION.....   | 18        |
| 36 | (CC)         | EXHIBIT CC – OTHER LAW .....  | 19        |
| 37 | (DD)         | EXHIBIT DD – SPECIFIC STANDARDS .....   | 19        |
| 38 | <b>VI.</b>   | <b>ANALYSIS AREAS FOR THE PROPOSED FACILITY .....</b>                         | <b>19</b> |
| 39 | <b>VII.</b>  | <b>COMMENTS FROM REVIEWING AGENCIES AND THE PUBLIC .....</b>                  | <b>20</b> |
| 40 | (A)          | PUBLIC COMMENTS.....  | 20        |
| 41 | (B)          | REVIEWING AGENCY AND OTHER COMMENTS.....                                      | 23        |
| 42 | <b>VIII.</b> | <b>EXPIRATION DATE OF THE NOTICE OF INTENT .....</b>                          | <b>23</b> |
| 43 | <b>IX.</b>   | <b>PROJECT ORDER AMENDMENT AND APPLICATION COMPLETENESS.....</b>              | <b>24</b> |
| 44 | <b>X.</b>    | <b>APPLICABILITY AND DUTY TO COMPLY .....</b>                                 | <b>24</b> |
| 45 |              |   |           |

1 **I. Statutes, Administrative Rules, And Related Permit Requirements Applicable To The**  
2 **Proposed Facility**

3 This section identifies the Oregon statutes and administrative rules that KFB must  
4 address in the ASC, and related state and federal permits and approvals.

5 **(a) Energy Facility Siting Council**

6 **Statute and Rule References:** Statutes pertaining to the regulation of energy  
7 facilities, starting at ORS 469.300, and administrative rules in OAR Chapter 345,  
8 including the general provisions of Division 1 and the requirements of Divisions 21,  
9 22, 24, 26 and 27 (as discussed further below).

10 **Permit:** An energy facility site certificate is required before construction or  
11 operation.

12 **Discussion:**

13 OAR Chapter 345, Division 21 (Application for Site Certificate)

14 See Section V for a discussion of specific information to be included in the ASC per  
15 the requirements of OAR 345-021-0010.

16 OAR Chapter 345, Division 22 (General Standards for Siting Facilities)

17 All general standards in OAR Chapter 345, Division 22, apply to the proposed  
18 facility.

19 OAR Chapter 345, Division 24 (Specific Standards for Siting Facilities)

20 Specific standards addressed in OAR Chapter 345, Division 24, apply to the  
21 proposed facility, including: Siting Standards for Transmission Lines (OAR 345-  
22 024-0090).

23 OAR Chapter 345, Division 26 (Construction and Operation Rules for Facilities)

24 If the Council issues a site certificate for the proposed facility, the certificate holder  
25 must implement a compliance plan, as described in OAR 345-026-0048 and  
26 periodically must submit reports as described in OAR 345-026-0080.

27 OAR Chapter 345, Division 27 (Site Certificate Conditions)

28 The site certificate will contain the mandatory conditions, applicable site-specific  
29 conditions, and monitoring conditions described in OAR 345-027-0020, -0023 and -  
30 0028.

31 **(b) Oregon Department of Agriculture, Plant Division — Native Plant**  
32 **Conservation Program**

33 **Statute and Rule References:** ORS Chapter 564 (Wildflowers; Threatened or  
34 Endangered Plants); and OAR Chapter 603, Division 73 (Plants: Wildflowers and  
35 Endangered, Threatened, and Candidate Species).

36 **Permit:** None required.

1           **Discussion:** The Oregon Department of Agriculture (ODA) provides technical  
2 review and recommendations regarding compliance with the Council’s threatened  
3 and endangered species standard (OAR 345-022-0070) as it relates to plant species.

4           OAR 603-073-0070 contains the state list of endangered and threatened plant  
5 species. OAR 603-073-0080 gives ODA the authority to designate candidate  
6 plants. If KFB finds any state-listed threatened or endangered plant species that  
7 may be affected by the proposed facility, KFB must address the requirements of  
8 OAR 603-073-0090(5)(d)(A)-(E) in the ASC.

9           KFB should include in its ASC a list of both state- and federally-listed endangered,  
10 threatened, and candidate plant species that have potential to occur in the analysis  
11 area. KFB should identify these species based on a review of literature,  
12 consultation with knowledgeable individuals, and reference to the list of species  
13 maintained by the Oregon Natural Heritage Program.<sup>1</sup>

14           KFB should include in its ASC a description and the results of a field survey for the  
15 listed plant species. The survey must be conducted by a person with expertise in  
16 field botany, plant taxonomy and biological conservation. The survey should be  
17 conducted during the time of year when it is possible to identify any listed plants  
18 (usually when these plants are in flower or fruit). The field survey report should  
19 include written descriptions of the survey methods and areas surveyed. KFB should  
20 consult with the Oregon Department of Agriculture, Native Plant Conservation  
21 Program, regarding field survey methods, appropriate survey seasons, qualifications  
22 of field survey personnel, and the information to be included in the field survey  
23 report.

24           **(c) Oregon Department of Environmental Quality — Air Quality Division**

25           **Statute and Rule References:** 40 CFR Part 72 (Acid Rain Permits Regulation);  
26 ORS Chapters 468A (Air Quality); OAR Chapter 340, Division 216 (Air  
27 Contaminant Discharge Permits); Division 218 (Oregon Title V Operating Permits;  
28 Division 224 (Major New Source Review)

29           **Permits:** Air Contaminant Discharge Permit (ACDP), Prevention of Significant  
30 Deterioration (PSD) Permit, Federal Operating Permit (Title V), and Acid Rain  
31 Permit (Title IV)

32           **Discussion:** The air quality permit program is delegated by the US Environmental  
33 Protection Agency to the Oregon Department of Environmental Quality (DEQ).  
34 The Council does not have jurisdiction for determining compliance with the  
35 applicable law. However, the Council may rely on the determinations of  
36 compliance and the conditions in federally delegated permits in making its

---

<sup>1</sup> OAR 345-022-0070 applies only to state-listed plant and animal species. Nevertheless, OAR 345-021-0010(1)(q) requires applicants to consider plant and animal species listed as endangered or threatened under both state and federal law. This requirement applies because the Council, in making its decision, must be mindful of possible adverse impacts to federally listed species. Note also that OAR 345-022-0070 applies to all lands affected by a proposed facility including state, federal and private lands.

1 determination about whether other standards and requirements under Council  
2 jurisdiction are met. Under OAR 345-021-0000(7), the Department shall not find  
3 an ASC complete unless the applicant has submitted one copy of all of its federally  
4 delegated permit applications. In addition, as described in OAR 345-021-0000(7),  
5 before the Department may find the ASC complete, KFB must submit to the  
6 Department a letter or other indication from DEQ stating that DEQ has received the  
7 permit applications from KFB, identifying any additional information DEQ is likely  
8 to need from KFB based on DEQ's review of the application as submitted, and  
9 estimating the date when DEQ will complete its review and issue its permit  
10 decision. This condition applies to the ACDP or PSD permit. KFB must submit  
11 the Title V Federal Operating Permit and Acid Rain Permit, if applicable,  
12 applications to DEQ within one year after the facility begins operation.

13  
14 In addition to the air quality requirements listed above, the Council may request  
15 additional information concerning air quality impacts if the information provided in  
16 obtaining the appropriate air quality permits is insufficient to determine compliance  
17 with other standards (e.g. 345-022-0040 Protected Areas). Transport of air quality  
18 emissions can lead to both near field and distant impacts that affect both human  
19 health, the environment, and visibility. The NOI does not specify the potential  
20 emission rates from the proposed facility. Without this information, ODOE is  
21 unable to determine what type of air quality permit would be required for  
22 construction and operation of the proposed facility. Because the type of air quality  
23 permit that would be required for construction and operation of the proposed  
24 facility cannot be ascertained, the level of air quality analysis that would be  
25 required by the DEQ with respect to the required air quality permit remains unclear.  
26 Depending upon the type of air quality permit the applicant must obtain from the  
27 DEQ, the applicant must include in the ASC sufficient information to enable the  
28 Council to determine whether its energy facility siting standards have been met.

29  
30 The proposed facility will be located outside Klamath Falls, Oregon. Parts of the  
31 County and City are "maintenance" areas for carbon monoxide and PM<sub>10</sub> and non-  
32 attainment for PM<sub>2.5</sub>, meaning that they have not consistently met the National  
33 Ambient Air Quality Standards (NAAQS). It is believed that the facility will be  
34 outside of these areas, in a part of the County that is in attainment of the NAAQS.  
35 If the facility is designed with a "potential to emit," as defined in OAR 340-200-  
36 0020, for any regulated pollutant that would define the facility as a "federal major  
37 source," as defined in OAR 340-200-0020, the DEQ would require the facility to  
38 obtain a Prevention of Significant Deterioration permit. Regardless of the type of  
39 air quality permit the applicant seeks, DEQ will require the applicant to prepare an  
40 air quality analysis for determining whether the ambient air quality standards and  
41 PSD increments will be exceeded in Class I and Class II areas as described in OAR  
42 340-204-0050. For a PSD permit application, the applicant will also be required to  
43 include an Air Quality Related Values (AQRV) analysis for Class I areas as  
44 described in OAR Chapter 340, Division 225. For gas fired electric generating  
45 facilities subject to major source review, the Council has found that the standards  
46 for siting energy facilities (OAR Chapter 340, Division 22) that could be adversely

1 affected by air emissions from the proposed facility will be met if the applicant  
2 applies for and receives a PSD air quality permit through the DEQ.

3  
4 If the applicant were to propose a facility with a “potential to emit” below “federal  
5 major source” levels, a PSD permit would not be required. However, a non-PSD  
6 Air Contaminant Discharge Permit would be required. Although the DEQ would  
7 not require AQRV analysis for such an air quality permit, ODOE will require this  
8 analysis as part of the ASC to ensure that the standards for siting energy facilities  
9 (OAR Chapter 340, Division 22) have been met. In particular, the AQRV analysis  
10 should show that the facility will not adversely affect Class I areas as those areas  
11 are defined by DEQ. Also, the Council has previously relied on the DEQ major  
12 source review to find compliance with its Protected Area Standard, OAR 345-022-  
13 0040. Therefore, regardless of what DEQ permitting path applies, the ASC should  
14 contain sufficient analysis of air quality impacts for the Council to determine if the  
15 air emissions would adversely affect the areas listed in its Protected Area standard.

16  
17 The requirements of an AQRV analysis should be determined through consultation  
18 between the applicant and DEQ regardless of whether the analysis is required solely  
19 for the ASC, but should include visibility and deposition impact assessment. The  
20 AQRV and air quality analysis should include impacts from not only the boiler  
21 stack, but also cooling towers, fugitive road dust and fuel and ash handling, if fuel  
22 or ash handling is intended to be performed in unenclosed areas. Any other sources  
23 not clearly defined in the NOI may also require inclusion.

24  
25 The U.S. EPA has recently issued proposed Maximum Achievable Control  
26 Technology (MACT) rules for hazardous air pollutants (HAPs) that may affect this  
27 project if promulgated in the fourth quarter of 2010. These rules, known to apply to  
28 major and area source Industrial, Commercial, and Institutional Boilers and Process  
29 Heaters may require additional pollution control equipment not identified in the  
30 NOI. Since the emission rates of HAPs from the boiler are not specified in the  
31 NOI, it is unknown whether these rules will be applicable. If these rules are  
32 applicable, the ASC must identify the pollution control equipment that will be  
33 installed in order to comply and provide details about any potential impacts of  
34 waste streams from these devices.

35  
36 **(d) Oregon Department of Environmental Quality — Water Quality Division**

37 **Statute and Rule References:** ORS Chapter 468B (Water Quality); OAR Chapter  
38 340, Divisions 40 (Groundwater Quality Protection), 45 (Regulations Pertaining To  
39 NPDES and WPCF Permits), 48 (Certification of Compliance with Water Quality  
40 Requirements and Standards), and 7I (Onsite Wastewater Treatment Systems).

41 **Permits:** National Pollutant Discharge Elimination System (NPDES), Section 401  
42 Water Quality Certification, Water Pollution Control Facilities (WPCF), and onsite  
43 wastewater system permits.

1  
2  
3 **Discussion:**

4 OAR Chapter 340, Division 45 (NPDES and WPCF Permits)

5 In accordance with OAR 345-021-0000(7), KFB must submit to the Department  
6 one copy of all applications for federally-delegated permits (including NPDES  
7 permits). The applicant must also provide a letter or other indication from the  
8 Oregon Department of Environmental Quality (DEQ) stating that the agency has  
9 received a permit application from the applicant, identifying any additional  
10 information the agency is likely to need from the applicant based on the agency's  
11 review of the application as submitted, and estimating the date when the agency  
12 will complete its review and issue a permit decision.

13 The U.S. Environmental Protection Agency has delegated authority to DEQ to issue  
14 NPDES Storm Water Discharge permits for construction and operation activities.  
15 The Council does not have jurisdiction over the federally-delegated NPDES permit,  
16 but the Council may rely on the determinations of compliance and the conditions in  
17 the federally-delegated permit in making its determination about whether other  
18 standards and requirements under the Council's jurisdiction are met.

19 The NOI states that the facility will have an average of 100,000 gallons per day of  
20 process wastewater. If a WPCF permit is required for a process wastewater  
21 evaporation pond, it is a state permit that is under Council jurisdiction. Regulations  
22 pertaining to WPCF permits are in OAR Chapter 340, Division 45. KFB must  
23 include in the ASC all information that would otherwise be required by DEQ in an  
24 application for the permit. The WPCF permit application must include data and  
25 calculations used to determine the most efficient size and location of a process  
26 wastewater evaporation pond.

27 OAR Chapter 340, Division 48 (Certification of Compliance with Water Quality  
28 Requirements and Standards)

29 If a Section 404 Permit is needed from U.S. Army Corps of Engineers for the  
30 discharge of dredge or fill material in Oregon's waters, a Section 401 Water Quality  
31 Certification must be granted by DEQ before a Section 404 permit may be issued. If  
32 a Section 401 Water Quality Certification is required, it is a state permit under  
33 Council jurisdiction. KFB must include in the ASC an itemized demonstration of  
34 each applicable provision in OAR 340-048-0020. If the certification is needed, the  
35 Council will make the issuing decision in consultation with the DEQ.

36 OAR Chapter 340, Division 71 (Onsite Wastewater Treatment Systems)

37 The NOI states that the facility will discharge up to 1,000 gallons of sanitary waste  
38 per day to an onsite septic system. Such discharges may require a WPCF permit  
39 from DEQ. In such event, KFB must first verify that the site is suitable for an  
40 onsite sewage disposal system by applying to DEQ or its designated agency for a

1 site evaluation of groundwater and soil conditions. In the ASC, KFB should  
2 provide information demonstrating that the proposed septic system is exempt from  
3 the WPCF permit requirement or, if it is not exempt, that it meets the requirements  
4 for a permit.

5 **(e) Oregon Department of Environmental Quality – Land Quality Division**

6 **Statute and Rule References:** ORS Chapters 465 and 466 (Hazardous Waste and  
7 Hazardous Materials I and II); and OAR Chapter 340, Divisions 100 through 122  
8 (Hazardous Waste Management).

9 **Permit:** None required.

10 **Discussion:** KFB must include in the ASC a list of all hazardous materials that  
11 potentially would be stored or used at the facility site during construction and  
12 operation. KFB must comply with DEQ regulations concerning the use of  
13 hazardous materials and the clean up and disposal of hazardous wastes. The  
14 requirement is incorporated in the general standard of review, OAR 345-022-0000.

15 The DEQ hazardous waste program implements requirements of the U.S.  
16 Environmental Protection Agency (EPA) and is a federally-delegated program.  
17 However, information on hazardous materials use and storage is important in  
18 determining the potential for spills that could adversely affect soils and potentially  
19 affect the cost and success of site restoration. A complete ASC would include  
20 sufficient information on plans and programs for storage of hazardous materials and  
21 management of hazardous waste for DEQ to comment on their adequacy.

22 **(f) Oregon Department of Environmental Quality — Noise Control Regulations**

23 **Statute and Rule References:** ORS 467.020 and ORS 467.030 (Noise Control);  
24 and OAR Chapter 340, Division 35 (Noise Control Regulations).

25 **Permit:** None required

26 **Discussion:** The proposed facility must comply with the noise control regulations  
27 for new industrial facilities. The requirement is incorporated in the general  
28 standard of review, OAR 345-022-0000.

29 KFB shall include a noise analysis in the ASC. The analysis must contain  
30 information to support a finding by the Council that the proposed facility would  
31 comply with the requirements of OAR 340-035-0035.

32 **(g) Oregon Department of Fish and Wildlife**

33 **Statute and Rule References:** ORS Chapter 496 (Application, Administration and  
34 Enforcement of Wildlife Laws); ORS Chapter 498 (ORS 498.301 through  
35 498.346—Screening and By-pass Devices for Water Diversions or Obstructions);  
36 ORS Chapter 506 (ORS 506.036—Protection and Propagation of Fish and ORS  
37 506.109—Food Fish Management Policy); ORS Chapter 509 (ORS 509.140—  
38 Placing Explosives in Waters and ORS 509.580 through 509.910—related to Fish

1 Passage); and OAR Chapter 635, Division 100 (Wildlife Diversity Plan) and  
2 Division 415 (Fish and Wildlife Habitat Mitigation Policy).

3 **Permit:** None required

4 **Discussion:**

5 OAR Chapter 635, Division 100 (Wildlife Diversity Plan)

6 The Oregon Department of Fish and Wildlife (ODFW) provides technical review  
7 and recommendations on compliance with Council standards. ODFW will base its  
8 review and recommendations on state wildlife policy and threatened and  
9 endangered species policy (Application, Administration and Enforcement of  
10 Wildlife Laws, see ORS 496.012 and ORS 496.171 - 192).

11 OAR Chapter 635, Division 100, provides authority for adoption of the state  
12 sensitive species list and the Wildlife Diversity Plan and contains the State list of  
13 threatened and endangered wildlife species. KFB should include in its ASC a list of  
14 both state-listed and federally-listed threatened and endangered wildlife species and  
15 State Sensitive Species that have potential to occur in the analysis area. KFB  
16 should identify these species based on a review of literature, consultation with  
17 knowledgeable individuals, and reference to the list of species published by the  
18 Oregon Natural Heritage Information Center.

19 KFB should include in its ASC a description and the results of a field survey for the  
20 listed wildlife species performed by qualified survey personnel during the season or  
21 seasons appropriate to the detection of these species. The field survey report should  
22 include written descriptions of the survey methods and areas surveyed. KFB should  
23 consult with ODFW regarding field survey methods, appropriate survey seasons  
24 and qualifications of field survey personnel.

25 OAR Chapter 635, Division 415 (Fish and Wildlife Habitat Mitigation Policy)

26 OAR Chapter 635, Division 415, classifies six habitat categories and establishes a  
27 mitigation goal for each category. KFB must identify the appropriate habitat  
28 category for all areas affected by the proposed facility and provide the basis for  
29 each category designation. The ASC should identify any impacts that project  
30 construction and operation will have on fish and wildlife habitat quality and  
31 quantity, and describe the actions that will be taken to mitigate for these impacts,  
32 consistent with the goals of the Mitigation Policy. These actions may include  
33 avoiding certain habitat areas, limiting the timing of construction to avoid sensitive  
34 time periods for wildlife, or compensation for unavoidable losses. The ASC should  
35 also describe how mitigation actions would be monitored and evaluated to ensure  
36 the success of mitigation.

37 **(h) Oregon Department of Geology and Mineral Industries**

38 **Statute and Rule References:** OAR 345-022-0020

39 **Permit:** None required.

1 **Discussion:** The Department of Geology and Mineral Industries (DOGAMI)  
2 provides technical review and recommendations on compliance with the Council's  
3 structural standard, OAR 345-022-0020. In its ASC, KFB must include a  
4 geotechnical report that includes, as a minimum, the information required by OAR  
5 345-021-0010(1)(h). Also relevant is the information required by OAR 345-021-  
6 0010(1)(i). (See Section V of this project order for additional discussion  
7 concerning ASC requirements.)

8 **(i) Oregon Parks and Recreation Department**

9 **Statute and Rule References:** ORS 97.740 - 760(Indian Graves and Protected  
10 Objects); ORS 358.905 - 961 (Archaeological Objects and Sites); ORS 390.010  
11 (Outdoor Recreation); ORS 390.235 (Archaeological Sites and Historical Material);  
12 and OAR Chapter 736, Division 51 (Archaeological Permits).

13 **Permit:** An archaeological permit may be required to conduct archaeological  
14 investigations of the site.

15 **Discussion:** The Oregon Parks and Recreation Department provides technical  
16 review and recommendations on compliance with Council standards.

17 The State Historic Preservation Office (SHPO) within the Oregon Parks and  
18 Recreation Department provides technical review and recommendations in  
19 reference to the Council's Historic, Cultural and Archaeological Resources  
20 Standard (OAR 345-022-0090). The ASC should include an archaeological and  
21 cultural survey conducted by a qualified archaeologist. KFB should work as early  
22 as possible with SHPO to ensure that KFB provides required information in  
23 SHPO's preferred formats.

24 **NOTE:** Information concerning the location of archaeological sites or objects may be exempt  
25 from public disclosure under ORS 192.501(11). Specific location information should not be  
26 included in the text of ASC. Such information, including archaeological survey reports,  
27 should be provided separately only after consultation with the Department.

28 **(j) Oregon Department of State Lands — Removal-Fill Authorizations**

29 **Statute and Rule References:** ORS 196.800 - 990 (Removal of Material; Filling);  
30 and OAR Chapter 141, Division 85 (Administrative Rules Governing the Issuance  
31 and Enforcement of Removal-Fill Authorizations Within Waters of Oregon  
32 Including Wetlands).

33 **Permit:** A removal-fill permit is required if any removal or fill activities occur in  
34 streams designated as Essential Indigenous Anadromous Salmonid Habitat (ESH)  
35 or 50 cubic yards or more of material is removed, filled or altered within a  
36 jurisdictional water of the State [OAR 141-085-0520(2) and (4)].

1           **Discussion:** In Oregon, the removal fill permit is issued by the Department of State  
2 Lands (DSL) separately from the 404 permit issued by the U.S. Army Corps of  
3 Engineers. DSL will review a joint permit application (JPA) for compliance with  
4 DSL wetland mitigation requirements. Note that in some cases the DSL wetland  
5 mitigation success criteria may differ from and exceed those of the Corps.

6           KFB should include information in the ASC to support a finding on whether a  
7 removal-fill permit is needed. KFB should consult with the Department of State  
8 Lands and obtain its concurrence, which may require a formal delineation of  
9 wetlands and waters of the State within the site boundary. If a removal-fill permit  
10 is needed, the ASC must include an itemized demonstration of each applicable  
11 provision of ORS 196.825 (Criteria for Issuance of a Permit) and OAR 141-085-  
12 0550 (Application Requirements for All Authorizations). If the permit is needed,  
13 the Council will make the issuing decision in consultation with the Department of  
14 State Lands.

15           **(k) Oregon Water Resources Department — Water Rights/Adjudications Division**

16           **Statute and Rule References:** ORS Chapters 536 through 540 (Water  
17 Resources/Water Rights); and OAR Chapter 690 (Water Resources Department).

18           **Permit:** Water right.

19           **Discussion:** The NOI states that water may be obtained from either Collins Timber  
20 or a new, onsite, private groundwater well. As a result, it is unknown whether a  
21 new water right will be required.

22           KFB should include information in the ASC to support a finding of whether a water  
23 right is or is not required. The ASC must identify the sources of water to be used  
24 by the proposed facility during construction and operation, the water right under  
25 which the water would be provided, the quantity of water needed, and the means of  
26 disposal of all water discharges from the proposed facility.

27           If a new water right or water right transfer is required, the ASC must include  
28 information to support a finding for issuance of a groundwater or surface water  
29 permit under ORS Chapter 537 (Appropriation of Water Generally) or transfer of a  
30 water use under ORS Chapter 540 (Transfer or Forfeiture of Water Rights),  
31 including a discussion and evaluation of all relevant factors, including those factors  
32 listed in ORS 537.153(2) and (3), ORS 537.170(8) and OAR Chapter 690,  
33 Divisions 310 (Water Right Application Processing) and 380 (Water Right  
34 Transfers). If a permit or transfer is needed, the Council will make the issuing  
35 decision in consultation with the Oregon Water Resources Department.

36           **(l) U.S. Army Corps of Engineers**

37           **Statute and Rule References:** OAR 345-048-0032

38           **Permit:** Section 404 Permit is required for the discharge of dredged or fill material  
39 in Oregon's waters.

1           **Discussion:** If the project requires any dredge or fill of water bodies, KFB must  
2 submit to the Department one copy of an application for a federally-delegated  
3 Section 404 permit, in accordance with OAR 345-021-0000(7). The DSL  
4 (removal-fill permit) and the U.S Army Corps of Engineers (Corps) (Section 404  
5 permit) use a joint application form. The applicant must also provide a letter or  
6 other indication from the Corps stating that the agency has received a permit  
7 application from the applicant, identifying any additional information the agency is  
8 likely to need from the applicant based on the agency's review of the application as  
9 submitted, and estimating the date when the agency will complete its review and  
10 issue a permit decision.

11           The Council does not have jurisdiction over the federally-delegated Section 404  
12 permit, but the Council may rely on the determinations of compliance and the  
13 conditions in the federally-delegated permit in making its determination about  
14 whether other standards and requirements under the Council's jurisdiction are met.

## 15   **II. NATIVE AMERICAN TRIBES**

16           **Statute and Rule References:** Not applicable

17           **Permit:** None

18           **Discussion:** The ASC should include evidence of consultation with affected tribes,  
19 including the Klamath Tribes, the Confederated Tribes of Siletz Indians, the  
20 Confederated Tribes of Warm Springs, the Confederated Tribes of Grand Ronde, and the  
21 Burns Paiute Tribe regarding archaeological and cultural sites and materials within the  
22 site boundary. The affected tribes provide technical review and recommendations in  
23 reference to the Council's Historic, Cultural and Archaeological Resources Standard  
24 (OAR 345-022-0090).

## 25   **III. APPLICABLE LOCAL GOVERNMENT ORDINANCES**

26           **Statute and Rule References:** Applicable substantive criteria from the Klamath County  
27 code and comprehensive plan.

28           **Permit:** Conditional Use Permit; Site Plan Review Permit; Site Evaluation Permit and  
29 an Installation Permit for the on-site sewage disposal system; Building Permits for  
30 structural, electrical, plumbing, and mechanical specialties; a Road Approach Permit  
31 (depending upon the results of the Traffic Impact Analysis).

32           **Discussion:** In the NOI, KFB states that it intends to satisfy the Council's land use  
33 standard by obtaining local land use approval from Klamath County under ORS  
34 469.504(1)(a). The choice of land use path can be changed until the ASC is submitted.  
35 Once the ASC is submitted, the choice of land use path is fixed. If KFB demonstrates  
36 land use compliance through local review, the ASC should contain documentation from  
37 the City that all land use requirements have been met and that KFB has applied for any  
38 needed local permits.  
39

1 The plan reviews performed by the county building official are not part of the EFSC  
2 review, but any site certificate issued would be conditioned on proper application to the  
3 county for the building permits described above.

#### 4 **IV. OTHER CONSTRUCTION-RELATED REGULATIONS**

5 If the Council issues a site certificate, the certificate holder must comply with  
6 construction-related regulations that apply to the proposed facility. As provided under  
7 ORS 469.401(4), the site certificate does not address these regulations.

#### 8 **V. APPLICABLE REQUIREMENTS FROM OAR CHAPTER 345, DIVISION 21**

##### 9 OAR 345-021-0000 (General Requirements)

10 All requirements apply. KFB must submit the information required by OAR 345-021-  
11 0000, particularly the information in sections (6) and (7) regarding the status of non-  
12 federally-delegated and federally delegated permits.

##### 13 OAR 345-021-0010 (Contents of an Application)

14 The ASC should include the information described in OAR 345-021-0010(1), which  
15 requires the applicant to include in its ASC the information necessary to address each  
16 provision of the rules identified in this project order, as well as the information from 345-  
17 021-0010(2) and (3). Each of the paragraphs below indicates which provision(s) of OAR  
18 345-021-0010(1)(a) – (dd) will apply to the Klamath Falls Bioenergy Facility.

##### 19 **(a) Exhibit A – General Information about the Applicant**

20 Paragraphs (A) through (D) apply. Note that paragraph (B) calls for a list of  
21 “participating persons, other than individuals.” “Person” is defined in OAR 345-  
22 001-0010(45). Include in the ASC information about all third-party entities  
23 (persons other than individuals) that are important to the facility.

##### 24 **(b) Exhibit B – General Information about the Proposed Facility**

25 All paragraphs apply except (A)(vii) and (viii). Paragraph (D) applies only if the  
26 transmission line associated with the Klamath Falls Bioenergy Facility meets the  
27 definition of an energy facility per ORS 469.300.

28 KFB must include a physical description and a description of the location of all  
29 components of the facility including, but not limited to, the boiler, the turbine  
30 generator buildings, outdoor heat recovery steam generators, cooling towers,  
31 water treatment building, indoor and outdoor fuel and ash storage piles, on-site  
32 fuel and ash loading areas, on-site fuel unloading areas, water tanks, control and  
33 administration building, retention or evaporation ponds, generators, auxiliary  
34 transformers, pollution control equipment, switchyard, access roads, road  
35 modifications, transmission lines, and interconnection facilities. KFB must  
36 describe any improvement or modification of existing structures, including roads.

1 The NOI states that the transmission line from the facility will be approximately  
2 1.5 miles in length to the substation. OAR 345-021-0010(1)(b)(D)(i) – (viii) is  
3 not applicable as long as the Klamath Falls Bioenergy Facility transmission line is  
4 less than 10 miles in length and will not cross more than one county jurisdiction.

5 **(c) Exhibit C – Location**

6 Maps included in Exhibit C should provide enough information for property  
7 owners potentially affected by the facility to determine whether their property is  
8 within or adjacent to the site. Major roads should be named. The ASC should  
9 include identification of lands enrolled in the Conservation Reserve Program and  
10 lands currently used for commercial agriculture. KFB should include maps drawn  
11 to a scale of 1 inch = 2,000 feet when necessary to show detail. Maps should  
12 indicate the “site boundary” as defined in OAR 345-001-0010(53).

13 **(d) Exhibit D – Organizational Expertise**

14 All paragraphs apply.

15 **(e) Exhibit E – Permits**

16 All paragraphs apply.

17 **(f) Exhibit F – Property Owners**

18 The NOI states that the facility will be located outside of the Klamath Falls urban  
19 growth boundary in an area zoned Heavy Industrial (IH). Accordingly, the  
20 distance in paragraph (B) of OAR 345-021-0010(f) applies (250 feet from the site  
21 boundary).

22 **(g) Exhibit G – Materials Analysis**

23 All paragraphs apply. See discussion in Section I.D (Oregon Department of  
24 Environmental Quality) of this project order regarding the importance of listing  
25 hazardous materials used and stored at the facility, or at temporary access and  
26 material staging areas. ODOE also uses the materials analysis to identify any  
27 hazardous materials whose storage could affect site restoration.

28 KFB must identify any chemicals that may be used in the cooling towers and/or in  
29 the process wastewater evaporation ponds. If a solid precipitate is created or if  
30 any other liquids or solids requiring disposal will accumulate (such as in the  
31 evaporation ponds, or material generated during maintenance activities), KFB  
32 must provide information concerning the storage, treatment, and/or disposal of the  
33 material. If KFB plans to send waste materials offsite to a licensed facility for  
34 treatment and/or disposal the ASC must describe the method that will be used to  
35 demonstrate that the material will not pose a threat to human health and the  
36 environment during storage or transport.

1           **(h) Exhibit H – Geology**

2           All paragraphs apply except OAR 345-021-0010(h)(E).

3           The ASC should include all results of field and laboratory investigations and any  
4           other geotechnical and geologic hazard site evaluations that have been conducted.  
5           A thorough ground shaking amplification, liquefaction, and lateral spread analysis  
6           with all of the calculations, methodologies, and recommendations based on this  
7           site-specific analysis will be required.

8                    **NOTE:** OAR 345-021-0010(1)(h), paragraphs (A), (F)(i), and (F)(iv), each contain  
9                    references to potentially outdated guidelines and codes. The applicant should consult directly  
10                   with the Oregon Department of Geology and Mineral Industries regarding the most current  
11                   standards the applicant should use in preparing information for the ASC. The ASC should  
12                   note the codes and guidelines used to prepare information in Exhibit H and provide an  
13                   explanation if any are different from those cited in the Council’s rules.

14           **(i) Exhibit I – Soils**

15           All paragraphs apply.

16           KFB should include information describing the impact of construction and  
17           operation of the proposed facility on soil productivity in farm zones. This  
18           includes analysis of deposition impacts from cooling tower drift and combustion  
19           pollutants. KFB should also provide detailed descriptions of how erosion and  
20           runoff will be controlled during construction and operation. Describe all  
21           measures proposed to maintain soil productivity during construction and  
22           operation. KFB should consult with local farmers, landowners, and soil  
23           conservation districts regarding mitigation of impacts to farmland. Erosion  
24           control should also be emphasized due to the proximity of the Klamath River and  
25           the location of the Miller Island State Wildlife Area as well as the Lower Klamath  
26           National Wildlife Refuge.

27           Biomass facilities generate ash and potentially wastes associated with pollution  
28           control equipment on the boiler. The applicant should describe the methods of  
29           disposal for this material. If land application is a potential use of the material, the  
30           applicant should describe the impact to soils and any constituents of concern.

31           Runoff from outdoor storage piles of wood debris are typically acidic and may  
32           impact soils. Additionally, runoff of outdoor storage piles of boiler ash are  
33           typically basic and may contain concentrated contaminants that may impact soils.  
34           The applicant should describe the long-term impacts of outdoor storage of  
35           materials on soils at the site.

36           **(j) Exhibit J – Jurisdictional Waters**

37           All paragraphs apply.

38                    **NOTE:** OAR Chapter 141, Division 85 (“Administrative Rules Governing the Issuance and  
39                   Enforcement of Removal-Fill Authorizations Within Waters of Oregon Including Wetlands”) was recently revised. The citations in OAR 345-021-0010(1)(j) to rules in Division 85 of  
40                   OAR Chapter 141 are no longer valid. For example, reference to OAR 141-085-0010 should  
41                   now be 141-085-0510 (Definitions). The citation to OAR 141-085-0018 should now be to  
42                   now be 141-085-0510 (Definitions). The citation to OAR 141-085-0018 should now be to

1 OAR 141-085-0520. The applicant should consult directly with the Oregon Department of  
2 State Lands if there are any questions regarding the applicable regulations.

3 **(k) Exhibit K – Land Use (Statewide Planning Goals)**

4 The NOI stated that KFB would seek local land use approval from Klamath  
5 County under ORS 469.504(1)(a). On June 15, 2010 Klamath Falls Bioenergy  
6 submitted a written change to the Notice of Intent information revising this  
7 election and stating that KFB will be seeking a land use determination from the  
8 Council under ORS 469.501(1)(b). KFB may change this election, but the election  
9 is final when the ASC is submitted.

10 **(l) Exhibit L – Protected Areas**

11 All paragraphs apply.

12 **(m) Exhibit M – Financial Capability**

13 All paragraphs apply.

14 **(n) Exhibit N – Need for the Facility**

15 Exhibit N does not apply.

16 **(o) Exhibit O – Water Use**

17 All paragraphs apply.

18 **(p) Exhibit P – Fish and Wildlife Habitat**

19 All paragraphs apply.

20 **(q) Exhibit Q – Threatened and Endangered Species**

21 All paragraphs apply.

22 **(r) Exhibit R – Scenic Resources**

23 All paragraphs apply. Include visual depictions of the project's impact on scenic  
24 resources within the analysis area, if visual depictions are available.

25 **(s) Exhibit S – Historic, Cultural and Archaeological Resources**

26 All paragraphs apply.

27 **(t) Exhibit T – Recreation**

28 All paragraphs apply.

29 **(u) Exhibit U – Public Services**

30 All paragraphs apply. Include an analysis of estimated facility-related traffic  
31 during construction and operation and the potential impact on traffic safety.  
32 Discuss transportation of heavy equipment and shipments of facility components

1 during construction, including proposed transportation routes, anticipated traffic  
2 volume and potential damage to public roads.

3 **(v) Exhibit V – Solid Waste and Wastewater**

4 All paragraphs apply.

5 Include in this exhibit information about obtaining a hazardous waste  
6 determination for excavated soils.

7 If process wastewater is disposed using land application, the ASC must also  
8 include data and calculations used to determine the most efficient size and  
9 location of the land application area, i.e., land application area that will achieve  
10 the purpose of disposing of process wastewater giving due consideration to  
11 conservation of land, soil and protection of surface and groundwater resources. If  
12 process wastewater is disposed using an evaporation pond, the ASC must include  
13 data and calculations used to determine the most efficient size of any process  
14 wastewater evaporation pond, i.e., pond size that will achieve the purpose of  
15 disposing of process wastewater giving due consideration to conservation of the  
16 water resource, including a description of precipitate or other solid waste that  
17 would be generated by operation of a process wastewater evaporation pond.

18 **(w) Exhibit W – Facility Retirement**

19 All paragraphs apply. Explain and justify the methodology used to estimate  
20 retirement costs.

21 **(x) Exhibit X – Noise**

22 All paragraphs apply. The ASC should include documentation of any waivers  
23 that KFB needs if the predicted noise levels at an affected property exceed the  
24 ambient degradation standard. All noise generating sources associated with site  
25 operations must be considered including, but not limited to, machinery and  
26 vehicle operations.

27 **(y) Exhibit Y – Carbon Dioxide Emissions**

28 Exhibit Y does not apply.

29 **(z) Exhibit Z – Cooling Tower Impacts**

30 All paragraphs apply.

31 **(aa) Exhibit AA – Electric and Magnetic Fields**

32 All paragraphs apply to any transmission line, regardless of size, that is a related  
33 or supporting facility, including collector lines.

34 **(bb) Exhibit BB – Other Information**

35 Any information requested in this project order that is not addressed in any other  
36 exhibit.

1           **(cc) Exhibit CC – Other Law**

2           Exhibit CC applies.

3           **(dd) Exhibit DD – Specific Standards**

4           Paragraph (C) applies. Per Section I(a) of this project order, the applicant should  
5           include in Exhibit DD information to support findings by the Council that the  
6           proposed facility complies with the Siting Standards for Transmission Lines  
7           (OAR 345-024-0090).

8  
9           **VI. ANALYSIS AREAS FOR THE PROPOSED FACILITY**

10          The analysis areas are the minimum areas that KFB must study for potential impacts from  
11          the construction and operation of the proposed facility. The analysis areas described in  
12          this project order do not limit the applicant’s responsibility to assess the potential impacts  
13          of the facility. They are the areas in which significant adverse impacts from the proposed  
14          facility are likely to occur. If significant impacts could occur beyond the analysis areas  
15          described here, then KFB must assess those impacts in the ASC and show how the  
16          facility would comply with the applicable standard with regard to the larger area where  
17          impacts could occur.

18          For all potential impacts, the analysis area includes all the area within the site boundary.  
19          In addition to the definition of “site boundary” in OAR 345-001-0010(53), the site  
20          boundary includes temporary laydown and staging areas, turn-around areas and  
21          equipment transport corridors (if required). In its ASC, KFB must describe the site  
22          boundary and provide a map showing the proposed site boundary.

23          The analysis areas are included in the following table:

| Affected Standard or Resource | Exhibit | Analysis Area   |
|-------------------------------|---------|---|
| Structural Standard           | Exh. H  | The area within the site boundary, notwithstanding the distances related to an assessment of seismic hazards required by OAR 345-021-0010(1)(h).  |
| Soils                         | Exh. I  | The area within the site boundary.  |
| Wetlands                      | Exh. J  | The area within the site boundary, and wetland areas hydrologically connected to wetlands within the site boundary.   |
| Land Use                      | Exh. K  | To be determined by the Klamath County Planning Department. If the applicant decides to seek a Council determination of facility compliance with statewide planning goals, the study area shall be within the site boundary and one-half mile from the site boundary. |
| Protected Areas               | Exh. L  | The area within the site boundary and 20 miles from the site boundary.  |
| Fish and Wildlife Habitat     | Exh. P  | The area within the site boundary and within one-half mile from all ground disturbing activities anticipated during construction, unless otherwise described in an ODFW- and ODOE-approved protocol.  |

1

| Affected Standard or Resource                   | Exhibit | Analysis Area  |
|---|---------|--|
| Threatened and Endangered Species               | Exh. Q  | The area within the site boundary and 5 miles from the site boundary.  |
| Scenic and Aesthetic Values                     | Exh. R  | The area within the site boundary and 10 miles from the site boundary.   |
| Historic, Cultural and Archaeological Resources | Exh. S  | The area within the site boundary.   |
| Recreational Opportunities                      | Exh. T  | The area within the site boundary and 5 miles from the site boundary.  |
| Public Services                                 | Exh. U  | The area within the site boundary and 10 miles from the site boundary, except that the ASC should also include an evaluation of impacts to the nearest health care facilities, which are in the city of Klamath Falls. |

2 **VII. COMMENTS FROM REVIEWING AGENCIES AND THE PUBLIC**

3 **(a) Public Comments**

4 In addition to the applicable statutes, rules, and land use requirements listed in  
5 this Project Order, the ASC must address issues arising from public comments following

1 the informational meeting on the NOI (OAR 345-015-0130). Pursuant to OAR 345-015-  
2 0160(1)(g), the issues raised in public comments are summarized in this Project Order.

3 ODOE heard public comments and concerns at public meetings held on May 5  
4 and June 15, 2010 in Klamath Falls. The public comment period on the NOI extended  
5 from the date the NOI was received until June 30, 2010. ODOE received over 80  
6 comments electronically and via US Mail.

7 Because there was considerable duplication among comments, the ODOE has  
8 identified in the summary below the issues raised that KFB should address in its ASC.  
9 Not all issues and questions raised in the public comments are matters within the EFSC  
10 jurisdiction; however, the ODOE expects KFB to work directly with the public and with  
11 local governments to address comments to the extent practical. The enclosed summary  
12 below is not a substitute for the original comments, nor do they represent the opinions of  
13 the ODOE or the EFSC.

#### 14 **1. Comments Related to Impacts to Agricultural Land**

- 15 • There will be negative impacts to nearby agricultural lands.
- 16 • The water usage of the facility will negatively impact availability of water  
17 to farmers in the Klamath Basin.

#### 18 **2. Comments Related to Environmental and Cultural Impacts**

- 19 • There will be negative impacts to air quality, from the proposed facility as  
20 well as increased diesel truck traffic (PM2.5).
- 21 • The facility will emit toxic chemicals.
- 22 • There will be air pollution from ash and sawdust.
- 23 • The facility is adjacent to a non-attainment area for PM2.5; increased  
24 truck traffic will contribute to this existing problem.<sup>2</sup>
- 25 • There will be negative impacts to migratory wildlife, including birds and  
26 deer.
- 27 • There will be negative impacts to nearby Miller Island State Wildlife  
28 refuge.
- 29 • There will be negative impacts to water quality.
- 30 • There is potential for spread of noxious weeds.
- 31 • Slash removal may have negative impacts on forest habitat.
- 32 • There will be impacts to six wildlife refuges in the Klamath Basin.
- 33 • The facility's water use will reduce flows in the Klamath River.
- 34 • Water pollution from the facility will negatively impact birds and bird  
35 habitat.
- 36 • There will be negative impacts to salmon habitat.
- 37 • Local tribal entities should be involved with this project.
- 38 • The facility is located on a Native American grave site.
- 39 • There is a historic gravesite on the proposed project site.
- 40 • The proposed facility location is within a wetland or floodplain.
- 41 • The facility will pollute the Klamath River.
- 42 • Light pollution from the facility will affect wildlife.

**EXHIBIT CC**

**Additional Statutes, Rules, and Ordinances**

OAR 345-021-0010(1)(cc)

**TABLE OF CONTENTS**

|   | <b>Page</b> |
|---|-------------|
| CC.1 INTRODUCTION .....   | CC-1        |
| CC.2 ADDITIONAL STATUTES, RULES, AND ORDINANCES .....                           | CC-1        |
| CC.2.1 Statutes, Rules, and Local Ordinances Referenced in Other Exhibits ..... | CC-1        |
| CC.2.2 Spill Response Statutes .....  | CC-3        |

**TABLE**

|   |      |
|---|------|
| CC-1 Statutes, Rules, and Local Ordinances Referenced in Other Exhibits ..... | CC-1 |
|---|------|



CC.1 INTRODUCTION

Klamath Falls Bioenergy, LLC (Applicant) proposes to construct the Klamath Falls Bioenergy Facility (Facility) near the City of Klamath Falls, Oregon (City). The proposed Facility will produce a total of 42 megawatts (MW), of which 37 MW will be exported to the electric grid. The site is zoned for heavy industrial land use and currently is used as pastureland.

CC.2 ADDITIONAL STATUTES, RULES, AND ORDINANCES

**OAR 345-021-0010(1)(cc)** *Identification, by legal citation, of all state statutes and administrative rules and local government ordinances containing standards or criteria that the proposed facility must meet for the Council to issue a site certificate, other than statutes, rules and ordinances identified in Exhibit E, and identification of the agencies administering those statutes, administrative rules and ordinances. The applicant shall identify all statutes, administrative rules and ordinances that the applicant knows to be applicable to the proposed facility, whether or not identified in the project order. To the extent not addressed by other materials in the application, the applicant shall include a discussion of how the proposed facility meets the requirements of the applicable statutes, administrative rules and ordinances.*

CC.2.1 Statutes, Rules, and Local Ordinances Referenced in Other Exhibits

Response:

Table CC-1 identifies by legal citation and relevant administering agency the state statutes and administrative rules and local government ordinances referenced in other Exhibits with the exception of Exhibit E. The identified statutes, rules, and ordinances contain standards or criteria that the proposed Facility must meet for the Council to issue a site certificate.

TABLE CC-1  
Statutes, Rules, and Local Ordinances Referenced in Other Exhibits

| Permit Name  | Agency Name and Address  | Authority   | Relevant Exhibit  |
|--|--|---|---|
| <b>Oregon Department of Agriculture—Plant Conservation Biology Program (also called the Native Plant Conservation Program)</b> | Oregon Department of Agriculture<br>635 Capitol Street, N.E.<br>Salem, OR 97301-2532<br>(503) 986-4550             | ORS 564; OAR Chapter 603, Division 73                                       | Exhibit Q discusses plant species in the Facility area that are threatened or endangered.               |
| <b>Oregon Department of Environmental Quality—Water Quality</b>  | Oregon Department of Environmental Quality<br>2146 NE 4th Street,<br>Suite 104<br>Bend, OR 97701<br>(541) 388-6146 | ORS Chapter 468 and 468B; OAR Chapter 340, Divisions 14, 41, 45, 52, and 55 | Exhibit O discusses the required water quality permits and Facility compliance with these requirements. |

TABLE CC-1  
Statutes, Rules, and Local Ordinances Referenced in Other Exhibits

| <b>Permit Name</b>  | <b>Agency Name and Address</b>   | <b>Authority</b>  | <b>Relevant Exhibit</b>   |
|---|--|---|---|
| <b><i>Oregon Department of Environmental Quality—Noise</i></b>                      | Oregon Department of Environmental Quality<br>811 SW Sixth Avenue<br>Portland, OR 97204-1390<br>(503) 229-5696                 | ORS 467; OAR Chapter 340, Division 35                   | Exhibit X contains an analysis of noise impacts from the Facility and compliance with required thresholds.  |
| <b><i>Oregon Department of Environmental Quality—Hazardous Waste Management</i></b> | Oregon Department of Environmental Quality<br>811 SW Sixth Avenue<br>Portland, OR 97204-1390<br>(503) 229-5696                 | ORS 465 and 466; OAR Chapter 340, Divisions 100-122     | Exhibit G describes proposed measures for managing hazardous waste generated by the Facility.   |
| <b><i>Oregon Department of Environmental Quality—Solid Waste</i></b>                | Oregon Department of Environmental Quality<br>811 SW Sixth Avenue<br>Portland, OR 97204-1390<br>(503) 229-5696                 | ORS 459; OAR Chapter 340, Division 93                   | Exhibit V describes proposed measures for managing solid waste generated by the Facility.   |
| <b><i>Oregon Department of Fish and Wildlife—Habitat Conservation Division</i></b>  | Oregon Department of Fish and Wildlife<br>3406 Cherry Avenue N.E.<br>Salem, OR 97303<br>(503) 947-6000                         | ORS 496 and 506; OAR Chapter 635, Divisions 100 and 415 | Exhibits J, P, and Q address Facility impacts on wetlands, fish and wildlife habitat, and threatened or endangered species, respectively. Proposed mitigation measures are described. |
| <b><i>Oregon Department of Geology and Mineral Industries</i></b>                   | Oregon Department of Geology and Mineral Industries<br>800 NE Oregon Street, Suite 965<br>Portland, OR 97232<br>(971) 673-1555 | OAR Chapter 632   | Exhibit H describes seismic issues related to Facility construction and operation.  |
| <b><i>Oregon Office of State Fire Marshal—EPCRA</i></b>                             | Oregon Office of State Fire Marshal<br>4760 Portland Rd NE<br>Salem, OR 97305<br>(503) 378-3473                                | ORS 453; OAR Chapter 837, Divisions 85 and 95           | Exhibit U contains information on emergency response procedures and coordination with state and local emergency response providers, including the state fire marshal.                 |
| <b><i>Department of Land Conservation and Development</i></b>                       | Department of Land Conservation and Development<br>635 Capitol St. N.E.<br>Suite 150<br>Salem, OR 97301-2540<br>(503) 373-0050 | ORS 197; OAR Chapter 660                                | Exhibit K addresses Facility adherence to Oregon state and local land use laws and requirements.  |
| <b><i>Oregon Division of State Lands</i></b>  | Oregon Division of State Lands<br>775 Summer St. N.E., Suite 100<br>Salem, OR 97301-1279<br>(503) 378-3805                     | ORS Chapter 273 and 274; OAR Chapter 141                | Exhibit F contains County and State data on land ownership in the vicinity of the Facility.   |

## CC.2.2 Spill Response Statutes

Response: State and federal provisions include requirements for responding to, or reporting, spills or release of various hazardous materials under a variety of circumstances or conditions. These statutes and rules include the following: ORS 466.635, OAR Chapter 340, Divisions 45, 47, 108, 122, 150, 160; 33 CFR part 153; and 40 CFR parts 110, 122, 262, 265, 280, 302, 355, 761. In the event of a release the Applicant will inform the Oregon Emergency Management Division, the Oregon Department of Environmental Quality, and/or the Oregon Department of State Police, depending on the nature of the release.

**EXHIBIT DD**  
**SPECIFIC STANDARDS FOR WIND FACILITIES**  
OAR 345-021-0010(1)(dd)

**TABLE OF CONTENTS**

|   | <b>Page</b> |
|---|-------------|
| DD.1 INTRODUCTION .....                                 | DD-1        |
| DD.2 WIND ENERGY FACILITIES.....                        | DD-1        |
| DD.3 GAS FACILITIES.....                                | DD-1        |
| DD.4 TRANSMISSION LINES UNDER COUNCIL JURISDICTION..... | DD-1        |



**DD.1 INTRODUCTION**

**OAR 345-021-0010(1)(dd)** *If the proposed facility is a facility for which the Council has adopted specific standards, information about the facility providing evidence to support findings by the Council as required by the following rules:*

**DD.2 WIND ENERGY FACILITIES**

**OAR 345-021-0010(1)(dd)(A)** *For wind energy facilities, OAR 345-024-0010 and -0015.*

**Response:** Klamath Falls Bioenergy, LLC (Applicant) is not proposing to build a wind energy facility; as a result, OAR 345-021-0010(1)(dd)(A) does not apply.

**DD.3 GAS FACILITIES**

**OAR 345-021-0010(1)(dd)(B)** *For surface facilities related to underground gas storage reservoirs, OAR 345-024-0030, including information required by OAR 345-021-0020.*

**Response:** The proposed Klamath Falls Bioenergy Facility (Facility) does not include underground gas storage reservoirs. Therefore, OAR 345-021-0010(1)(dd)(B) does not apply.

**DD.4 TRANSMISSION LINES UNDER COUNCIL JURISDICTION**

**OAR 345-021-0010(1)(dd)(C)** *For any transmission line under Council jurisdiction, OAR 345-024-0090.*

**Response:** The Facility does not include a transmission line that meets the definition of an energy facility under Council jurisdiction. However, the 69-kilovolt (kV) power line is a related or supporting facility. For information regarding compliance with OAR 345-024-0090 for this related or supporting facility, see Exhibit AA.