From: Lubozynski, Tom
To: "Juan Guerra";
cc: "aws97@aol.com"; Cheryan, George; DePradine, Gloria-Jean; Heidorn, Marjorie;
Subject: RE: Friends Recycling OCD-SW-08-0040
Date: Friday, January 18, 2008 4:18:53 PM
Attachments: 2008-01 well abandonment guidelines.doc

Juan

Thank you for your e-mail. I accept you proposal of a 50 foot setback along the southern border and a 100 foot setback along of the west border of Cell 2. The setback is from the property line to the edge of waste. This proposal, coupled with your willingness to remove the waste in the southeast corner of the property (that is, out of the groundwater well setback areas called Cells 1B and 2C on your drawing), will provide reasonable protection.

Also, I accept the proposal you made on 1/16/2008 regarding the placement of groundwater monitoring wells. The table below reflects our understanding. As stated during the meeting, do not re-use old well numbers. Wells that are abandoned must still be shown on site plans.

The current wells must be sampled once more before they are abandoned. Wells must be abandoned properly (see attached document). The Department must be notified at least 7 days prior to a well being abandoned so that we may come to the facility to watch the process. Within 30 days of the field activity, a report must be submitted documenting the abandonment of the wells.

Wells must be installed properly. As we mentioned in the meeting, the recording of the lithology is extremely important. A geologist must be onsite throughout the drilling activity to log the boring. See the previous information we sent you about well installation. The Department must be notified at least 7 days prior to a well being drilled so that we may come to the facility to watch the process. Within 30 days of the field activity, a report must be submitted documenting the drilling of the wells.

As we continue through the permitting process, remember to accomplish the semi-annual groundwater monitoring in February. The sampling event can be accomplished in January if you want complete it so that you begin the well abandonment process quicker.

"W' Designation in Permit Application	Current MPIS Well Name	Facility Proposed 1/16/08	Comments	DEP Recommended Well Names For Permit MPIS
W21	MW-1	MW-1	Remains	MW-1
W25	MW-2	Old MW-2	To be properly abandoned after one more sampling event; No "replacement" well	
W24	MW-2R	MW-2	To be properly abandoned after one more sampling event; No "replacement" well	
W23	MW-3	MW-3	To be properly abandoned after one more sampling event; No "replacement" well	
		Proposed MW-3	New-to be installed southwest of MW-3, by "corner" of Cell 1 and 2	Do not name MW-3R because not a true "replacement well" Call it MW-8
W22	MW-4	MW-4	To be properly abandoned after one more sampling event; No "replacement" well	
		MW-4R	New-to be installed due north of MW-4	Do not name MW-4R because not a true "replacement well" Call it MW-9.
W17		MW-5	Existing--add to MPIS	MW-5
		Proposed MW-6	New-to be installed on west property line by potable wells	MW-6
		Proposed MW-7	New-to be installed southeast corner due east of MW-5	MW-7
				MW-8 - west side of Cell 1, northwest of Cell 2; by "corner" of Cell 1 and 2
				MW-9 – northern boundary of disposal area; north of MW-4

Tom Lubozynski

F. Thomas Lubozynski, P.E.
Waste Program Administrator
FDEP Central District
407-893-3328

From: Juan Guerra [mailto:JCG@guerracorp.net]
Sent: Thursday, January 17, 2008 12:06 PM

To: Lubozynski, Tom
Subject: Friends Recycling

Tom,

I want to thank you and your staff for meeting with us in what I consider a very productive meeting. We are already working in updating our designs per our conversation yesterday.

I am also following up on the issue of the 100' setback. I would like reach a compromise with you today so that I can have the drawings and submittal package reflect it.

I truly feel that the additional 50-foot setback is a harsh request for several reasons:

1. There is an unspoken rule about asking for additional comments and concessions after several rounds of review.
2. The plans have always had Cell 2 with the boundary as shown and this is a permit renewal, even if cell 2 was not active.
3. The health safety and welfare of the public is not an issue to the south since the well setbacks are being met, and there is an asphalt plant to the south, which will most likely continue to be that for years to come. Counts Construction has known about this landfill since its inception; after all, it was Counts who originally excavated the pit on cell 2 and they sold the property to the landfill for its current use.
4. I recognize that you have been accomodating and very profesional and, believe me when I say it, I appreciate that. However, the rule for the 100' setback is not enacted yet, and this applicant is being asked to sacrifice a lot for the mistakes of the previous owner. I have not made a bigger issue of it, but we all know that DEP and the previous owner share in a lot of responsibility for my client having bought into a heap of problems, which we are trying hard to resolve to your satisfaction.
5. I understand your concerns and the responsibility you shoulder, and I firmly believe that what I propose will be a just compromise.

I propose that the additional 50 foot setback (total of 100') be implemented along the west boundary, in front of the various residences with wells which are close to the facility. This is the area of concern to both DEP and us. The loss of value for the facility there will be well worth the increased protection of the health, safety and welfare of the public. The south boundary should remain as it has been on the plans for nearly a decade.

I hope you find this proposal acceptable and look forward to preparing a submittal that will address your concerns.

Sincerely,

Juan C. Guerra, P.E.
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FDEP CENTRAL DISTRICT
GUIDANCE FOR WELL AND BORING ABANDONMENT
(revised 2008-01-18)

GENERAL

Abandonment procedures are designed to permanently close a boring or monitoring well. As such they are designed to preclude and current or subsequent fluid media from entering or migrating within the subsurface environment along the axis. It is therefore important that a borehole be sealed in such a manner that it cannot act as a conduit for migration of contaminants from the ground surface to the water table or between aquifers.

All soil borings not completed as monitoring wells must be abandoned in accordance with the following procedures and must be documented on the boring log as such. The date(s) of abandonment and the abandonment method must be included on the boring log.

METHODOLOGY

Each boring to be abandoned should be sealed by grouting from the bottom of the boring/well to ground surface. This should be done by placing a tremie pipe to the bottom for the boring (i.e., to the maximum depth drilled) and pumping grout through the pipe until undiluted grout flows from the boring at ground surface. The ground sealant must consist of high-solids, 100 percent-pure sodium bentonite grout. The amount of approved water used should be kept to a minimum. Neither additives nor borehole cuttings should be mixed with the grout.

After 24 hours, the driller, site geologist, or other field representative, should check the abandoned site for grout settlement. Any settlement depression should be immediately filled with ground and rechecked 24 hours later. Additional grout should be added using a tremie pipe inserted to the top of the firm grouts, unless the depth of the unfilled portion of the hole is less than 5 feet and that portion is dry. The process should be repeated until firm grout remains at the ground surface. In may be necessary to grout the boring to a depth of 2 feet below grade and complete the backfill with lean concrete or asphalt, depending upon the composition of the original surface.

Extracted from Chapter 40C-3, Water Wells, St. Johns River Water Management District
http://www.sjrwmd.com/rules/pdfs/40C-3.pdf and
http://www.sjrwmd.com/regulatory/permitforms.html

40C-3.531 Abandoned Well Plugging.
(1) Any well which is an abandoned artesian well under subsection 373.203(1), F.S., shall be plugged in accordance with this section.
(2) All abandoned wells shall be plugged as set forth in subsection 40C-3.517(8) unless otherwise specified by the District. The work shall be accomplished by a licensed water well contractor.

(3) Request to abandon a well shall be submitted on application form 41.10-410(1), provided by the District unless the well is exempt from permitting under Rule 40C-3.051.
Specific Authority 373.044, 373.309, FS. Law Implemented 373.306, 373.308, 373.309, 373.113, FS. History--New 10-14-84, Formerly 40C-3.531, 40C-3.0531. Amended 9-17-89, 11-11-03.

40C-3.517 Grouting and Sealing. Wells shall be grouted and sealed to protect the water resource from degradation caused by movement of waters along the well annulus either from the surface to the aquifer or between aquifers, and to prevent loss of pressure in artesian aquifers. All wells shall be constructed and sealed using a method which insures that an open or unnaturally permeable annular space does not remain when a well is completed.

(1) All wells that are constructed in a manner which creates an annular space between the casing and the naturally occurring geologic formations will be grouted and sealed in accordance with the methodologies listed in this section.

(2) Wells obtaining water from a formation and having a casing less than four inches in outside diameter shall have a nominal one inch thickness of grout sealing the annular space to ensure that an open or unnaturally permeable annular space does not remain when the well is completed.

(3) Wells having a nominal casing size equal to or greater than four inches in outside diameter and obtaining water from a formation shall have a nominal two inch thickness of grout sealing the annular space for the entire length of casing.

(4) Wells obtaining water from a consolidated formation and which are constructed using telescoping casings shall meet the following conditions:
(a) The annular space between the casings shall be sealed by grout, by packers or both as described in subsection 40C-3.512(5).
(b) The annular space between each casing and the bore-hole shall be grouted in accordance with the provision of subsections (1) - (3) above.
(c) For wells in which the largest external nominal casing size is four inches or less and the annular space between the internal casing and the borehole wall is less than one inch, the provision of subsections (1) - (3) above will not apply, provided that the clay formation through which the internal casing passes is of such a caving nature so as to naturally seal the annular space. If such caving nature is not present, the provisions in subsections 1-3 above must be met. In all circumstances the external casing must be grouted and sealed into a consolidated unit within the intermediate confining unit.

(5) For wells constructed using a jetting method and obtaining water from an unconsolidated formation of a naturally caving nature in which the annular space is completely filled with formation material, then only the upper three feet shall be grouted to provide protection from contaminated surface water.

(6) Wells obtaining water from an unconsolidated formation using a method other than jetting or driving a casing, shall be grouted from the filter pack plug to the upper terminus with a grout allowed in subsection 40C-3.517(8).

(7) Cuttings shall not be reintroduced into the annular space. Wells which breach confining units and special monitor well installations will be grouted as outlined below.

(a) When confining units are breached and the guidelines in subsection 40C-3.512(2) are not met, the following practices will be acceptable: 1. Seating of a casing into the confining unit and grouting as required, or 2. Placing of grout in the annular space to meet subsection 40C-3.512(2) requirements. When caving materials are present above and below the confining unit, temporary casing or drilling fluids will be placed in the borehole to maintain an opening to the confining unit. In all circumstances, the annular space shall be maintained by use of either drilling fluids or temporary surface casing until the confining unit breach is plugged.
(b) Monitor wells required to comply with Chapter 62-761, F.A.C. shall be grouted in the following manner:

1. The terminal box in traffic areas and well casing shall be sealed to a depth of eighteen inches below land surface with cement grout.
2. The well casing or outside protective casing in high water table areas shall be grouted to a depth of eighteen inches in a non-traffic area.

(8) Unless a variance has been granted by the District, grouting and sealing of water wells shall be accomplished in the following manner:
(a) The grout mixture shall consist of either Portland Cement or a natural Bentonite slurry for wells and boreholes meeting the requirements in subsection 40C-3.512(8).

1. A mixture consisting of 5.5 to 6.0 gallons of water per sack of Portland Cement or a mixture of 6.5 gallons of water per sack of Portland Cement with 3 to 5 pounds of Bentonite not to exceed 5% by weight will meet minimum requirements.
2. A mixture of 8-20-mesh granular Bentonite, water, and an approved liquid polymer viscosifer or untreated 200-mesh Bentonite and water is acceptable. In all circumstances, the manufacturer's mixing instructions shall be followed.

(b) The minimum set time for grouting of casing using either Portland Cement or Bentonite before drilling operations may continue is 12 hours. The minimum set time for grouting of casing using Portland Cement and 2% calcium chloride by weight as an accelerator will vary with depth. Set times are listed in Table 3 below. The addition of Bentonite as specified in subsection 40C-3.517(7)(a) does not change the set times listed in Table 3.

TABLE 3
INITIAL SET TIMES FOR SPECIFIED
DEPTH RANGES WHEN 2% CALCIUM
CHLORIDE IS MIXED BY WEIGHT
WITH PORTLAND CEMENT

Depth (in feet)	Set Time (in hours)
0-200	4
201-400	3.5
401-600	3
601-800	2
801 & greater	1