

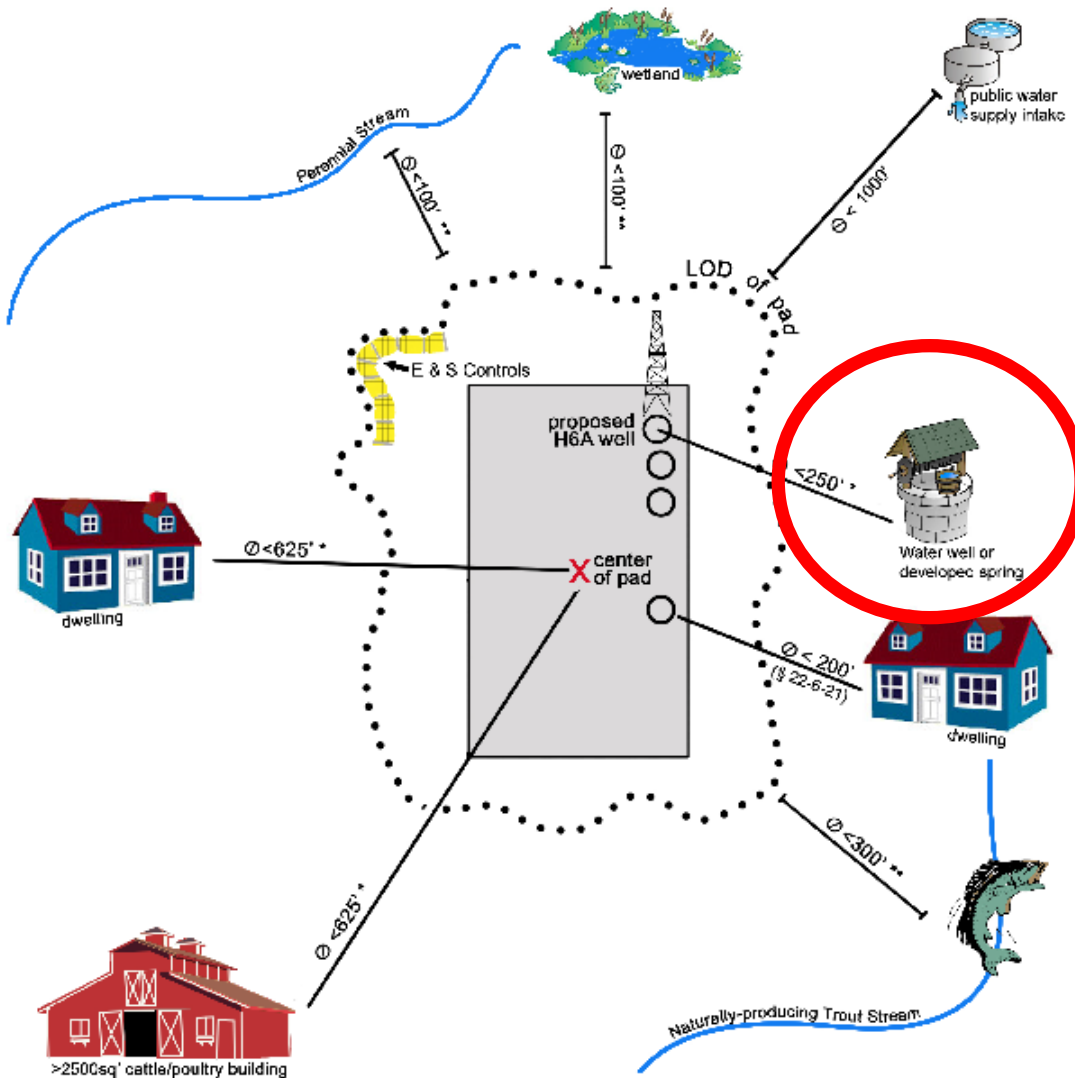


WELL LOCATION RESTRICTIONS

Kelly Kees, P.E.

DEP Office of Oil and Gas

H6A Well Location Restrictions



* Unless a waiver is provided from owner of water well, dwelling or farm

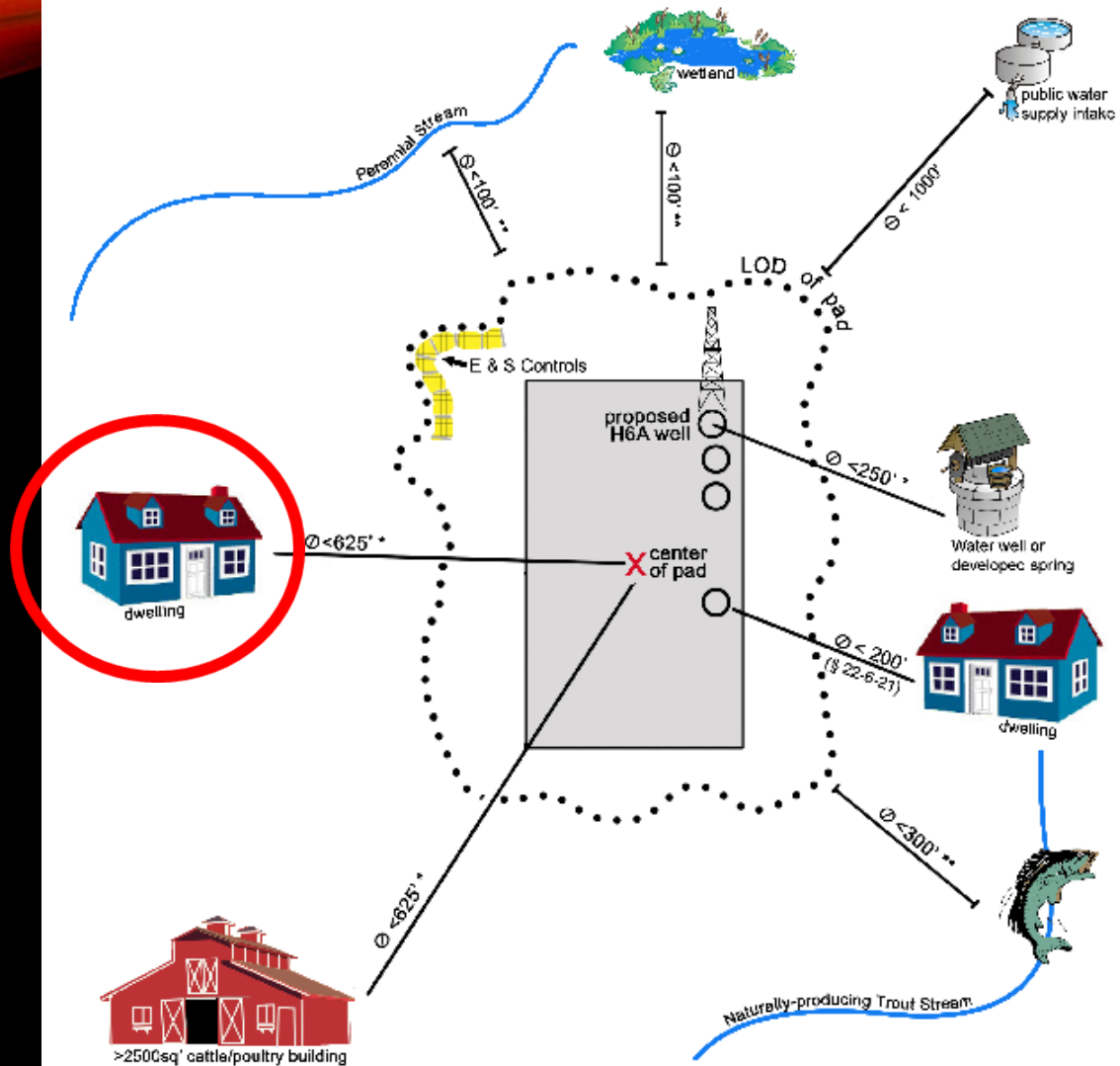
** Unless a DEP waiver or ACOE 404 permit is obtained

WELL LOCATION RESTRICTIONS

WATER WELL OR DEVELOPED SPRING

- Wells may not be drilled within 250' measured horizontally from any existing water well or developed spring used for human or domestic animal consumption

H6A Well Location Restrictions



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WELL LOCATION RESTRICTIONS

DWELLINGS OR CATTLE POULTRY BUILDINGS

- The center of well pads may not be located within 625' of an occupied dwelling structure, or a building 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry.
- Dwellings or cattle/poultry housings that are less than 625' please provide a label showing the distance on the engineering plans.
- If there are structures that are within 1000' of the center of the pad, provide a label. The label saves time during review determining whether or not a structure needs a waiver.



WELL LOCATION RESTRICTIONS

- This location restriction is applicable to those water wells, developed springs, dwellings or agricultural buildings that existed on the date the following are mailed:
 - Notice to the surface owner of planned entry for surveying or staking (WW-6A3)
 - Notice of intent to drill a horizontal well (WW-6A4)
- This includes any dwelling under construction prior to that date.

WELL LOCATION RESTRICTIONS

- This limitation may be waived by written consent of the surface owner
- The Well Location Restriction Waiver WW-6RW must be recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located.

WW-6RW (1-12) API NO. 47- _____
OPERATOR WELL NO. _____
Well Pad Name: _____

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL LOCATION RESTRICTION WAIVER**

The well operator, _____ is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions:
Pursuant to West Virginia Code § 22-6A-12(a), Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements.

WAIVER

I, _____ hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: _____ UTM NAD 83 Easting: _____
County: _____ UTM NAD 83 Northing: _____
District: _____ Public Road Access: _____
Quadrangle: _____ Generally used farm name: _____
Watershed: _____

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on these materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

<p>WELL SITE RESTRICTIONS BEING WAIVED *Please check all that apply</p> <p><input type="checkbox"/> EXISTING WATER WELLS</p> <p><input type="checkbox"/> DEVELOPED SPRINGS</p> <p><input type="checkbox"/> DWELLINGS</p> <p><input type="checkbox"/> AGRICULTURAL BUILDINGS</p>	<p>FOR EXECUTION BY A NATURAL PERSON Signature: _____ Print Name: _____ Date: _____</p> <p>FOR EXECUTION BY A CORPORATION, ETC. Company: _____ By: _____ Its: _____ Signature: _____ Date: _____</p>
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Well Operator: _____ Signature: _____
By: _____ Telephone: _____
Its: _____

NOTARY SEAL

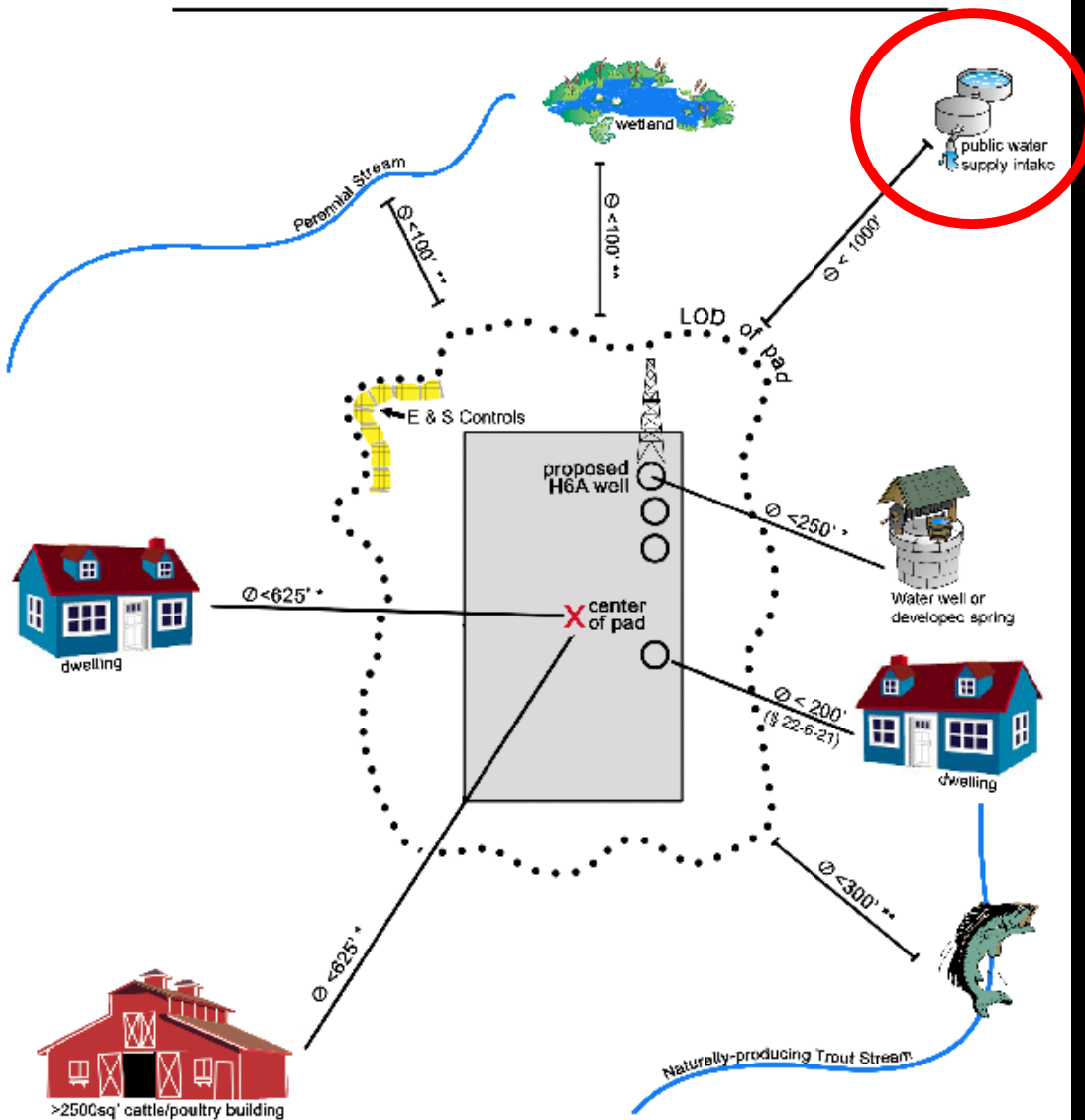
Subscribed and sworn before me this _____ day of _____

Notary Public

My Commission Expires: _____

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

H6A Well Location Restrictions



* Unless a waiver is provided from owner of water well, dwelling or farm

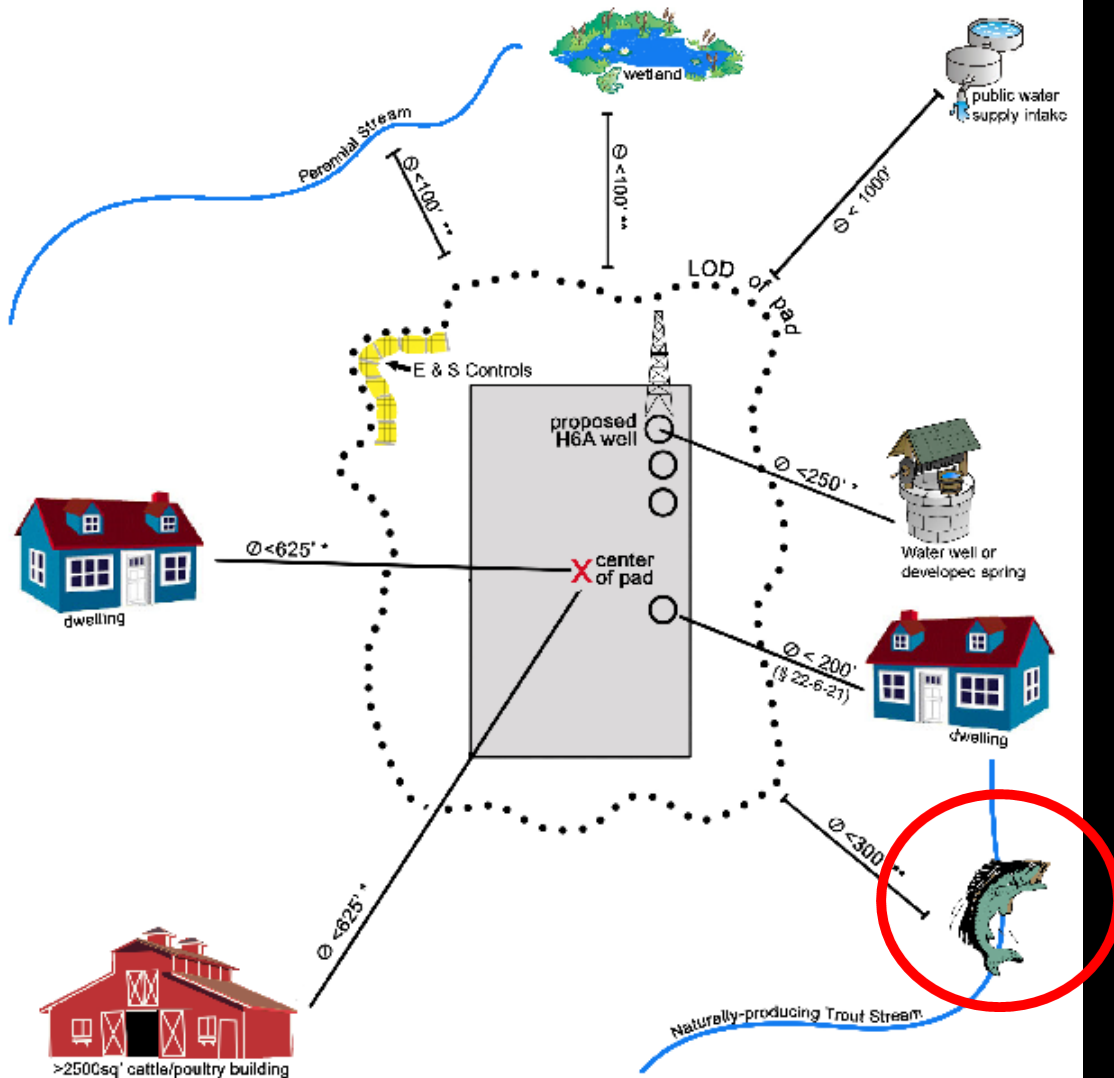
** Unless a DEP waiver or ACOE 404 permit is obtained

WELL LOCATION RESTRICTIONS

PUBLIC WATER INTAKES

- No well pad may be located within 1000' of a surface or ground water intake of a public water supply.
- The distance from the public water supply as identified by the department shall be measured as follows:
 - For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir.
 - For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake.
 - For a groundwater source, the distance shall be measured from the wellhead or spring.

H6A Well Location Restrictions



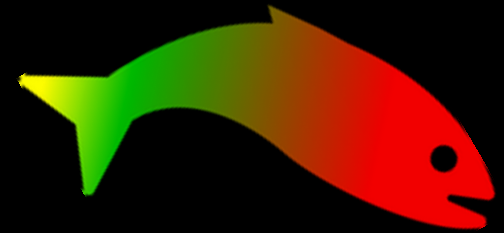
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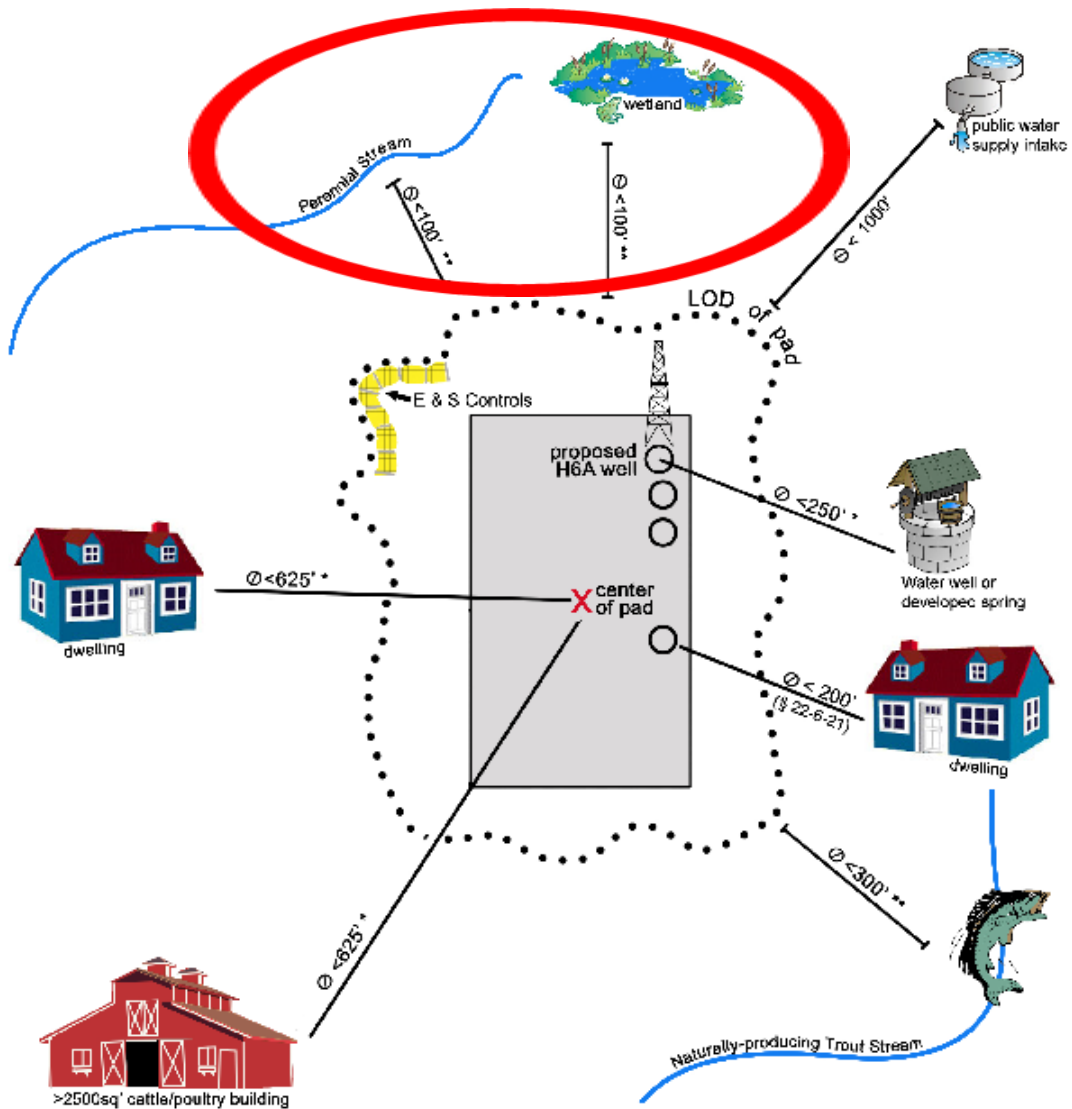
WELL LOCATION RESTRICTIONS

NATURALLY REPRODUCING TROUT STREAMS

- No well pad may be prepared or well drilled within 300' of a naturally reproducing trout stream
- This is measured from the Limits of Disturbance to the edge of the stream.



H6A Well Location Restrictions



* Unless a waiver is provided from owner of water well, dwelling or farm

** Unless a DEP waiver or ACOE 404 permit is obtained

WELL LOCATION RESTRICTIONS

Perennial Streams, Wetlands, etc.

- No well pad may be prepared or well drilled within 100' measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland
- This is measured from the Limits of Disturbance or LOD of the well pad to the edge of the stream, lake or pond

WETLAND AND PERENNIAL STREAM WAIVERS

- Distance restrictions for perennial streams, natural or artificial lakes, ponds or reservoirs, or wetlands may be waived upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state.
- A waiver, if granted, shall impose any permit conditions as the secretary considers necessary.
- Any proposed activity that will directly impact a wetland and/or perennial stream will require permit coverage from the United States Army Corps of Engineers (USACE).

WETLAND AND PERENNIAL STREAM WAIVERS

Request form can
be found on the
Horizontal Well
Permit Packet –
Application page

Updated 11/3/14

11/3/14

Wetland and Perennial Stream Waiver Request

API Number:

Operator's Well Number:

Well Operator:

Well Operator

Well Number:

Well Pad Name:

County, District, Quadrangle of Well Location:

Answer the questions below to request a waiver from West Virginia Department of Environmental Protection for any wetlands or perennial streams which lie within one hundred feet of proposed project Limit of Disturbance (LOD), which includes any erosion and sediment control devices to be used.

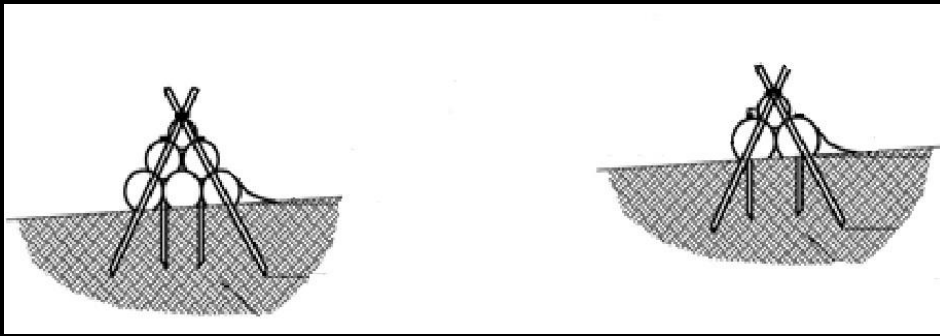
This waiver shall be requested pursuant to Chapter 22 Article 6A Section 12 of West Virginia Code, which states:

§22-6A-12(b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows:

WETLAND AND PERENNIAL STREAM WAIVERS

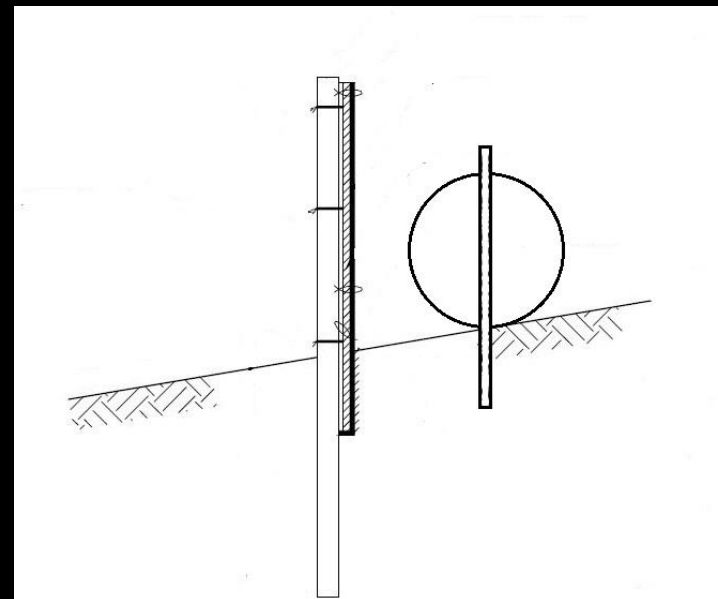
- What do the engineering plans need to show?
 - Distance between the LOD and the stream or wetland
 - Increased BMP's for the area that runoff will occur feeding the stream or wetland.
 - If possible redirect possible sediment laden water away from the stream or wetland, without eliminating their water source.
 - Any streams or wetlands that are close to the LOD but are greater 100' provide a buffer dimension or other distance label.

WETLAND AND PERENNIAL STREAM WAIVERS

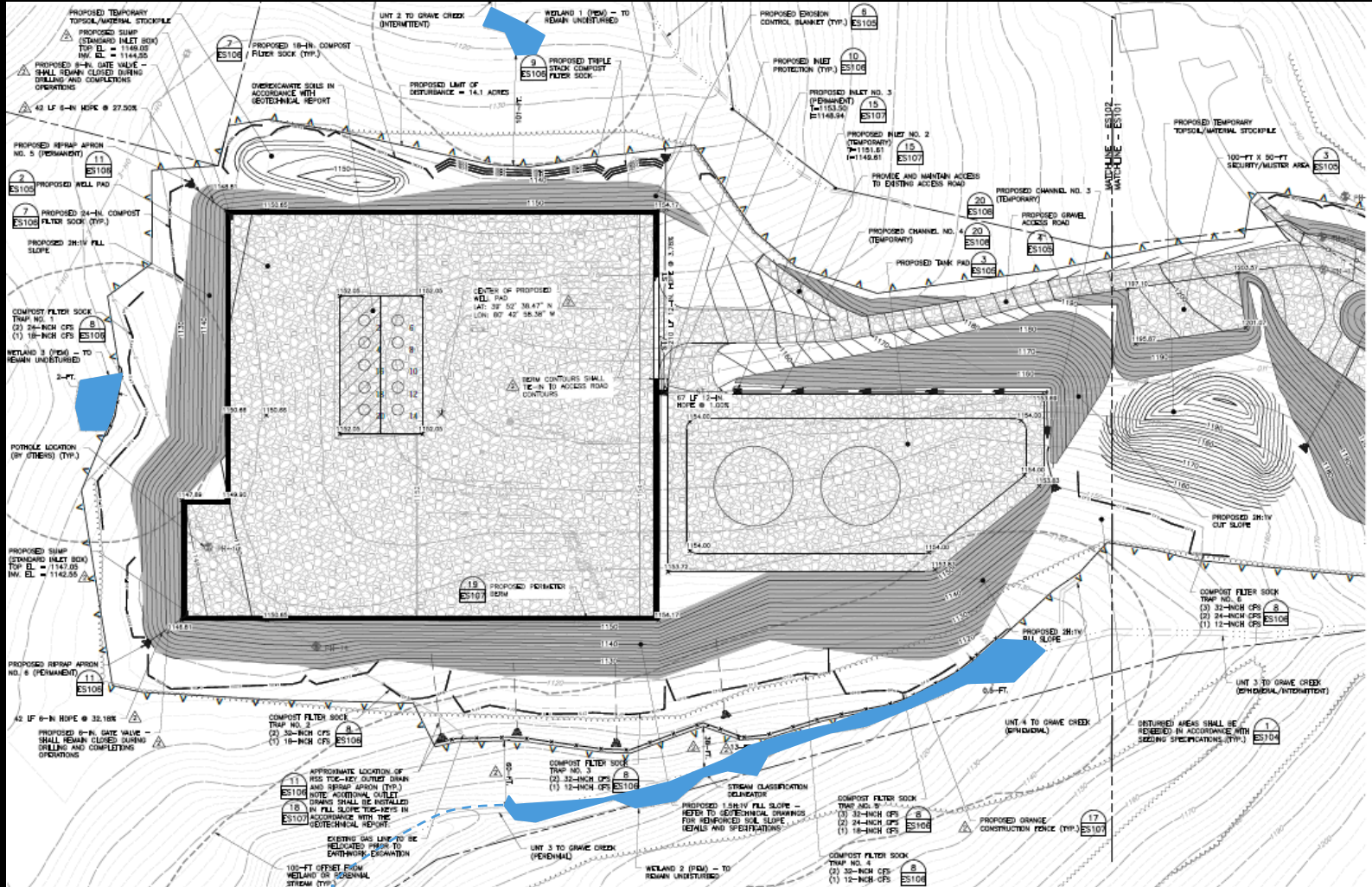


Stacked Compost Filter Sock

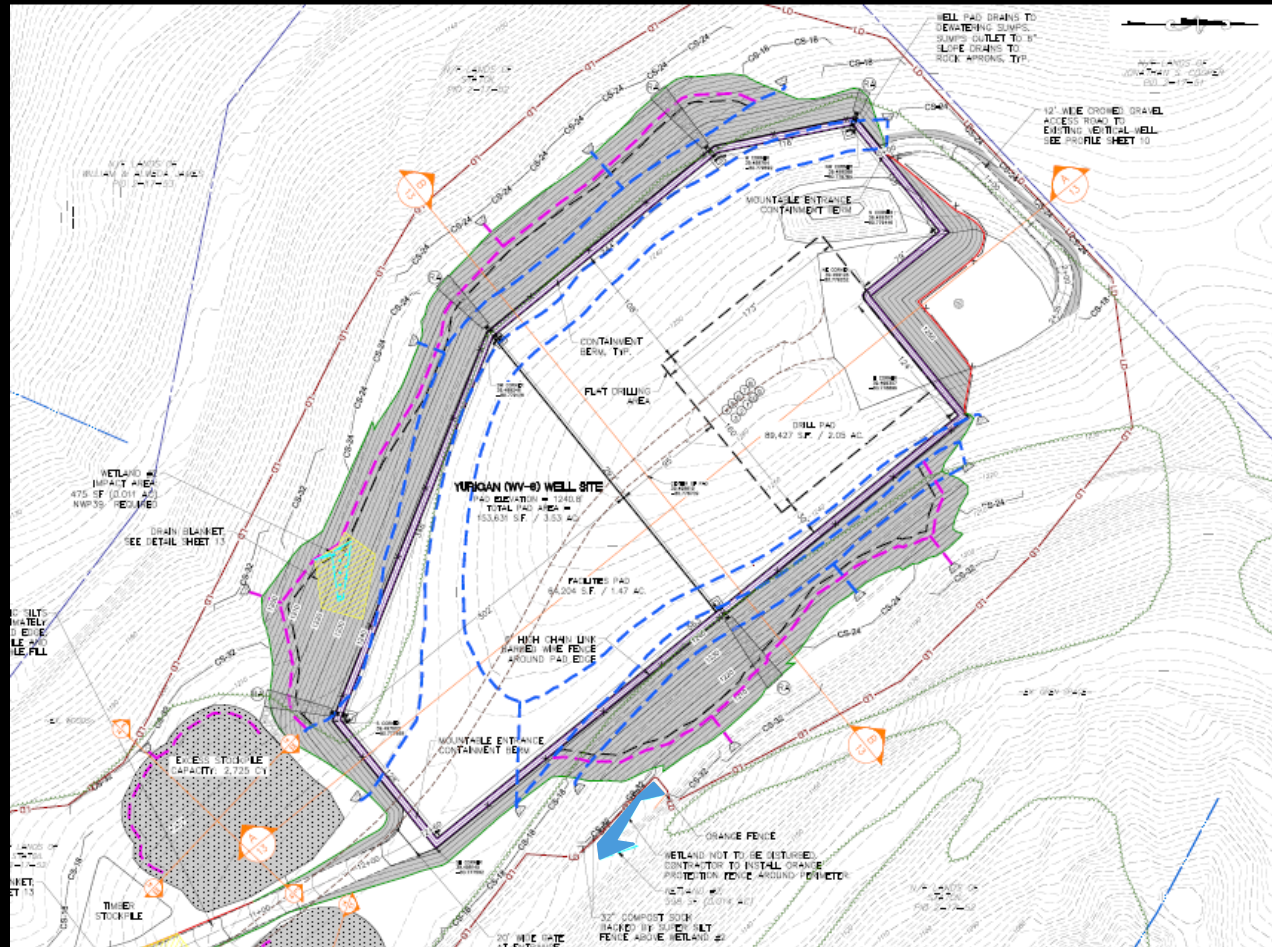
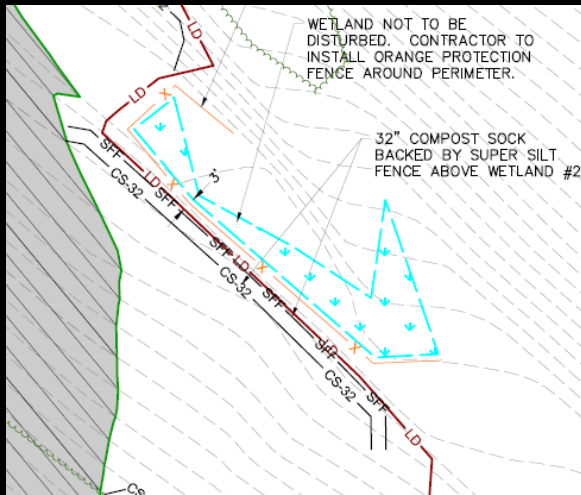
Compost Filter Sock backed
with Super Silt Fence



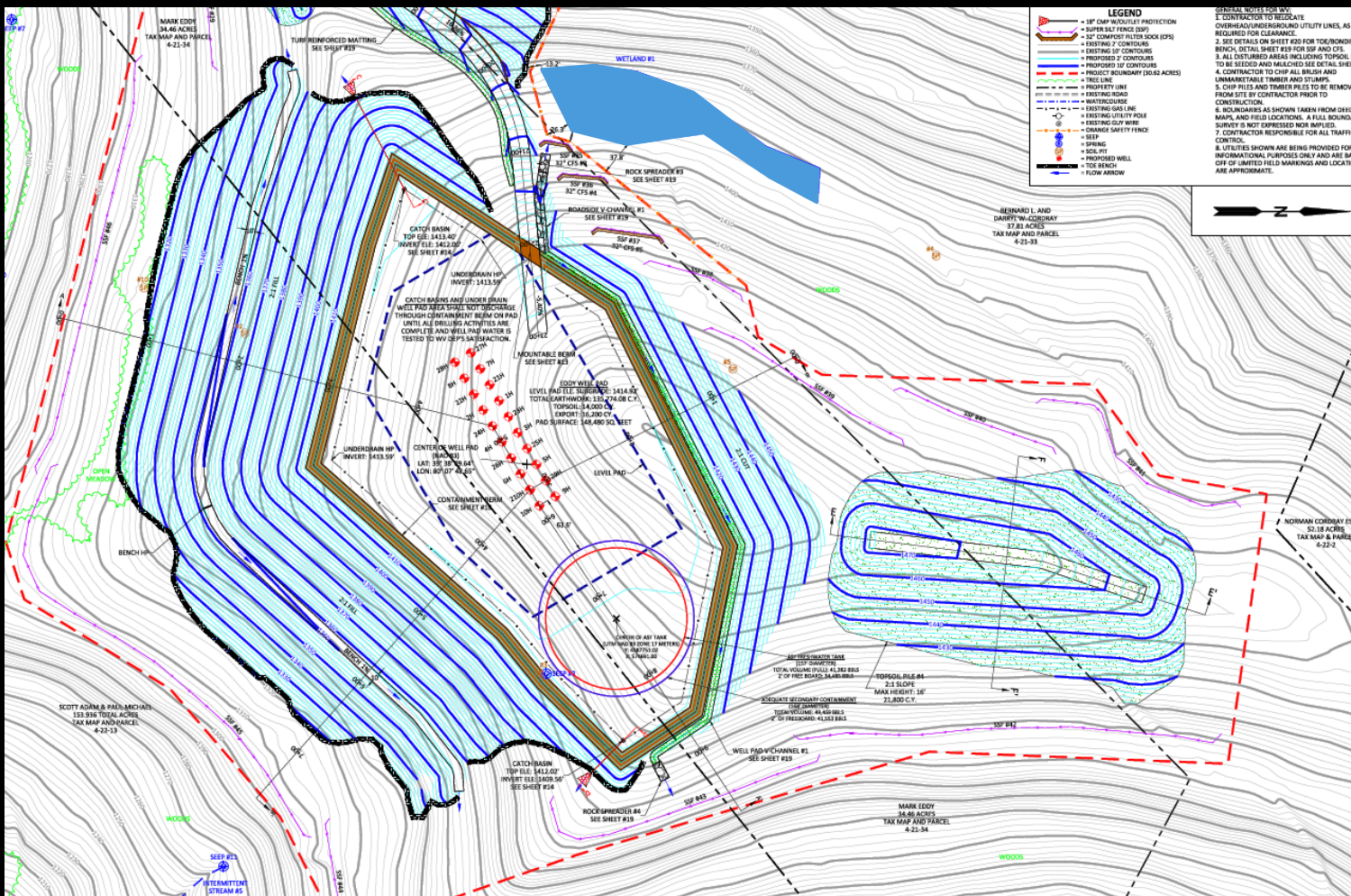
WETLAND AND PERENNIAL STREAM WAIVERS



WETLAND AND PERENNIAL STREAM WAIVERS



WETLAND AND PERENNIAL STREAM WAIVERS



ENGINEERING UPDATE

Engineering Plans for H6A Pads

- Show and label the mountable berm
- Make sure all required notes are in the submitted plans
 - Compaction specs
 - Fill thickness
- Provide sections of associated pits/impoundments and large stock piles. Include volumes for each location.
- Show the sumps and their detail on the plans. Include the note “that there will be no discharge during drilling or completion activities”.
- Include berm breach locations and a detail for construction in the reclamation plans.

ENGINEERING UPDATE

As-Builts

- Survey to the limits of the LOD; include any sediment and erosion control features that are still in place.
- Show and label all features on the well pad and associated structures, including the berm, sumps, production facilities, and tanks (with type, use and UTM coordinates)
- Provide an as-built of access road from the entrance at the public road to the well pad, including plan & profile with culvert locations, size & type and road grades.
- If you have not disturbed everything permitted in your original LOD, you do not need to submit a modification, just show the original LOD and the area disturbed in your as-built. Add a comment to indicate that the area was not disturbed.

ENGINEERING UPDATE

As-builts

- Show API numbers for all wells on the well pad.
- On as-builts of pre-22-6A well pads, provide a short step-by-step reclamation plan.
- On as-built drawings for centralized impoundments or pits including berms, fencing, safety features, monitoring wells (if pit) & as-built of the access road from the entrance at the public road to the impoundment or pit.
- Have local oil & gas inspector review as-built drawings and initial prior to submittal to WVDEP-OOG
- Must be signed, sealed and dated by a West Virginia professional engineer.

ENGINEERING UPDATE

Centralized Pits & Impoundments

- MEAP's need to include the OEM director for the county the facility located in the contact list. The OEM director should be sent notification prior to construction.
- County inspector must sign off on the plans before we can issue the COA.

QUESTIONS

