



## **Well Construction Technical Advisory Group (TAG)**

### ***Meeting Minutes***

DATE: April 7, 2015

TIME: 9:00 AM to 4:00 PM

LOCATION: Department of Ecology  
500 Desmond Dr. SE  
Lacey, WA 98503

#### INTRODUCTIONS

#### WELL REPORT GATEWAY UPDATE

Certain resource protection well reports can be submitted online now.

There is general adoption from industry - most feedback is positive.

The new Well Report Gateway has greatly simplified the process of reporting for four types of resource protection wells: geotechnical soil borings, and the three types of environmental investigation wells (soil sampling, water sampling and vapor sampling).

These wells are constructed and decommissioned virtually simultaneously. The Well Report Gateway generates a construction and decommissioning report with the same information with data taken from the NOI form already submitted. We've developed a smart-form format that minimizes the need for repeated input.

When submitted, well reports are automatically uploaded to our well database. Ecology can concentrate on eliminating the well report backlog currently hampering efficiency with the assistance of this process.

We have asked users to provide comments for improvement.

## NEW DEWATERING WELL REPORT PROCESS

Multiple dewatering water well reports can be submitted on one well form.

Geology and other criteria match for a series of dewatering wells, these can be submitted on one form.

Raised concerns that this may require a rule revision.

The language in the regs was not strong enough to warrant a rule change, and the law clearly states that multiple wells may be reported on one form for dewatering wells.

We are getting around the one well report per Unique Well ID issue by submitting one well report for each ID on the database.

This process needs guidelines.

Well tags have to be sequential.

Oregon sent out guidelines to licensed drillers – will provide to Chair.

Ecology would like to implement a Well Construction bulletin board on their website to communicate news.

## ECOLOGY SWITCHED UNIQUE WELL ID TAGS FROM ALUMINUM TO STAINLESS STEEL

Recently switched due to corrosion problems

We are asking drillers to finish their current well ID tag supplies

## UNLICENSED DRILLING

Educating large construction companies about well construction regs

Trade groups may be a good venue.

## HB1137 – Proposed Geologist Exemption from Licensing Requirements

The bill has been deferred until next session, likely.

If the bill passed, it would limit Ecology's ability to regulate well construction to some degree.

There's a whole new set of implications when adding geologists to the exemption. The exemption previously only applied to a few people – the geologist exemption would add many people who are directly involved with the drilling industry.

Why can't drillers become exempt from hydrogeologist licensing?

Geologists can already hand-drill to 10 ft without regulation – hand drilling wells is not a valid argument.

Drilling wells gives geologists a liability they don't want.

Allows geologists to easily decommission RP wells, cost savings.

Construction contractors don't want to follow the regulations to decommission wells, this bill could increase this problem by eliminating drillers.

There appears to be a consensus for different reasons to oppose the house bill.

Ecology needs to come to some conclusion at TAG - Ecology should not be neutral. Ecology was involved with legislative process previously when new bills were introduced that impacted the Well Construction and Licensing Office (WCL).

We should discuss this more in the next Well Construction Coordinators meeting.

HB 1137 went to total darkness, we don't know what they are planning.

Geotechnical engineers are using the exemption.

Given issues with regulation and protecting the resource, why is Ecology neutral?

Ecology employees can't really comment about upcoming legislation, there are strict guidelines.

While Ecology is supposed to be neutral, TAG doesn't have to be neutral.

Professional engineers are only supposed to practice within their expertise. If they are not, it's illegal.

Exemptions from the licensing regulations should be subject to CEUs.

What is the history of the engineer's exemption?

The engineering lobby pushed Ecology to allow the original exemption if they wanted their legislation to pass. They killed the well construction legislation the year prior to it passing around 1992... I recommend staying focused on the geologist exemption.

Ecology could testify in a hearing, which was done when we had the piezometer rule changes.

A licensed driller needs to go through a long process to be in a position to be liable for well construction. The proposed bill will enable somebody to bypass the apprenticeship process entirely.

The insight a hydrogeologist has is completely different than the insight a driller has. The only guy that knows is the driller. There is a reason they went through the licensing of the driller. Nobody knows what is going on down the hole except the driller.

Can TAG advise Ecology to require these people to have CEUs?

Ecology is not lobbying the legislation.

Ecology could provide testimony in the hearing.

Ecology could raise concerns about the bill.

## ABANDONED WELLS

Ginny Stern brought up some issues in the last TAG meeting.

Ginny was commenting about wells in Yakima Valley, abandoned wells are acting as a short circuit and bypassing soils and impacting GW with nitrates. Now there are fewer small family

farms, those properties are being bought up. Wells on these parcels are being abandoned. Some are pits, some are capped and tagged. There general concern is that certain wells are contributing to the nitrate problem. What can Ecology and the well industry do to alleviate the problem?

Only about 1% of wells are being decommissioned currently. Working on a public outreach campaign. There is a hard sell decommissioning these wells due to expense and low incomes in these areas.

This is a recurring discussion.

The best strategy may be to post the abandoned well on the title and wait until the property changes hands before limiting the building permit.

Requiring that a well be decommissioned may be taking real property from a property owner, which may not be constitutional.

Just yesterday a child fell into a septic tank in Whatcom County. There is a public safety component to this argument.

Sand points and drive points are commonly just chopped below grade and buried

Banks have been the best at fostering decommissioning, since they were stuck with so many foreclosures

Get the information to the underwriters group, they drive those loan decisions

When properties are going through a land use change the county has been requiring that dug wells be decommissioned.

Does Ecology offer a variance for hardship, can you look at the decommissioning on a case by case basis? Chipping up a water well would be the easiest thing to do. You could get a variance to decommission the well for \$500 instead of \$5000.

Only Pierce County is providing that consideration for a variance. A hydrogeologist is required for a variance, and few counties have them.

Homeowners are afraid of the State. Getting the State involved can be a financial nightmare. If Ecology changed their stance then that could change some attitudes.

There used to be a third option for decommissioning, in 1993-96, Ecology took away the chipping option. Why, because you don't know what will happen in the future on the property.

Making decommissioning more affordable would greatly alleviate the problem of avoiding the issue all together. Filling with chips would be much more affordable.

The outside conduit for contamination is just as big an issue as the inside of the casing, and there is no way to know how long the seal is working. If there is an option between doing nothing and chipping and installing a cement pad over the well, the chipping option is better.

Look at the records, I think Kitsap Co. has more wells decommissioned than anywhere else. We would limit building permits if abandoned wells were present. We did not post on the property title in Kitsap Co.

Educate the board of health in each county.

Would you rather have 90% more wells decommissioned or keep our current decommissioning regulations? What's more important?

Advertise that you can get a variance to decommission a well.

That could be a good sales pitch for drillers

Historically we don't take financial considerations into account for a variance.

Simply dumping chips down a well would take care of a significant issue, it would be protecting the resource.

## LAW AND RULE REVISIONS

[The Chair] sent out an email after the last TAG meeting containing a compilation of rule change ideas. The assignment was to rank the top ten revision ideas so that a consensus could be built. Only three people provided comments for this assignment.

There is a formal process at Ecology in place for Rule Making. In order to stay within the guidelines, our actions are limited. At this stage we are discussing general concepts and issues. My understanding is that if we start drafting language for rule revision then we would need to initiate the Rule Making procedures.

[Ecology] is not going on the record saying we're changing our rules. We would be open to changing the rule. But we'd need to go through a formal process to do that. We don't have a clear idea at this point.

Are there clear things we have agreement on?

How long does a WAC change take?

Rule changes can take 2 years, the simpler process.

Have something ready so that if the law does open up, we should be prepared to provide the changes. The law should be fixed first.

If we identify an RCW change, then we could be prepared for a WAC change as well.

In 1993, when the RCW went through its change, we went through the WAC language with TAG, then went through the public process. That process worked because the language was already written. People could and did offer changes to the language. When you are writing a lot of rule you don't want to be constrained by time. [Ecology member] never heard of any blowback at that time. We can prepare language for the WAC and then just park it. The same way with the RCW. We can suggest that language, but we don't have a lot of control on the outcome. When that bill gets signed by the governor it may look totally different. A strong lobby group can come in and say this bill is dead, and it won't go anywhere. We can work on language without starting the process. We had a successful event and process at that time.

That process may have changed since that time.

We need to work on consensus building.

Does anybody not like the proposed process (ranking rule revision priorities)?

Let's move the deadline for the top ten rule revisions by August 1<sup>st</sup>. That way they we can look at the data prior to the next TAG meeting in October.

Licensing and deadlines between the Water and Resource Protection licensees that have dual licenses - how can we combine the license expiration date?

We would have to change the statute.

This issue may not have been in the Rules Revision List.

Then we will add it to the list.

## OWNER CONSTRUCTED WELLS

The Southwest Region in particular has many issues with property owners that construct their own wells that do not conform to the regulations.

Dug wells in particular are a big issue in the SW region – property owners frequently do not read the regulations before constructing a well. A well being constructed without a seal or notice is commonplace, unfortunately. Property owners can construct a well without a license once every two years. Often the wells don't pass a bacterial test and we become aware of the issue when they try to comply with the County ordinances.

They are widespread throughout the region.

Perhaps undelegated counties are more likely to have these owner constructed wells.

Local drilling conditions also influence these improperly constructed wells. Places like Long Beach peninsula would be easier to construct a sand point than in a place like Quincy.

Can a homeowner hire an unlicensed driller?

No. A homeowner that “personally constructs a well” is exempt from the licensing regulations.

You could talk about places like Long Beach all day. There are also areas where drillers are not particularly successful, so people basically construct collectors and buy their drinking water in town. That is Smith Creek in Pacific County in a nutshell.

Pacific County has drinking water guidelines, and we work closely with that county.

The Geologist Licensing Board prepared a publication aimed at the permitting people at the county level, consider reading that and using the same idea and putting that information out to county officials.

Ecology had a good pamphlet, the Homeowners Guide to Drilling a New Well.

We are in the process of updating that document.

We also are drafting another pamphlet about reconsidering drilling your own well, or the cost of drilling your own well plus the expense of decommissioning an improperly constructed well.

Coordinators like to meet people that approach me with plans to drill a new well...

Maybe we should remove the owner exemption from the regulations

They have the same performance standards as licensed drillers.

#### GUEST SPEAKER – LYNN BARTHOLOMEW and the HYDRAULIC PERFORATOR

Necessity has brought about a new tool, this hydraulic perforator has two rows. A mills knife can get stuck. Perforators work best when the formation is in contact with the casing. When there are voids on the outside of the casing, the casing is egg shaped (deforms) and there is not enough power in some rigs to do the job. The perforation is  $\frac{3}{4}$ " by  $1\frac{3}{4}$ " using the hydraulic perforator. Typically you would use a 1" tremie pipe. When we take a piece of 6" pipe and perforate it with a mills knife, and place it in a 5-gal bucket, sealing material outside the casing will not equalize in the bucket. With the hydraulic perforator, the sealing material will equalize. Wheel type perforators have some advantages in some situations. With my hydraulic perforator each slot will be in excess of 1" pipe in area.

How far are the slots apart?

A foot.

A wheel perforator is hard on a rig.

What is your actuating fluid?

Water - we operate at 4,000 PSI using two knives, perforating opposite sides at the same time.

Did you design the perforator? Is it available commercially?

I built the tool. I would consider it a new technology.

Would you consider this something you could use in a limited access situation?

Yes, all you need is a pump truck.

When you try to pull back a well casing and it pops at 6 ft or 18 ft, you're not doing anybody any good.

How many rows would you perforate?

I have a two inch pipe or a one inch pipe and can change that orientation downhole.

Can you build it with four cylinders?

No, the operating pressures are too high. I'm operating only with water down the hole. You'll never catch me with an oil can in a hole.

If you are making a  $\frac{3}{4}$ " by  $1\frac{3}{4}$ " inch hole then I see no problem with that.

Yes.

We are running the same hoses that we use for hydraulic fracturing, this isn't Greek to us.

In situations like this, couldn't you just get a variance? The alternative is to change the regulations.

There is a concession for using new technology in the regulations.

It all comes down to open area on the slots, you can only use one tremie tube.

When you perforate the casing there is a corresponding drop in pressure. I would load the hole with a bentonite slurry first.

I'd like to get to the point where you guys could come out and look at the process.

I think we have a general consensus that this process is adequate. I'm a little concerned that this process may act as a can opener and destroy the casing.

That is a real concern with following the regulations at four perforations per foot.

Does it take a variance for new technology?

Lynn is telling us that he needs to get a variance to the regulations for perforating four holes per foot to use this technology.

When you start getting into bigger casing, larger than 8-inch casing, there may be some issues with the number of perforations.

Is four holes really sacred, or is the open area to get access to the annulus the important thing?

#### LATITUDE AND LONGITUDE ON WELL REPORTS

The current TRS system for locating wells is an old system that is flawed in the well report database. Many locations are mismapped. Requiring latitude and longitude on well reports is the natural next step.

Section numbers that are greater than 36, for instance in the older towns of Washington, areas that have high concentrations of [RP] wells, have virtually no reports in the database mapped at that location. The database uses the actual section number for that location, even for section numbers higher than 36. For example, in Olympia there is an area near where Section 1 is full of well reports, but it is only a small, irregular area. Section 64, which is where Section 1 would be in a traditional TRS grid, has virtually no well reports. This is confusing to database users.

We had a similar discussion to this 6 years ago, but the technology wasn't as good then. Now that has changed.

Could you put lat/long in the website?

Yes.

Could we go to the website and find a lat/long?

Not right now, but we could do that.

#### DRILLER LICENSE WRITTEN EXAM ISSUES

Very few people fail the written test for either water wells or RP wells in WA. [Chair] would like to propose that we make the examinations more difficult. One way we could do this is to ask everybody at TAG to provide five questions to be used on the test.

Why don't regulators focus on regulatory questions and drillers concentrate on practices related to drilling.



Is there a problem because people are passing the test that don't know enough about drilling?

There are a number of people that can't demonstrate how to locate a well using TRS while grading these tests. We typically follow up with those to make sure that they know the process before they start submitting well reports. The Water Well test is more difficult than the RP test, at least it takes more time.

Do you do an onsite test for new drillers? Are you watching the complete drilling process?

If [Ecology wants] to make it tougher then you should heavy up on the regulations.

What are you gaining by making the test more difficult?

More competent well drillers...

People should know how to perform other skills besides what rig or work they are working on currently. People change employers and take their license with them.

The owner of the company keeps people employed, if the driller is incompetent doesn't the industry weed those people out?

[Driller member] is more concerned that they know the regulations.

Make sure licensees are aware of the reason regulations are in the book.

The test is open book. Ecology used to test for knowledge of different types of drilling rigs. We then moved away from equipment and then moved toward Water or RP licenses, and dual licensure. The test is geared toward knowing the regulations and knowing where to find them.

If [Ecology is] worried that it's too easy – revising it is probably a good idea. However how difficult does it need to be to be effective?

What is the problem we are trying to fix?

Competency is learned in the field being trained by experience. The test is a hurdle to know the regs. Then you have to learn how to perform the job competently.

It can take 10 years to learn what is really going on as a driller. He's learning for at least 10 years. On the testing, one thing that needs to be brought is the use of the website. Understanding the process of how to do the paperwork.

After going through the trainee process the written test is a non-issue.

It has been so many years since [driller member has] taken the test... could we look at the test at the next meeting?

Have the regional guys provide some questions and then provide those to us. That may be an option.

If the problem is we have too many drillers in the state, then this would be an issue. That is not the issue presently.

## HORIZONTAL WATER COLLECTORS IN WHATCOM COUNTY

These are a geoengineering exercise. They are digging up a football field size excavation, then installing horizontal infiltration galleries.

This is occurring in Whatcom Co., it is occurring anywhere else?

Yes, we get a few of them in Central WA.

It's like a Ranney well underneath a field. The idea is to recycle the water. From an efficiency standpoint it. It's all agricultural based.

They are reusing the precipitation that cycles through the ground.

Is it degrading the water quality?

Public interest in the water quantity took precedence over water quality issues.

There is also an exchange of surface water rights for these horizontal collectors in some instances.

We (WCLO) regulate the vertical component of these wells. We have worked with the operators that install these and there is an agreement to concentrate on the vertical portion for regulation.

The issue is closed with WCLO

The very first thing in the regulations is that infiltration and exfiltration galleries are not regulated. Then further in the regulations it says they are regulated.

This started about three years ago.

## TRAINING HEALTH DEPARTMENT INSPECTORS

[Ecology wants] to designate one location on the west side and one on the east side for training county inspectors. The plan is to try to get as many people together as possible.

There is no King Co. well inspector at this point. NW doesn't have many delegate inspectors that are active.

These are for water wells only.

Consistency between the different counties would be ideal. It used to be dramatically different between the separate counties.

County inspectors really appreciate when drillers educate them on the process.

During the CEUs, tell the drillers what is expected from the county inspectors. There is going to be differences in how the regs are interpreted, but at least I know what the intentions are for the regulations.

I would appreciate it if drillers emailed Scott or the coordinators to discuss these issues with interpretation of the regulations so that inspectors can be educated. That would keep us on our toes too.

The frequency of the inspections is an issue in most counties. Pierce Co and Kitsap Co still have active programs.

The drinking water program went away in 2007-08 in King Co.

So King Co. isn't inspecting wells?

They do when they are onsite for septic inspections.

There are some counties that don't inspect between Fri and Sun, and we find some drillers that start projects on Friday in those counties.

#### NEW MEMBER SOLICITATION

[Ecology is] trying to fill the new slots by mid-summer. The new TAG website is a venue to advertise for the positions.

#### ROUND TABLE

Drill rigs are available on Craigslist

When property owners are finished with the drilling equipment they will likely sell it afterwards to another property owner and they will construct another well that does not conform to the regulations.

END OF TRANSCRIPT