JDMT, Inc

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Mr. Michael Waugh
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California Air Resources Board
Sacramento, CA 95814
Via email: mwaugh@arb.ca.gov

Submitted: http://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=lcfssustain-ws&comm_period=1

SUBJECT: CALIFORNIA LOW CARBON FUEL STANDARD SUSTAINABILITY
Comments to Proposed Sustainability Principles 4, 5, 6 and 7

Dear Mr. Waugh:

Air Resources Board (ARB) staff has requested that members of the Low Carbon Fuel Standard (LCFS) Sustainability Workgroup comment in detail upon the four Principles and their sub-parts discussed during the last workgroup meeting on Wednesday, July 20, 2011. I am pleased to provide my comments to the draft Principles as requested. The ARB has developed the draft Principles from an aggregate of many resources, including the Workgroup sessions, presentations by specialists, and through research into the many global Sustainability-related certification schemes now being formulated and refined. It is hoped that these comments help clarify the path to formal submission of Sustainability provisions to the Board for consideration.

The Sustainability Workgroup has selected a suite of twelve key Sustainability Principles; those addressed in these comments are highlighted: (1) Legality; (2) Planning, monitoring, and continuous improvement; (3) GHG emissions; (**4) Conservation and biodiversity; (5) Soil; (6) Water; (7) Air;** (8) Use of technology, inputs and management of waste; (9) Human and labor rights; (10) Rural and social development; (11) Local food security; and (12) Land rights.

The outlined sub-parts identify the most important concepts for each principle, detailing the requirements of the Responsible Operators from the farm level Feedstock Producer, to the Feedstock Processor, to the Biofuel Producer. From these discussions, we hope to develop concepts for incentives, for methods of reporting, and an infrastructure for implementation of the Sustainability criteria within the broader LCFS provisions.

General Comments are offered first on this stage of LCFS Sustainability development, then Specific Comments following the outline provided to the Workgroup come next.

GENERAL COMMENTS

It is important to understand how the assigned Tasks were developed for our Sustainability Workgroup, and the relationship of Sustainability to the overall LCFS program. I suggest we establish a "preamble" and more closely divide our work into the Workgroup's five assigned tasks. The following comments outline the origin of our Tasks.

This collaborative process is charged with establishing sub-elements to the LCFS program as a whole. A clear LCFS Program Statement could assist us, one overarching guideline against

which we can measure all subsequent Principles and their sub-parts. That Statement might be best extracted from Governor Schwarzenegger's Executive Order (EO) S-01-07 of January 18, 2007. EO S-01-07 became part of the regulation, and Item 4 provides the core of the LCFS Program Statement:

"*The LCFS shall apply to all refiners, blenders, producers or importers ("Providers") of transportation fuels in California, shall be measured on a full fuels cycle basis, and may be met through market-based methods by which Providers exceeding the performance required by a LCFS shall receive credits that may be applied to future obligations or traded to Providers not meeting the LCFS*."

- EO S-01-07 first defines the Providers, (1) **Refiners**; (2) **Blenders**; (3) **Producers**; and (4) **Importers.** The LCFS is applicable to these Providers with carbon intensity assessments being made on a "full fuels cycle" basis. Note that this differs from our description of *Responsible Operators* as (1) *Feedstock Producer,* (2) *Feedstock Processor,* and (3) *Biofuel Producer*. We must have a clear understanding of how Providers are the same as and how they differ from Responsible Operators. Clarification of applicability under the LCFS and identification of the regulated parties is necessary.

- The EO offers a two-step hybrid process combining aspects of both mandatory and voluntary standards through which program goals may be met, utilizing market-based methods:
  - Establish a baseline level of required performance, then
  - Allocate tradable credits to Providers for exceeding that level of performance.

- **Our development of Sustainability Principles might best take this same multi-level approach, first establishing a minimum performance standard to be offered to the Board as regulatory criteria, then second defining for each Principle how a Provider's efforts might *exceed* the regulatory baseline, sufficient to warrant tradable credits.**

- Following the January 2010 passage of the first part (sans carbon intensity values) of the LCFS regulations, Resolution 09-31 directed staff to develop a series of LCFS Workgroups to address stakeholder questions and concerns from the Rulemaking process in a series of Resolution elements intended to provide guidelines for program implementation. Page 17 of Resolution 09-31 provides the core guidance for the Sustainability Workgroup development of provisions:

  "*BE IT FURTHER RESOLVED that the Board directs the Executive Officer to work with IFWG, appropriate state agencies, environmental advocates, regulated parties, and other interested stakeholders to present a workplan to the Board by December 2009 for developing sustainability provisions to be used in implementing the LCFS regulation. The workplan should include, but not be limited to, a science-based definition of sustainability; how the sustainability provisions can incentivize sustainable fuels; what provisions will be reviewed for inclusion in the LCFS regulation; the framework for how sustainability provisions could be incorporated and enforced in the LCFS program; and a schedule for finalizing sustainability provisions by no later than December 2011, unless the Executive Officer determines that such actions are not feasible and not appropriate*."

- From this are derived five Sustainability Workgroup Tasks, re-ordered to improve work flow:
  1. Develop a science-based definition of sustainability;
  2. Determine what provisions will be reviewed for inclusion in the LCFS regulation;

3. Determine how the sustainability provisions can incentivize sustainable fuels;
4. Develop the framework for how sustainability provisions could be incorporated and enforced in the LCFS program; and
5. Develop a schedule for finalizing sustainability provisions (timeline caveat modified).

Task 1: We need to agree upon a "Science-based Definition of Sustainability"; I would ask that this be revisited in light of our growing understanding. As a base, we can consider the standing definitions in use by institutions and agencies of purview, starting with the US Environmental Protection Agency (EPA):

> "*The traditional definition of sustainability calls for policies and strategies that meet society's present needs without compromising the ability of future generations to meet their own needs.*"

The EPA also provides a key to the dilemma of balancing economics and environmental protection:

> "*Sustainable development reflects not the trade-off between business and the environment but the synergy between them*."

National delineation of what constitutes "sustainability" is closely linked with national greenhouse gas programmatic development, just as California's LCFS emissions based program must include an element of Sustainability. Two federal Executive Orders (EO) are particularly instructive: EO 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" of 2007 was codified in 2009, addressing efficiency and emissions management. EO 13514 followed, enhancing EO 13423 by requiring agencies to reduce energy and water intensity and achieve other specific sustainability goals.

Task 2: We have accomplished the first major part of Task 2 by establishing a set of twelve Sustainability Provisions. We have now begun to refine each Provision by developing specific Principles as sub-parts for later Board consideration and possible inclusion in the final LCFS regulations.

This Task may be aided by development of a simplified table-format matrix of the 12 Sustainability Provisions. The Matrix should then compare our LCFS Sustainability Provisions with the key criteria of each of the seven sustainability certification programs just recognized by the European Commission (EC). Attention should be paid to comparing only similarly ranked Provisions for presence / absence. Greater detail may always be added and referenced. The base Matrix should be constructed to facilitate rapid recognition of the key similarities and differences.

The seven EC-recognized schemes include: (1) ISCC (International Sustainability and Carbon Certification); (2) Bonsucro EU; (3) RTRS EU RED (Round Table on Responsible Soy EU RED); (4) RSB EU RED (Roundtable of Sustainable Biofuels EU RED); (5) 2BSvs (Biomass Biofuels voluntary scheme); (6) RSBA (Abengoa RED Bioenergy Sustainability Assurance), and (7) Greenergy (Greenergy Brazilian Bioethanol verification programme).

The EC's recognition of the seven biofuels sustainability schemes depends upon inclusion of the following **minimum key criteria**:

- A set of **land use criteria**: It is not allowed to convert land with high carbon stock or land with high biodiversity value into land used for production of biofuels. In plain words: No forests – whether tropical forests or natural forests – can be destroyed to grow biofuels. No wet land can be dried and no protected areas can be used.

- A minimum amount of **greenhouse gas savings** over the whole production chain: Biofuels need to stand a comparison with fossil fuels such as petroil: Only if it is proven that they emit at least 35% less greenhouse gases then petroil, than they are seen as sustainable. In 2017 these savings have to be at least 50%. Biofuels produced from new installations have to save at least 60% from 2018.

- The system needs to **monitor the whole production chain** from how the crops are grown through the manufacturing process to the pump.

Additional Concerns: California's LCFS would be well-advised to clearly meet the EC's minimum key criteria. We expect to interact with the global biofuels marketplace, especially for the importation of sustainable biofuels; the LCFS program should be designed to garner global recognition and parity. Our Workgroup efforts should thus establish specific "sustainability" elements for each of the three minimum key criteria.

As agreed during our workshops, it is not useful to curtail productive discussions simply because they do not fit a strict agenda. Yet once a key issue is raised that is more appropriate to subsequent Tasks, I suggest we table the detailed discussions for a later date. We have had lengthy discussions pertinent to Task 3, considering how specific best management practices might be incentivized.

The "incentives" issue will need to be addressed as a separate Task 3 in the mandated report to the Board. For example, reference recently to mandatory vs. voluntary LCFS aspects is a core concern of Task 3 and must be well in hand before we can approach Task 4, to craft mechanisms for inclusion and enforcement within the subsequent LCFS regulatory structure.

SPECIFIC COMMENTS

Throughout our Specific Comments, we point to and offer modifications of current wording that we believe risks layering unnecessary "bedroom regulation" on top of our world-standard California Environmental Quality Act (CEQA). Minor word changes can in most instances reign in what we perceive to be excessive control, where we are best served by reliance on existing law and regulation. CEQA was based upon and designed to strengthen the National Environmental Protection Act (NEPA); the introduction to the EPA's own Sustainability program points out that NEPA provides the basis for today's implementation of sustainable, environmentally responsible development.

Staff text is *italicized*; deletions are shown by ~~strikethrough~~; inserted wording is underlined. Clarifying comments are indented. Where no comments are offered, the text is acceptable as it stands.

Principle 4: Conservation and Biodiversity - *Biological diversity is conserved or enhanced by ~~protecting~~* proper management *of land with high biodiversity value or high carbon stock ~~and avoiding~~* that avoids or mitigates *negative impacts from biomass production and biofuel operations.*

Responsible Operators: Feedstock Producer, Feedstock Processor, Biofuel Producer

> "Proper management" according to an accepted management plan is NOT the same thing as "protection", an emotionally charged word denoting a "hands-off" attitude. Mitigation of unavoidable negative impacts is acceptable under CEQA and NEPA disallowed here.

4.1 A good practices environmental management plan (part of Principle 2) is implemented that includes practices that conserve or enhance biological diversity.

4.1.1 Conservation values within areas of biomass/biofuel operation are ~~identified through an environmental impact assessment~~, assessed *and the ~~protection~~* proper management *of those areas is established.*

Existing regulations already have a process that leads to a determination of whether a Project requires a formal environmental assessment. We do not want to suggest the need for a "CEQA Equivalent" requirement that might supersede existing standards. Again we suggest substitution of "proper management" linked to a Management Plan, rather than reference to ubiquitous "protection".

4.1.2 The responsible operator uses available expertise, *maps and databases to help identify conservation values* appropriate to the level of project assessment required*.*

Not all biofuels production projects will require the same intensity of assessment. The NEPA and CEQA determinations of impact significance associated with a Project should be the guideline.

4.1.3 If ~~the~~ an *impact assessment identifies areas where biomass/biofuel production ~~directly affects~~* causes a significant negative impact upon *ecosystem functions and services, the responsible operator shall show that practices are in place to* avoid or *mitigate negative impacts (e.g. creation of riparian buffer zones, maintenance of natural barriers or hedgerows, etc.)*

Do not allow our Sustainability Provisions to stray outside of standard environmental impact assessment regulatory requirements, unless there is a clear and over-riding element of "sustainability" that is NOT covered in such regulations. We should rely on the decades of CEQA to provide proper assessment of what is and is not a "Project", and to what degree that Project might create a significant negative impact. CEQA already contains provisions to accommodate special circumstances, for example by providing Program EIR mechanisms to address multi-project, regional concerns.

4.1.4 Fragmentation of habitats is minimized by the protection, restoration, or creation of ecological corridors and buffer zones, according to an approved Management Plan and within the context of existing environmental impact assessment regulations.

Resist the temptation to make all-inclusive statements without regard to scale, impact significance or inherent project socio-environmental value. Highways "fragment habitats" by their very nature, but are considered to provide more good than the harm they cause. CEQA cases have implemented mitigation measures for highway construction habitat fragmentation such as game under-pass structures.

4.2 No areas defined as nationally or internationally as protected or classified as High Conservation Value (HCV) areas shall be used ~~after _____ unless~~ without assessment and adherence to an approved management plan, or as otherwise *legally authorized. (Refer to www.hcvnetwork.org)*

4.2.1 Biomass production in areas of high biodiversity is to be *avoided* unless all actions are undertaken according to an approved management plan that indicates no resultant unmitigated significant impact*.*

~~4.2.2 Biomass production on grassland with high biodiversity is avoided.~~

Delete as redundant; grasslands are a subset of 4.2.1.

4.2.3 Natural structure or "primal" *~~F~~forest conversion to plantations or non-forest land uses is* to be *avoided*, unless all actions are undertaken according to an approved management plan that indicates no resultant unmitigated significant impact..

4.3 The status of rare, threatened, and endangered species and their habitats are identified and their conservation taken into account in management plans and operations.

4.3.1 The responsible operator shows compliance with all national and local laws protecting the conservation of rare, threatened, or endangered species or habitats and takes effective steps to maintain conservation of those areas.

~~*4.3.2 The responsible operator shows that the management plan considers rare and endangered species that may be outside of the geographic area of biomass/biofuel operations but have migration or travel routes that cross into the area of biomass/biofuel operations.*~~

Delete as redundant; endangered species are covered as a subset of 4.3.1 sub-principles.

~~*4.3.3 The responsible operator shows that measures are in place for management of hunting, fishing, trapping, ensnaring of rare and endangered species in areas of biomass/biofuel operations.*~~

Delete as redundant; this is already a prohibited activity under existing law and need not be called out as a special criterion.

4.4 The use of exotic species are monitored and controlled. The risk of invasive species invading areas outside the operation site is minimized.

4.4.1 The responsible operator shows that no species or subspecies *identified as noxious or highly invasive or which is officially prohibited nationally will be used at the biofuel operation sites (e.g. using the CALWEED database or Global Invasive Species database)*

4.4.2 The responsible operator shows that if invasive species are found, the management plan identifies measures to mitigate and control the invasion.

Principle 5: Soil

Soil ~~*quality is maintained or improved*~~ degradation is to be minimized or improved *by* ~~*minimizing erosion and*~~ developing and adhering to management practices that ~~*promoting*~~ promote ~~*healthy biological systems and*~~ balanced, resilient biological, *chemical and physical* ~~*properties*~~ characteristics.

As noted by Dr. Kaffka during our many workshops considering this issue, soil "quality" and soil "health" are indeed qualitative, not quantitative, measures that can incorporate a great number of variables. The choice of what might be included is very subjective and depends upon perspective.

Responsible Operator: Feedstock Producer, Feedstock Processor (when employing on-site processing)

5.1 An environmental management plan (part of Principle 2) is developed and *implemented that includes an impact assessment and practices that prevent or reverse soil degradation over the long term. Nutrient levels of soil or plants and soil are assessed and monitored.* ~~*Erosion is avoided and field travel zones are limited.*~~

5.1.1 The environmental management plan shall include practices to maintain and improve nutrient levels, soil pH, soil organic matter, soil biodiversity, ~~*avoid*~~ along with practices that minimize and mitigate impacts of *compaction and* ~~*prevent*~~ *salinization of the soil. The responsible operator assesses and monitors nutrient levels of the soil to improve soil health and uses soil maps where available.*

It is impossible to work on soil without causing compaction; it is also good agricultural practice to mitigate soil compaction. In many areas, irrigation waters and sub-surface waters are saline and evapotranspiration can only increase soil salinity.

5.1.2 The responsible operator shows that practices/techniques to reduce or avoid erosion are understood and in place (e.g. organic direct planting, permanent soil cover, crop rotation, terracing, etc.) according to a pre-approved erosion management plan compliant with the National Pollutant Discharge Elimination Standard (NPDES).

5.1.3 The responsible operator shows that the use of agricultural and forestry residues are not used at the expense of improved source-site *soil health and soil productivity.*

The concept here is to avoid "forest soil stripping", an avoidance of removing too much down timber and brush and allowing the forest soil to incrementally become infertile. The current wording may be too subtle.

5.1.4 ~~None of the c~~Chemicals prohibited for use on a project site under California law, or if outside of California, as locally mandated. At a minimum, chemicals banned from use as *recorded in the World Health Organization's (WHO) 1a, 1b, or 2 lists should be used.*

This is the California LCFS; we need to observe California standards first unless other laws supersede. Biofuels originating from outside of California should adhere to local laws unless these are less stringent than the WHO standards.

5.1.5 The responsible operator shows compliance with local, state, federal and/or international *laws and regulations with respect to waste ~~storage and handling~~* management*.*

Principle 6: Water

Water quality and quantity of surface and groundwater shall be maintained or improved while respecting water rights.

Responsible Operator: Feedstock Producer, Feedstock Processor, Biofuel Producer

6.1 An environmental management plan (part of Principle 2) shall be developed and implemented that includes an assessment of the potential impacts on water quality and quantity from the proposed *biomass/biofuel operations.*

6.1.1 Water used for biomass/biofuel production shall not be ~~withdrawn beyond~~ extracted at a rate and for a duration greater than the *replenishment capacity of the water table* sufficient to cause significant unmitigated negative impact on surround natural or agrarian needs*.*

6.1.2 The responsible operator shall provide evidence that the water management plan identifies any negative impacts resulting from biomass/biofuel operations on water resources of the local communities and ecosystems that rely on that water and that they are mitigated.

This proposed wording is a combination of 6.1.2.and 6.2.1, deleted below as redundant.

6.1.3 Irrigation is carried out responsibly and according to best management practices (BMPs) ~~or legislation~~.

In all cases, there is already an over-arching requirement to abide by pertinent laws that need not be continually restated.

~~*6.1.4 In drought-prone areas, irrigation shall not be used unless evidence is shown that water used for biomass/biofuel operations does not deplete the natural water table levels.*~~

There is probably some logical reason, based on a specific known example that prompted the inclusion of this statement in its source document. If so, the logic escapes me. Clearly,

irrigation improves agriculture in drought-prone areas. Just as clearly, the natural water table must already assumed to be stressed in such drought-prone areas and may actually benefit by introduction of irrigation. The only possible useful interpretation would duplicate the concerns driving 6.1.1.

6.1.5 The responsible operator shall provide evidence that BMPs are applied that reduce water use and maintain and improve water quality (recycling, waste storage handling, waste discharge, fertilizer use).

6.1.6 The responsible operator shall perform ~~an annual~~ periodic *review*s as agreed upon in the approved *~~of~~ the management plan and report on its effectiveness.*

Period reviews are necessarily, but only when and as indicated in a pre-approved plan.

6.1.7 The responsible operator shows compliance with ~~local~~ pertinent *laws and regulations with respect to waste-*water *~~storage and handling~~* management, to include obtaining proper use and discharge permits as required.

6.2 Both formal and customary water rights are respected; where conflicts arise, the principle of "do no harm" shall supersede.

~~6.2.1 The water management plan shall assess whether biofuel operations negatively affect the water supply of the local communities and ecosystems that rely on that water and identify any mitigation measures.~~

Delete; combined with 6.1.2.

~~6.3 Pursuant to Principle 1 (Legality), responsible operator shall obtain and comply with applicable water use and discharge permits from local, regional, state, and/or federal agencies.~~

Delete; combined with 6.1.7.

Principle 7: Air

Air pollution from biofuel production shall be minimized.

Responsible Operators: Feedstock Producer, Feedstock Processor, Biofuel Producer

7.1 A good practices environmental management plan (part of Principle 2) is implemented that includes minimization of air pollution emissions.

7.1.1 The responsible operator shows that air pollutants released from the biomass/biofuel operations are identified and a mitigation plan is in place.

7.2 The responsible operator shows that open-air burning as part of land clearing or waste disposal is avoided.

7.2.1 National interpretation should identify any specific situations where such use of fire may be acceptable, for example through reference to 'Guidelines for the implementation of the ASEAN policy on zero burning', or comparable guidelines in other locations.

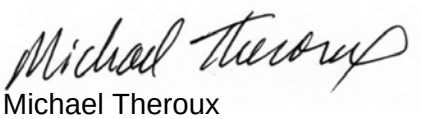
7.3 Pursuant to Principle 1 (Legality), responsible operator shall obtain and comply with applicable air pollution permits from local, regional, state, and/or federal agencies.

It is intriguing that the most direct and cohesive Principles would be those directly within the purview of the Air Resources Board. The simplicity of the above Air Principles should be followed for Biodiversity, and Soil and Water, which are under the purview of and regulated by other state agencies.

Please contact me at mtheroux@jdmt.net or (530) 613-1712 if you have any questions.

Sincerely,

JDMT, Inc



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Vice President

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