

A Potential Coal-Fired Boiler Facility

What is a county government's role in issuance of environmental permits by DNR?

They may comment during the public comment opportunities provided by DNR permitting procedures like any other member of the public.

To obtain a permit for a landfill for coal combustion residue and scrubber waste, the facility would need to receive local siting approval from the county board of supervisors.

How does the public provide input during the DNR permitting processes?

The DNR publishes a public notice stating its intent to issue air quality construction and operating permits, for wastewater and storm water operating permits, and for water use permits for such a facility. The public may provide written comments on a proposed permit or they may provide oral comments at a public hearing held by DNR.

The local siting approval process for a landfill includes notice and opportunity for public comment.

What could be the DNR permit requirements for such a facility?

The actual requirements will not be known until the size and type of equipment and emission control equipment, associated support activities and actual location of the facility are known. Typically this information would be included in the permit application submitted by the company applying for the permit.

Air Quality: Two types of permits would be required – one that allows construction and installation of the air pollutant emitting equipment and emission control equipment and one that allows the operation of the equipment. For a coal-fired boiler facility the construction permits would include requirements of the federal Prevention of Significant Deterioration (PSD). PSD requirements assure that impacts to existing air quality are minimized and that public health and welfare are protected. The permit applications must include detailed information on estimated air emissions, proposed equipment and control equipment, why the proposed control equipment and operating practices (like dust control measures) meet the best available control requirements, results of computerized air dispersion modeling which includes real meteorological data and terrain characteristics for the proposed location, and analysis of existing air quality for the area. The permits would include emission limitations for each air pollutant, operating requirements, emission testing requirements, and emission monitoring requirements including some continuous emission monitoring requirements.

The operating permit for such a facility would include the requirements of the federal Title V operating permit program and would include requirements for monitoring, record keeping, and annual reporting to the DNR.

Public notice in a local newspaper and opportunity for public comments are required for both permits.

Water Withdrawal: In order to use groundwater in Iowa, DNR requires two types of permits. The first is a permit to physically construct a well. Public water supplies are those that supply water to 15 service connections, or which serve an average of at least 25 people per day, for at least 60 days of the year. The services of a licensed professional engineer are required to construct public water supply wells. (Otherwise, a private water well construction permit is required from the county).

The second type of permit, required by any user of over 25,000 gallons of water per day, is the water use permit. This is sometimes referred to as the water allocation or water rights permit. These permits are required under Iowa laws that originated during the droughts of the 1950's. The term of these permits is 10 years.

A map showing the precise location of the proposed well must be returned to the DNR. The location of the land upon which the water is to be used must also be shown. For groundwater, available hydrogeological data is reviewed to determine what, if any, further information the applicant must submit. Applicants are required to assist DNR to predict the effects of the withdrawals upon the aquifer and upon neighboring water supplies. DNR may require a survey of surrounding wells (within 1-2 mile radius), to determine the probability of serious well interference. Water quality data, if available, though not specifically mentioned in the rules, is often helpful in determining the aquifer that is being tapped.

Test drilling may be required, and if done, the well logs must be submitted to DNR. Yield tests may be needed, and even controlled aquifer tests using the formal Theis method, are on occasion necessary. These tests are done under the supervision of a registered well driller or a registered professional engineer.

After all the necessary supporting information is received, a summary is written containing recommendations to award or deny the permit. It describes the hydrogeologic context of the proposed withdrawal, the anticipated effects of the proposed withdrawals, and indicates whether verified well interference has been found. The reasons for the inclusion of non-standard permit conditions are indicated in the summary report.

Upon completion of the summary report, DNR publishes a notice of its intent to award a permit. Twenty days are generally allowed for the public to request a copy of the summary report, and to submit comments. At the end of the period, DNR considers all comments and if necessary revises the summary report. The initial decision is then issued, as either a Water Use Permit, or disapproval. Complete disapprovals are very rare. In many cases, though, special conditions are included in the permit. In others, the rates of withdrawal, and the total annual amount of withdrawals, may be reduced from the request, to facilitate beneficial use of the water. Copies of the initial decision are mailed to the applicant, all commenters, and any others who request one.

The permit would require annual reporting of the amount of water pumped and used. Some individual permits may have specific water quality reporting conditions.

Wastewater: If any wastewater treatment systems and discharge would be planned, construction and operating permits would be required. This would include meeting the federal National Pollutant Discharge Elimination System (NPDES) program requirements and the federal effluent guidelines that apply to discharges of wastewater from steam electric power plants. More stringent water quality based requirements may apply depending on the facility's location and the stream to which it would discharge. Such a permit would include monitoring and reporting requirements.

There will undoubtedly be storm water runoff associated with construction of the plant and obtaining and complying with the DNR general storm water permit would be required.

Public notice in a local newspaper and opportunity for public comments are required for both the discharge and storm water permits.

Coal Combustion Residue Landfill: The requirements to obtain this permit include obtaining local siting approval; comprehensive waste planning approval for the facility; an investigation of the geology, soils and groundwater of the site including groundwater monitoring; and a demonstration that the landfill design ensures protection of groundwater and surface water. All plans and specifications must be approved by the Department prior to start-up.

What ongoing monitoring and enforcement will occur to assure that permit requirements and DNR rules are met?

The DNR permits will include monitoring, record keeping and reporting. The facility itself is the first line of defense in assuring continuous compliance with permit requirements. DNR staff check monitoring reports and periodically inspect such facilities to assure that compliance is occurring. The DNR field staff would be responsible for this oversight activity.

Are Iowa's standards for permitting less stringent than another state's?

For both air and wastewater there are federal standards that such a facility would be required to meet in any location. Iowa does not have any unhealthy air areas whereas another state may. If such a facility were to have a significant impact on an unhealthy air area, it would be required to meet more stringent standards and provide offsetting emission reductions.

What are the typical requirements for continuous monitoring for such a facility?

The actual requirements will not be known until the size and type of equipment and emission control equipment, associated support activities and actual location of the

facility are known. However, for air emissions continuous monitoring for sulfur dioxide, nitrogen oxides, carbon monoxide and opacity would be required.

Will coal be stockpiled at the facility and what could be the environmental impact?

Coal would be stockpiled at such a facility. The size or quantity of coal needed on site will depend on the size of the boiler and other factors. Dust control measures like application of dust suppressants and measures to control precipitation runoff from the coal piles would be required.

Will the water withdrawal needs of the facility adversely impact neighbors or existing wells?

One of the important purposes of the water use permit process is to assure no adverse impacts to existing wells in the area.

Will the facility complete an environmental impact statement in compliance with the federal National Environmental Policy Act?

The State of Iowa does not require environmental impact statements.

The general purposes of this requirement are

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
- achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Will any impact analysis be done with regard to impact to Endangered Species?

Survey and analysis for endangered species is part of preparation of an environmental impact statement.