Clear Form

WELL ISOLATION DISTANCE WORKSHEET for MAJOR and POTENTIAL SOURCES of CONTAMINATION for TYPE IIA, IIB and III PUBLIC WELLS and PRIVATE WELLS on FARM OPERATIONS

Producer Name: _____County: _____

Farm location: Township _____ Range _____ Section _____ ____ ¼ of ____ ¼ of ____ ¼

Farm address:_____

Prepared by: _____ Date: _____ Checked by: _____ Date: _____

Introduction

	Classification		Description
Public Water System	**Type II Noncommunity**	Type IIA	Serves an operation with 25 or more employees with a monthly water use of ≥ 20,000 gallons per day during the peak month (total of all wells)
		Type IIB	Serves an operation with 25 or more employees with a monthly average water use of < 20,000 gallons per day during the peak month.
	Type III		A water supply that is a dairy operation that does not meet the requirements above or a farm operation with 1-24 employees
	Private Water System		A water supply that does not meet any of the above classifications

Note: Employees in the descriptions are non-family members.

Minimum well isolation distances are required from both "major sources of contamination" and "potential sources of contamination." Actual isolation distances should be maximized to the extent possible. Major sources of contamination include storages of toxic materials, such as pesticides and fertilizers, fuel, or animal manure. Facilities meeting the NRCS conservation practice standards (CPS) Waste Storage Facility (313) (except bedded pack storage facilities which are a potential contamination source), Composting Facility (317) for manure, Agrichemical Handling Facility (309), and On-Farm Secondary Containment Facility (319) are major sources of contamination.

Potential sources of contamination include areas such as animal and poultry yards. Facilities meeting the NRCS (CPS) Waste Transfer (634) are potential sources of contamination. Lots where livestock are concentrated, such as feedlots and exercise lots, and manure packs in livestock buildings are also considered potential sources of contamination. Pastures as defined in the Generally Accepted Agricultural and Management Practices for Manure Management and Utilization are neither major nor potential sources of contamination.

Michigan Minimum Isolation Distances (Ft) by Well Type (Part 127 Act 368 P.A. 1978 and Act 399, P.A. 1976)		
Well Type	Major Source of Contamination	Potential Source of Contamination
IIA	2000	200
IIB or III	800	75
Private	150*	50

* 300 feet for fuel /chemical tanks 1,100 gallons or larger, 50 feet for tanks less than 1,100 gallons.

Michigan minimum isolation distances may be reduced for on-farm operations per the July 21, 2014 MOU between MDARD and DEQ (now EGLE). Follow the instructions in the following worksheets to determine if any reductions are applicable.

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Part A

Instructions: Enter the appropriate information for each step in the order they are presented and follow the directions provided after each step. Attach a map of the farmstead showing the locations and identifications for all sources of contamination and wells included in the worksheet.

Note: New wells must be sampled. Bacteria and nitrate levels must meet drinking water standards.

1. Are there any wells located within the Michigan minimum isolation distances on the farm? YES ◯ NO ◯
   If YES, complete Part B-1 and B-2 for each well located within minimum distances before proceeding to Step 2.
   If NO, complete B-2 and proceed with assistance without further consideration of well isolation distances.

2. Are there any wells noted in Part B-2 where the Actual Isolation Distance from a source of contamination is less than the Minimum Isolation Distance? YES ◯ NO ◯

   If YES and the source of contamination is existing, proceed to Step 3.
   If YES and the source of contamination is planned, proceed to Step 4.
   If NO, proceed with design and construction assistance. Do not proceed to Steps 3 or 4.

3. Existing source of contamination:
   - For any well where the actual isolation distance from an existing source of contamination does not meet the minimum well isolation distance, the Comprehensive Nutrient Management Plan (CNMP) must include the notation below. No corrective action date is necessary.

     The isolation distance for well _____ from the existing source of contamination _____ does not meet the minimum State of Michigan isolation distance requirements.

4. Planned source of contamination:
   - For any well where the actual isolation distance from a planned source of contamination does not meet the minimum well isolation distance, the CNMP must include the notation below. The corrective action and scheduled date must be shown in the CNMP Schedule of Implementation.

     The isolation distance for well _____ from the planned source of contamination _____ does not meet the minimum State of Michigan isolation distance requirements. Corrective action to the well or source of contamination must be taken prior to operation of the planned source of contamination facility.

   - Verify in Part B-1 Step 6 when corrective action, as noted in Part B-1 Step 5, is fully implemented.

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Producer Name: _____ County: _____

Well ID: _____ Prepared by: _____ Date: _____ Checked by: _____ Date:_____

PART B-1

Instructions: Complete a separate Part B (1 and 2) for each well within the minimum state law distances of any existing or planned source of contamination on the farm. **Attach a copy of the Water Well and Pump Record, if available**.

1. Has the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or the local health department issued a permit or a deviation for this well in full consideration of the location of any existing or planned source of contamination located within state law distances of this well? YES ◯ NO ◯ (check one)
   If YES, use the isolation distance allowed by the permit or deviation and record that distance in the Minimum Well Isolation Distance block on Part B-2 for each source of contamination where the permit or deviation applies (attach copy of permit or deviation). Proceed completing Part B-2.
   If NO, proceed to Step 2.
2. Does the well casing extend at least 25 feet below the ground surface? YES ◯ NO ◯ (check one)
   If YES, proceed to Step 3.
   If NO, casing depth is less than allowed by State of Michigan law. Unless casing depth is extended to at least 25 feet, a variance is required from EGLE or the local health department in order to proceed.
   Where no well record is obtainable, the casing depth will need to be verified by a registered well driller.
3. Do any of the following conditions apply?
   The well record indicates the well is a Type IIB or Type III public well. YES ◯ NO ◯ (check one)
   The well is used for the milkhouse or milking parlor for a dairy operation. YES ◯ NO ◯ (check one)
   The well is connected to a potable plumbing system and is on a farm that has at least one employee (non-family member) at any time during the year. YES ◯ NO ◯ (check one)

   If YES to **any** of the above conditions, this is a public well. Proceed to Part B-2.
   If NO to **all** of the above conditions, this is a private well. Proceed to Part B-2 and record 150 feet in the Minimum Well Isolation Distance, 50 feet when isolating from fuel storage with secondary containment or other potential sources of contamination, 300 feet for fuel storage equal to or greater than 1,100 gallons without secondary containment.
4. Are there any planned sources of contamination noted in Part B-2 where the Actual Isolation Distance is less than the Minimum Isolation Distance? YES ◯ NO ◯ (check one)
   If YES, proceed to Step 5.
   If NO, proceed to Part A Step 2.
5. List the planned source(s) of contamination and the corrective action(s) needed so the Actual Isolation Distance is equal to or greater than the Minimum Isolation Distance, as identified in Part A Step 4.

Planned Source of Contamination	Corrective Action(s) Required

6. Verification of Corrective Action: Corrective action is fully implemented as required above for this well where the actual isolation distance from any planned source(s) of contamination was not adequate.

   Verified By: _____ Date: _____

   Record documentation supporting verification below or attached supporting documentation:

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PART B-2

Instructions: Enter the description of each major or potential source of contamination within 800 feet (2,000 feet for Type IIA) of the well and mark if Existing or Planned for each source of contamination at the top of the table. Indicate whether each well protection factor applies relative to each source of contamination. Use information from the site well records and information on the individual waste storage facility or source of contamination. Where a well record does not exist, answer "NO" to the well protection B, C, and D or obtain written documentation from a licensed well drilling contractor on the specific well protection factors for the specific site well. Where on-site soils investigations provide additional information, attach a copy of the investigation report, and note on the worksheet where the investigation information altered the worksheet results, as applicable. **After completing the table, return to Step 4 on Part B-1**.

Producer Name: _____ **County:** _____ **Prepared by:** _____ **Date:** _____ **Checked by:** _____ **Date:** _____

Isolation Distance Reduction for Part B-2	
Type IIA – Reduction allowed down to 1,000 feet **Type IIB and Type III** - Reduction allowed down to 400 feet where the following Protection Factors are documented in Part B-2	**Type IIA** – Reduction allowed down to 500 feet **Type IIB and Type III** - Reduction allowed down to 200 feet where the following Protection Factors are documented in Part B-2
A or, B+C or, E	A+B or, E+B+C or, A+C or, E+D or, A+E or, F (agrichemical and fuel storage only)

July 21, 2014 MOU between MDARD and DEQ (now EGLE)

Refer to Part B-1, Step 3 for Private well isolation distances.

Well Identification: _____ **Well Protection Factors**	*Contamination Description:* Existing ☐ Planned ☐	*Contamination Description:* Existing ☐ Planned ☐	*Contamination Description:* Existing ☐ Planned ☐	*Contamination Description:* Existing ☐ Planned ☐
A - Based on groundwater flow direction, well is up-gradient from the contamination source. Attach documentation.	YES ◯ NO ◯ UNKNOWN ◯	YES ◯ NO ◯ UNKNOWN ◯	YES ◯ NO ◯ UNKNOWN ◯	YES ◯ NO ◯ UNKNOWN ◯
B - Confining material of 10 feet of continuous clay or shale or 20 feet of a continuous clay mixture* below the design bottom elevation of the waste storage facility/source of contamination	YES ◯ NO ◯ Thickness = _____ feet CLAY ◯ SHALE ◯ CLAY MIXTURE ◯ (check one)			
C - Well casing depth is 100 feet or more	YES ◯ NO ◯ Actual Casing Depth = _____ feet			
D - Must meet the conditions of factor B, have a minimum casing depth of 60 feet, and have a combined length of confining material and casing depth greater than or equal to 100 feet.	YES ◯ NO ◯ Thickness = _____ feet Actual Casing Depth = _____ feet CLAY ◯ SHALE ◯ CLAY MIXTURE ◯ (check one)			

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Well Identification: _____ **Well Protection Factors**	*Contamination Description:* Existing ☐ Planned ☐	*Contamination Description:* Existing ☐ Planned ☐	*Contamination Description:* Existing ☐ Planned ☐	*Contamination Description:* Existing ☐ Planned ☐
E - Waste storage facility constructed with flexible membrane liner, reinforced concrete**, glass fused steel; or solid manure stacking facility constructed in accordance with USDA NRCS-Michigan conservation practice standards **and** sited or graded to protect the water supply in the event of failure	YES ◯ NO ◯ Describe facility type and liner, as appropriate:	YES ◯ NO ◯ Describe facility type and liner, as appropriate:	YES ◯ NO ◯ Describe facility type and liner, as appropriate:	YES ◯ NO ◯ Describe facility type and liner, as appropriate:
F - Fuel storage facilities without secondary containment meeting factor D may be reduced to 500 feet for a Type IIA well or 200 feet for Type IIB and Type Ill. Agrichemical containment facilities (secondary containment required) and fuel storage facilities ***with secondary containment*** (meeting the regulating agencies requirements) may be reduced further. The actual isolation distance when secondary containment is present should be maximized to the extent possible and not less than 200 feet for Type IIA, nor less than 75 feet for a Type IIB or Type III.	Secondary Containment YES ◯ NO ◯ N/A ◯	Secondary Containment YES ◯ NO ◯ N/A ◯	Secondary Containment YES ◯ NO ◯ N/A ◯	Secondary Containment YES ◯ NO ◯ N/A ◯
List the well protection factors (**A**, **B**, **C**, **D**, **E, F)** with a "YES" response for each individual facility.				
Minimum Well Isolation Distance in feet (based on Part B-1 Step 1, Part B-1 Step 3, or Isolation Distance Reduction table on page 2 of Part A, whichever is less.)	Feet	Feet	Feet	Feet
Actual Well Isolation Distance in feet.	Feet	Feet	Feet	Feet
Is the Actual Well Isolation Distance less than the Minimum Well Isolation Distance?	YES ◯ NO ◯	YES ◯ NO ◯	YES ◯ NO ◯	YES ◯ NO ◯

* Note – For continuous clay mixtures, when interpreting water well record information contained under Formation Description, the first material named is the dominant material in the strata being described. For example: (a) If the material is described as "clay/sand/gravel," clay is the dominant material and would classify as a continuous clay mixture; (b) If the material is described as "sand/clay," it would not be acceptable as a continuous clay mixture since sand is the dominant material.

** Note – Reinforced concrete (r/c) includes; r/c liners and r/c structures are tanks with pre-cast or cast-in-place reinforced concrete walls and plain concrete floors where: (1) the floor is placed below the natural ground surface to a depth equal to at least 3/4 of the maximum wall height, and (2) the walls are backfilled to a depth equal to at least 3/4 of the wall height. Plain concrete liners do NOT meet well protection factor E.