STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 North Orchard • Boise, Idaho 83706 • (208) 373-0550

C.L. "Butch" Otter, Governor
Curt Fransen, Director

July 30, 2012

CERTIFIED MAIL NO. 7009 0820 0000 2799 9413
RETURN RECEIPT REQUESTED

Doyle Pergande, P.E.
Dynamis Energy, LLC
776 E. Riverside Drive, Ste. 150
Eagle, ID 83616

Re: Non-Municipal Solid Waste Management Facility Design Plan Approval Application (Revised July 5, 2012)
Proposed Renewable Energy Project Located At Ada County Landfill
DEQ Comments

Dear Mr. Pergande:

On May 18, 2012, the Department of Environmental Quality (Department) received the design plans for the above referenced facility located within Ada County, Idaho. DEQ comments on the design plan were provided to Dynamis Energy, LLC (Dynamis) on June 18, 2012. Dynamis submitted a revised application on July 5, 2012.

The Department has reviewed this revised submittal in accordance with the requirements of IDAPA 58.01.06 Solid Waste Management Rules. The Department finds the application is still incomplete, and in accordance with Section 58.01.06.032.03, this letter hereby notifies Dynamis Energy, LLC that the application is incomplete. Dynamis Energy, LLC may submit additional information in the form of an amended application, withdraw the application, or request a conference to discuss the Department's determination. The basis for our finding the application is incomplete is outlined below.

PROPOSED RENEWABLE ENERGY PROJECT AT HIDDEN HOLLOW LANDFILL

Chapter 4

Drawing 1102-10-P-1002104

General. It appears the leachate piping has been changed from ductile iron to schedule 80 PVC. Dynamis states this pipe material change is in compliance with the 2003 Uniform Plumbing Code, the UPC does not require secondary containment for sanitary sewer pipes, and the UPC does not provide a standard for design or leak detection for gravity sewers.

Leachate is comprised of organic and inorganic chemicals, metals, and biological waste products of decomposition and is typically acidic. The critical differentiation is that leachate composition is not the same as municipal wastewater, and the requirements for

containment are more stringent and are governed by IDAPA 58.01.06, SOLID WASTE MANAGEMENT RULES. Leachate is defined under these rules as:

"A liquid that has passed through or emerged from waste and contains soluble, suspended or miscible materials removed from such waste."

The Uni-Bell Handbook of PVC Pipe, Fourth Edition, August 2001, lists chemical resistance of PVC pipe. This reference confirms that PVC pipe is not resistant to at least a dozen constituents that can be found in leachate (acetone, benzene, carbon disulfide, di-chloroethylene, etc., all of which are listed in Appendix I to 40 CFR Part 258 - Constituents for Groundwater Monitoring). DEQ will not approve the use of PVC pipe in the leachate gravity collection or pressure discharge piping systems as it is incompatible with the potential constituents found in the leachate and compromises the integrity of the collection system.

The revised lift station detail (Drawing No. 1102-04-F-1002038) indicates that double containment piping will be provided on the discharge side of the lift station. However, the revised submittal still has no provision for secondary containment on the gravity side of the leachate collection system which is critical for groundwater protection and also allows for leak monitoring of the annular space.

The leachate collection system is not approvable as designed.

Drawing 1102-04-F-1002038

This drawing still notes this is a "Preliminary Lift Station Design Detail". The design application is to contain final design details upon which the facility will be constructed. Any changes made after approval of the design application will require a separate DEQ review and approval prior to construction. The design details must include both engineered plans and specifications upon which these components will be built. These details must be submitted to DEQ for review.

Pump station materials shall be selected that are appropriate under conditions of exposure to constituents frequently present in leachate.

Multiple pumps shall be provided. Units shall have capacity such that, with any unit out of service, the remaining units will have capacity to handle design flows.

Suitable shutoff and check valves shall be placed on the discharge side of each pump. All shutoff valves and check valves shall be operable from floor level and accessible for maintenance.

Covered wet wells shall have provisions for air displacement to the atmosphere, such as an inverted "j" tube or other means.

Pump controls shall be located outside the wet well.

Alarm systems with a backup power source shall be provided. The alarm shall be activated in cases of power failure, dry well sump and wet well high water levels, pump failure, unauthorized entry, or other cause of pump station failure. Pumping station alarms, including identification of the alarm condition, shall be transmitted to a twenty-four (24) hour response center.

Back-up power supply provisions must be installed.

Drawing p4.1

The plumbing schedule provided still does not address any of the piping material for the leachate collection system. Please revise and resubmit and include a list of piping materials: size, class, joint type (gasket or solvent weld), etc.

General

It is the design engineer's responsibility to select the appropriate materials for construction while taking into account the physical and chemical constraints for the project. Other similar leachate transport systems that have been submitted to and approved by DEQ have utilized butt fusion welded heavy wall HDPE pipe, as it is a piping material with broad chemical resistance characteristics. In addition, the fusion joints provide increased assurance of protection of the environment by minimizing leak pathways associated with gasketed joints. However, there may be other suitable pipe materials that meet both the physical and chemical requirements of your project.

If you have any questions or comments, please call me at 373-0599.

Sincerely,

Jack Gantz, P.E.
Technical I Engineer

c: Mike Reno, EHS – CDHD

ec: Dean Ehlert, DEQ State Office
TRIM 2012BAB182