

Appendix E

Guardian's Agricultural Mitigation Plan

**Agricultural Mitigation Plan
Guardian Pipeline, L.L.C.
Guardian Expansion and Extension Project**

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Appendix A Agricultural Best Management Practices (BMPs)

1. Introduction

Guardian Pipeline, L.L.C (Guardian) owns and operates 141 miles of natural gas pipeline in Wisconsin and Illinois. Guardian is proposing to expand its existing system by installing about 82 miles of new 30-inch-diameter pipe, about 36 miles of new 20-inch-diameter pipe, 1.4 miles of 16-inch diameter pipe, and 0.8 mile of 12-inch diameter pipeline between the existing terminus in Ixonia, Wisconsin and a new terminus west of Green Bay, Wisconsin. The new pipeline will typically be installed within a new, 50-foot wide permanent easement. The construction right-of-way for the 30-inch-diameter pipeline will be a minimum of 110 feet wide across agricultural lands. The construction right-of-way for the 20-inch-diameter and smaller branch lines will be a minimum of 95 feet wide across agricultural lands. Additional right-of-way could be required to allow for safe working conditions and to accommodate special soil handling procedures. In addition to the pipeline facilities, Guardian will be constructing six meter stations and tap valves at various above ground locations along the 119.1-mile route in Wisconsin. Guardian will also construct one electric motor driven compressor station in Walworth County, Wisconsin. The new compressor station will be located along Guardian's existing pipeline facilities in Walworth County.

Guardian has developed this Agricultural Impact Mitigation Plan (AMP) and associated Best Management Practices (collectively referred to as the AMP) in consultation with the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP). The primary objective of the AMP is to identify methods designed to prevent or mitigate potentially adverse impacts on agricultural productivity. The AMP will be incorporated into construction specifications for the project and will be enforced accordingly. It is binding on the company and all subsidiaries, holding companies, successors and assigns. The mitigation actions included in this AMP are subject to change by the farmland owner, with concurrence of Guardian, provided the changes are consistent with Federal Energy Regulatory Commission (FERC) requirements and Wisconsin Department of Natural Resources (DNR) permits. These changes should be in writing and reported to the DATCP, the Agricultural Inspector (AI), Environmental Inspectors (EIs), and the Agricultural Monitor (AM).

2. Purpose

The purpose of this AMP is to:

- supplement the Construction Compliance Documents (CCDs);
- establish personalized communications with agricultural landowners and tenants to ensure their unique concerns are addressed by retaining an Agricultural Inspector;
- provide agricultural landowners and tenants with a toll free, 24-hour hotline for convenient access to the AI;
- present a concise informational process for agricultural landowners and tenants regarding the various project phases;

- provide additional assurance of effective agricultural BMPs; and
- demonstrate a comprehensive agricultural mitigation program satisfactory to applicable agencies, including Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and the Federal Energy Regulatory Commission (FERC).

3. Soils and Agriculture in the Project Area

Major land resource areas (MLRAs) are geographically associated land resource units. Identification of these large areas is important in statewide agricultural planning and has value in interstate, regional, and national planning.

About two-thirds of the project area is located in MLRA 95B (Southern Wisconsin and Northern Illinois Drift Plain), and one-third is located in MLRA 95A (Northeastern Wisconsin Drift Plain). These two MLRAs are described more fully below.

MLRA 95B

More than 90 percent of MLRA 95B is occupied by farms, about 65 percent of which consists of cropland. Feed grains and forage for livestock are the chief crops. Much of the feed grain and forage is fed to dairy cattle and other livestock on the farms where it is grown, but cash-grain farming is also important. Canning crops, potatoes, fruits, and other specialty crops are important, especially around urban centers. The remainder of the farmland in this MLRA is about equally divided between managed pasture and farm woodlots. Some of the better farmland is increasingly used for urban development. Elevations range from 650 to 980 feet. This area consists of a glaciated plain with belts of hills and ridges, and nearly level outwash terraces. Drumlins (long steep-sided oval-shaped hills) are a prominent feature in the north central part of MLRA 95B. Local relief is generally subdued, but the glacial moraines, drumlins, and bedrock escarpments rise 80 to 300 feet above the adjacent lowlands.

Most of the soils developed from glacial materials that were covered by forest land prior to the onset of agriculture. These soils are moderately deep to deep and medium textured. Soils located in rolling uplands consist of moderately well drained and well drained soils with clay-enriched subsoils (e.g., Miami, McHenry, Fox, and Theresa series) that formed in loamy glacial till. These soils commonly have a thin surface layer of wind-blown silt. Moderately deep, medium textured soils with thick dark surface layers (e.g., Hochheim series) are located on the lower slopes of the same glacial landforms. Poorly drained soils with thick, dark surface layers (e.g., Will, Pella, Brookston, and Sebewa series) formed in medium textured material in the lowest lying areas. Floodplain soils (e.g., Juneau series) have formed in silty sediments surrounding local and regional drainageways.

MLRA 95A

More than 90 percent of MLRA 95A is occupied by farms, nearly 60 percent of which consists of cropland. Feed grains and hay are the chief crops. Much of the grain is fed to dairy cattle and other livestock on the farms where it is grown. Canning crops, fruits, and specialty crops are also important. The remainder of the farmland is about equally

divided between managed pasture and farm woodlots. Elevation ranges from about 650 to 1300 feet. Locally, the nearly level to rolling till plains are mantled by silt. Nearly level outwash plains and lacustrine basins, low hills, and ridges occur throughout the area. Lakes and bogs occupy some basins. Local relief is generally subdued, but some hills rise more than 160 feet above the adjacent lowlands.

Most of the soils are moderately deep to deep, and medium and fine textured. Well drained and moderately well drained, nearly level to sloping soils that have clay-enriched subsoils (e.g., Kewaunee, Hortonville, and Theresa series) occupy glacial till plains throughout this MLRA. Similar soils with thick, dark surface layers (Hochheim series), and somewhat poorly drained, nearly level to sloping soils (e.g., Manawa and Symco series) occur in the lower lying portions of the landscape. In the northern portion of MLRA 95A, moderately deep to deep, medium textured and moderately coarse textured soils with iron-rich subsoils are dominant. Well drained and moderately well drained, gently undulating to sloping soils with iron-rich subsoils (e.g., Onaway series) and somewhat poorly drained, gently undulating to sloping nutrient-rich forest soils (Solona series) occur on glacial till plains. Poorly drained soils (e.g., Angelica and Poygan series) occupy low relief areas throughout this MLRA. Organic soils that formed in highly decomposed plant residues (e.g., Houghton and Palms series) occupy deeper depressional areas.

4. Applicability

This AMP will apply to construction-related activities occurring on privately owned agricultural land. Agricultural land as used here is understood to include:

- actively cultivated land;
- hay and pasture land that is part of a crop rotation program, or has some documented history of being cropped during the last 5-years;
- land used for truck gardens and specialty crops;
- land that was previously cultivated but is currently in the federal Conservation Reserve Program (CRP) or other government agricultural set-aside programs; and
- other land with some previous crop history within the past five years even though not currently cropped.

The AMP will not generally apply to land devoted exclusively to pasture or hay production that is not suited to tillage or crop rotation, i.e., permanent pasture. However, pasture land crossed by pipeline construction will be reseeded as part of restoration and will be treated in a manner consistent with *Guardian's Upland Erosion Control, Revegetation and Maintenance Plan*. The AMP may not apply to organic muckland soils; the interests of landowners whose property consists of such soils will be addressed on an individual basis. Landowners may request changes to the provisions of the AMP, provided such changes are presented to Guardian in writing. Guardian will discuss the requests with the Landowners to reach a workable solution which will be communicated to DATCP.

"Right-of-way" (ROW) as used here and in the BMPs includes all permanent or temporary easements and workspace area to be used by Guardian for the purpose of

constructing and operating the pipeline, as well as lands on which temporary access roads, pipe storage yards, and other aboveground facilities or other appurtenances related to the pipeline project will be located. The AMP and BMPs will apply to all agricultural land within this right-of-way except where owned in fee simple by Guardian.

5. Inspection and Monitoring

Guardian will employ a team of Environmental Inspectors (EIs) to provide oversight and enforcement of various environmental permits and plans. It is anticipated that Guardian will employ a team of four EIs. One of the Environmental Inspectors will be designated as the Agricultural Inspector (AI). The AI will be responsible for enforcing the provisions of this AMP and will have the authority to stop activities that are deemed by the AI to be out of compliance. The EIs and AI will report to Guardian's Chief Inspector.

In addition to the AI, Guardian will fund a third-party Agricultural Monitor (AM) for the project. Although funded by Guardian, the activities of the AM will be directed by DATCP. In general, the AM will serve in an auditing role, working closely with Guardian's AI to verify that construction activities on agricultural land are in compliance with this AMP. The AM will not have the authority to stop construction activities, but will work through Guardian's AI and/or EIs to resolve instances of non-compliance. The AM will have full access to agricultural land affected by the pipeline and will have the option of attending daily meetings where compliance issues are discussed. Guardian will provide resumes of qualified candidates for the AM position; DATCP will have the option of making the final selection.

Specific qualifications, roles and responsibilities of the AI and AM are similar and will generally include:

- a bachelors degree in agronomy, soil science, or equivalent work experience;
- demonstrated experience working with pipeline construction and restoration on agricultural land;
- knowledge of agriculture and farming systems as well as techniques of soil conservation;
- ability to communicate effectively orally and in writing with landowners, tenants, agency staff, and construction personnel; and,
- extensive knowledge of the AMP, BMPs, the FERC Plan and Procedures and FERC's construction compliance documents

6. Role and Responsibilities of Agricultural Monitor

The AM is a full-time position that will be retained and funded by Guardian, but will report directly to DATCP. The primary function of the AM will be to audit Guardian's compliance with provisions of this AMP. The AM will not have the authority to direct construction activities and will work through Guardian's AI and/or EIs if compliance issues are identified. The AM will have full access to agricultural land crossed by the project and will have the option of attending meetings where construction on agricultural land is discussed. Specific duties of the Agricultural Monitor will include, but are not limited to the following:

- participate in preconstruction training activities sponsored by Guardian;

- review the agricultural data provided to the right-of-way agents by the landowners/tenants and the special construction provisions as agreed to by Guardian with the landowners/tenants;
- conduct soil borings as necessary;
- maintain a full-time presence in the construction work area;
- monitor construction and restoration activities on agricultural land for compliance with provisions of this AMP,
- report instances of noncompliance to Guardian's AI and prepare regular compliance reports and submit the reports to DATCP, including relevant facts, if corrective action is needed;
- act as liaison between landowners and tenants and DATCP;
- maintain a written log of communications from landowners and/or tenants including compliance with this AMP and special construction provisions;
- immediately report landowner or tenant complaints to Guardian's AI and right-of-way representative document with daily reports construction activities in agricultural land; and
- make recommendations to Chief Inspector when necessary regarding stopping work due to wet soil conditions or serious BMP violations threatening to result in significant damage to agricultural resources in the project right-of-way.

7. Role of the Agricultural Inspector

The AI will:

- be a full-time member of Guardian's environmental inspection team;
- be responsible for verifying Guardian's compliance with provisions of this AMP during construction;
- work collaboratively with other Guardian inspectors, right-of-way agents, and the AM in achieving compliance with this AMP;
- observe construction activities on agricultural land on a continual basis;
- have the authority to stop construction activities that are determined to be out of compliance with provisions of this AMP;
- document instances of noncompliance and work with construction personnel to identify and implement appropriate corrective actions as needed;
- provide construction personnel with training on provisions of this AMP before construction begins;
- provide construction personnel with as-needed field training on specific topics such as protocols for topsoil stripping; and
- make recommendations to the Chief Inspector regarding stopping work during wet soil conditions or recommended methods to prevent agricultural damage due to BMP violations.

8. Agricultural Mitigation: Planning Phase

During the planning phase, Guardian's right-of-way agents will contact landowners to obtain information on each land parcel. This information will include:

- presence and location of drainage systems (both surface and subsurface) and drainage systems planned within the next three years;
- presence of irrigation systems (including spray, trickle and buried types);
- land in the federal Conservation Reserve Program (CRP) or other set-aside programs;
- fields certified as "organic";
- muck soils;
- actively used pasture and options for minimizing disturbance to livestock;
- lands susceptible to damage due to slope, seasonal high water table, and shallow depth to bedrock;
- areas of specialty crops;
- location of existing conservation practices; and
- general location of areas where the three-lift soil handling protocol is required.

This information will be provided by Guardian to the AI, AM and DATCP at least 30 days prior to construction. Information on agricultural operations requiring special attention during construction and/or restoration obtained from landowners will be included on the construction line list as special construction provisions to alert construction personnel about special requirements for each land parcel. The AI and AM will become familiar with the permits, alignment sheets, project plans, and any relevant information provided by the farmland owner.

Guardian will make a good-faith effort to maintain communications with both landowners and tenants regarding construction scheduling. Most of the communications between Guardian and the landowners and tenants will be conducted by the right-of-way agents, although the AI and AM will be included in the process when applicable or at the landowner's or tenant's request. In addition, prior to the start of construction, Guardian will provide landowners and tenants with a toll-free number, mailing address, and e-mail address to facilitate ongoing communication. The phone number will allow calls during evenings and weekends through the use of a voice-mail system. Guardian will respond promptly to calls or correspondence from landowners or tenants affected by construction activities. Where concurrence from both the landowner and tenant of a property is needed, Guardian will make a good faith effort to obtain concurrence from both. In the event there is a disagreement between landowner and tenant with regard to a decision, Guardian's obligation will be satisfied by securing agreement of the appropriate party dependent upon the contractual agreement that exists between the landowner and tenant.

Guardian anticipates that the AM and AI will be on site about 30 days prior to construction. The AI and AM will be involved directly in overseeing the collection of site-specific baseline agricultural information and in documenting baseline conditions on and off the pipeline right-of-way. Guardian will provide the AM and AI with copies of the

current construction line list and alignment sheets, any Environmental Construction Plans, Guardian's Upland Erosion Control, Revegetation and Maintenance Plan, as well as other relevant information (e.g., topsoil depths, potential triple-lift locations, CRP land, etc.) at least 30 days prior to construction. The AM and AI would use the pre-construction time to become familiar with the route and the various documents and other information relevant to construction on agricultural land in addition to documenting baseline conditions. Immediately prior to the beginning of construction, Guardian will provide one or more environmental training sessions to construction personnel. This training will include specific information on construction requirements for agricultural land. The AI and EIs will be required to participate in this training and will provide input to the sessions. The AM and DATCP staff will be invited to attend and participate in these sessions.

9. Agricultural Mitigation: Construction and Restoration Phase

During construction and restoration, the AI's role is to monitor and enforce implementation of the AMP. The AI will travel between various construction activities in agricultural lands, checking to make sure construction activities are in compliance with the AMP. Instances of non-compliance will be documented by the AI and reported to the Chief Inspector. In some instances the AI may temporarily stop a construction activity that the AI deems to be out of compliance with the AMP. The AI will collaborate with other inspectors or will work directly with the contractor to identify and implement corrective actions. Corrective actions that are not completed on the same day that the non-compliance occurred will be added to the contractor's "punch list" and tracked by the AI and shared with the AM and DATCP until they are completed. The AI will attend regularly scheduled meetings with the Chief Inspector during which non-compliance items will be discussed along with upcoming agricultural concerns. In cases of disputes involving landowners or tenants, or when more right-of-way is needed, the AI will first notify Guardian's right-of-way agent and then work closely with the AM and the agent to achieve a resolution.

During periods of wet soil conditions, the AI and AM will assess the need for temporary work stoppage and will make appropriate recommendations to the Chief Inspector. If a wet weather shutdown condition is implemented, the CI, in conjunction with recommendations from the AI and AM will determine when to allow these activities to resume. Construction crews cannot commence construction or restoration activities during irregular or non-standard hours without contacting the AI or AM to assure soil conditions are suitable.

The AM will interact primarily with Guardian's AI or EIs to resolve any compliance issues that may arise during construction or restoration activities on agricultural land. The AM will be in regular communication with the AI, DATCP staff, and landowners/tenants. The AM will also communicate with Guardian's right-of-way representative, as appropriate. The AM will attend daily construction meetings where compliance issues are discussed with the Chief Inspector, other inspection staff, and/or the contractor. The majority of the AM's time will be spent observing construction activities and comparing results to the requirements of the AMP and agricultural specifications on construction alignment sheets, the line list, and other related documents. If the AM observes construction activities that are not in compliance with the various agricultural requirements, the AM will document the situation and notify the AI immediately.

The AM and AI will work collaboratively with the construction crew and landowners when necessary, to resolve compliance issues that may arise. If the situation cannot be resolved in the field, the AM will have the option of requesting involvement by the Chief Inspector, right-of-way representative, DATCP staff, and if appropriate, the landowner or tenant, to achieve a satisfactory resolution. The AM will not direct the activities of or communicate directly with the contractor. During periods of wet soil conditions, the AM may recommend to the AI or another of Guardian's EIs that topsoil removal, topsoil replacement, or decompaction activities on an individual land parcel be temporarily suspended. When this occurs, the AI or EI will use their stop task authority to stop the immediate activity until the parties can resolve the issue. Wet weather working conditions are described further in Section 11 below.

10. Agricultural Mitigation: Post-Construction Monitoring Phase

The AM's role will be complete when final clean up, as defined in BMP06, is completed (e.g., following initial topsoil replacement, drain tile repair, and initial decompaction), and any required seed and fertilizer has been applied (as outlined in BMP 07). The AM will have one week following completion of final clean up and seeding to complete and file a final report to DATCP. The AM will not be involved with post-construction issues between the landowner and/or tenant (as appropriate) and Guardian. If issues arise following restoration, these will be resolved by the landowner and/or tenant and Guardian (as appropriate) through implementation of BMP 8.

11. Best Management Practices (BMPs)

Guardian will implement the BMPs that are incorporated by reference into this AMP as well as the supplemental BMPs described below. The primary objective of the BMPs is to identify specific measures to be implemented during the planning, construction, restoration and post-construction phases of the project. Once finalized with DATCP, these measures will be incorporated into construction specifications and be enforceable as such. As described above, the primary responsibility for enforcing the BMPs will rest with the AI, with monitoring oversight from the AM. The AI and AM will work collaboratively with the Chief Inspector, construction inspectors, EIs, right-of-way representatives, and ultimately the construction contractor to achieve compliance. If there is a conflict between the BMPs and other contract specifications, the requirements of the BMPs will take precedence. The BMPs are attached to this AMP as Appendix A. Guardian will include this AMP and these BMPs in all bid documents and contracts with each contractor and with each contractor's subcontractors retained on the project for construction, restoration and post-restoration monitoring.

12. Supplemental Agricultural Best Management Practices

In addition to the provisions of the BMPs in Appendix A, Guardian has identified other construction and restoration practices that are applicable to agricultural land, but not explicitly addressed in the BMPs. These supplemental BMPs are described below.

Depth of Cover

Where the new pipeline is not adjacent to an existing pipeline, the minimum depth of the new pipeline in agricultural land will be 4 feet to the top of the pipe. Where the new pipeline is within 100 feet of an existing pipeline that is less than 4 feet deep, the depth of cover over the new pipeline will be at least 3 feet (but not be less than the existing

pipeline). In either case, Guardian will install the pipeline at a sufficient depth to maintain a 12-inch separation between the pipe and overlying drain tiles unless precluded by site-specific conditions.

Temporary Access Roads

Guardian will typically use public roads to access the pipeline right-of-way. If temporary approaches are needed across road ditches, they will either be constructed with soil taken from the right-of way or imported rock. However, no topsoil will be used. Topsoil potentially affected by any temporary access road will be stripped and segregated as outlined in BMP 2, and later replaced, as detailed in BMP 6, after the road is no longer needed. If rock is used, it will be placed over a layer of geotextile fabric and care will be taken to remove the rock when the approach is no longer needed for construction or restoration. A culvert will be installed if needed to allow normal functioning of the road ditch while the approach is in place. Approaches from public roads will not typically be left in place after construction.

If public roads do not provide sufficient access, Guardian will attempt to use existing farm roads for access to and from the ROW, subject to approval from the landowner. In the event that Guardian needs to construct a new temporary access road across agricultural land, the location will be negotiated with the landowner. If the temporary roads in agricultural lands require gravel stabilization, geo-textile construction fabric will be placed below imported rock material for additional stability and to provide a distinct barrier between the imported rock material and the soil surface. Temporary roads will be designed to accommodate existing surface drainage patterns and to minimize soil erosion. During the restoration phase, temporary and existing access roads will be restored to preconstruction conditions based on procedures in BMP 6 and other relevant BMPs. The restoration of access road areas will follow the same restoration practices as the pipeline right-of-way. New temporary access roads may be left in place at the request of the landowner, if no regulatory issues prevent Guardian from leaving said temporary road in place.

Clearing of Brush and Trees from the Easement

Guardian will be responsible for clearing and disposal of brush and timber on agricultural land. Species such as black cherry and black walnut will not be stockpiled in a manner that allows wilted vegetation to come in contact with livestock. Guardian's right-of-way representatives will negotiate compensation for the merchantable trees that are removed. In addition, the landowner may request that Guardian cut and stack the timber along the edge of the ROW for the landowner's use. If the landowner requests timber to be stacked on the edge of the ROW then changes their mind prior to the end of construction restoration, removal of the timber will be the landowner's responsibility.

Irrigation Systems

If pipeline construction activities interfere with the operation of sprinkle, trickle or buried irrigation systems, Guardian will establish with the landowner or tenant, an acceptable amount of time the irrigation system may be out of service. If feasible, temporary measures will be implemented to allow an irrigation system to continue to operate across the right-of-way during pipeline construction. Any damage to irrigation systems caused by construction-related activities will be repaired following backfilling.

Weed Control

Guardian will make a good faith effort to prevent weeds from spreading off the right-of-way onto adjacent agricultural land. If any spraying is required, it will be done by a state-licensed applicator. Guardian will reasonably compensate a landowner for costs of weed control that can reasonably be determined to have been caused by the spread of weeds from the pipeline right-of-way. During construction, if the AI or AM determines that weed growth on stockpiled topsoil could present a problem, the landowner or tenant (as appropriate) will be consulted regarding options of spraying, pulling, or cutting the weeds prior to topsoil replacement. If a spraying option is chosen, the landowner will further be consulted in regard to the choice of herbicide to be used, taking into account their preference for cover crop and cropping plans for next year.

Fertilizer and Lime Application

During negotiations for easement acquisition, if requested by the landowner, Guardian will offer to reimburse landowners or tenants for reasonable and necessary costs for preconstruction soil fertility testing along the easement. Standard testing would follow the methods outlined in the University of Wisconsin Agricultural Extension publication A2100. Soil analyses would include phosphorus, potassium, calcium, magnesium, percent organic matter, pH, estimated cation exchange capacity (CEC), and lime requirements. Guardian will compensate the landowner or tenant for fertilizer as needed to match levels measured in pre-construction soil samples, or add an appropriate amount of fertilizer and/or lime using Guardian's contractor. In the event of a dispute regarding fertility levels, a side-by-side comparison of the right-of-way and similar adjacent land will be used for comparison. Sampling adjacent to the right-of-way will be conducted to the same depth as topsoil was segregated on the right-of-way.

Where permanent seeding is required (e.g., pasture and CRP land), Guardian will use seeding information on the construction line list or from the CRP contract and a standard application of fertilizer and lime as recommended by the local soil conservation authority.

Repair of Existing Erosion Control Practices

Existing erosion control practices such as diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, vegetated filter strips, etc. damaged due to construction activities will be restored to pre-construction condition as approved by the AM and County Land Conservation Department (LCD) where applicable. The local LCD will be requested to provide Guardian with topographic survey information or provide technical assistance to lay out design grades associated with such practices, if needed.

Livestock Control and Disease Prevention

Guardian will arrange with landowners or tenants to relocate livestock away from the right-of-way during construction. Temporary fencing may be installed if relocation of livestock is not possible. Where livestock is grazed on adjacent lands, Guardian will make arrangements with the landowner prior to construction as to how and where to install temporary fences to maintain appropriate access to pastures. If gates are needed, Guardian's contractors will be responsible to close any gates after working hours. Temporary fences will be kept in place until vegetation canopy closure has taken place or until the landowner elects otherwise.

Permanent fences that are removed during construction will be repaired using new posts and wire. Wire tension on such fences must be adequate to prevent sagging and fences must be at least 3 to 5 feet from the pipe edge. Fence posts should not be placed over the backfilled trench. Bracing of fences to trees or vegetation is prohibited. Fence materials, such as paint, must not be toxic to livestock.

In addition to the livestock exclusion measures described above, Guardian will arrange with landowners or tenants to stop spreading manure along the right-of-way before construction begins.

Wet Weather Shutdown

Guardian anticipates the use of full right-of-way topsoil segregation on most agricultural lands. As a result, the need for wet weather shutdown should be minimal. However, during construction certain activities may need to be suspended due to excessive wet soil conditions. The need for suspension of work would be based on consideration of the following factors:

- plasticity (as defined by the Atterberg Field Test in BMP 6, Appendix A) of the surface soil to a depth of approximately 4-8 inches (see BMP 06 for more information regarding plasticity);
- extent of surface ponding;
- extent and depth of rutting and mixing between topsoil and subsoil horizons (if topsoil was not fully segregated);
- ability to re-route traffic around the wet area; and
- type of equipment and nature of the construction operations proposed for that day.

If the above factors cannot be achieved to the satisfaction of the AI and AM, the contractor shall cease work in the applicable area until such a time that moisture conditions allow work to continue. The Atterberg Field Test will be used to determine moisture conditions. In the event of a disagreement between the AM and the AI regarding the need for wet-weather shutdown, the activity in question will be stopped until there is a meeting with the Chief Inspector.

Appendix A
Agricultural Best Management Practices (BMPs)

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 01 - Right-of-Way Width

Purpose To define the locations and limits of rights-of-way and additional temporary workspaces, in order to minimize the impacts on agricultural lands.

Organization

Guardian's Agricultural Inspector (AI), in cooperation with the Agricultural Monitor (AM) will enforce the measures described for pipeline construction within agricultural lands.

Planning

1. Prior to construction Guardian will determine the right-of-way widths over the length of lands traversed by the pipeline, including additional temporary workspaces. Areas potentially requiring triple-lift soil handling (BMP 10) will be identified using the NRCS SSURGO2 digital version of applicable county soil surveys and will be verified in-field by the Agricultural Monitor. Triple-lift soil handling will be accounted for in extra workspace determinations but may require workspace modifications in the field.
2. Guardian will show the specific limits of rights-of-way on alignment sheet drawings provided to the construction contractor, environmental consultants, the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), the Agricultural Monitor, and inspection personnel. Guardian will provide DATCP with a summary table of right-of-way limits upon request at least 30 days prior to construction.
3. Guardian will provide the construction contractor, environmental consultants, DATCP, the AI and AM with right-of-way configuration drawings and other figures referred to by the BMPs developed for the project at least 30 days prior to construction. Guardian will provide training to familiarize construction personnel with the use and interpretation of drawings and figures.
4. Guardian will obtain the appropriate environmental and right-of-way clearances prior to entry on any land affected by construction of the pipeline.

Construction

1. The limits of the right-of-way and all additional temporary workspaces will be staked prior to work commencing at that location. The need for triple-lift soil handling will be verified in the field by the AI and AM. Locations requiring additional workspace will be identified during staking in order to receive additional workspace authorization prior to construction.
2. For the 30-inch-diameter pipeline (assuming full right-of-way topsoil stripping) a right-of-way width of 110 feet is required. This consists of 50 feet of permanent easement, and a temporary construction easement of 60 feet. See figure 1A.
3. For the 20-inch-diameter pipeline, a right-of-way width of 95 feet is required. This consists of 50 feet of permanent easement, and a temporary construction easement of 45 feet. See figure 2A.

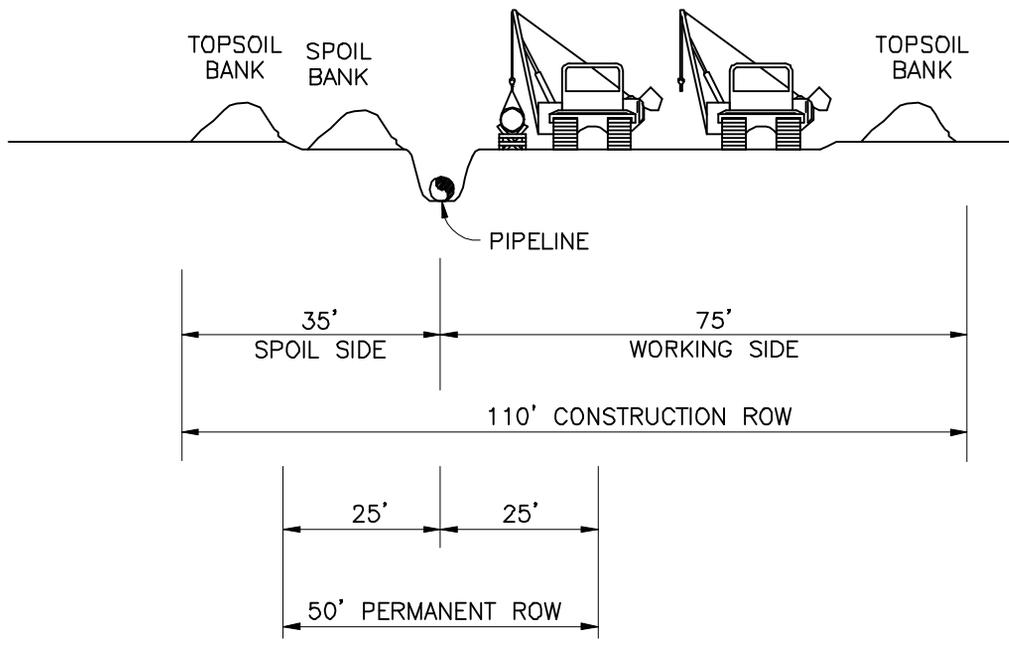
Where 3-lift soil handling procedures are implemented, an additional 25 feet of temporary right-of-way will be required see figure 1B and 2B. See BMP 10 for additional details of 3-lift soil handling.

4. Additional temporary workspace will also be required for stream crossings, road bore crossing areas, side-hill construction areas, uplands on either side of wetlands, equipment turnaround areas, HDD drill sites, HDD pull back areas, and foreign pipelines

Guardian Pipeline Expansion and Extension Project
BMP 01 - Right-of-Way Width - Continued

and other utility crossings. Guardian will determine the amount of additional right-of-way needed for construction on agricultural land.

5. Should a situation arise where the approved workspace is not adequate to implement the agricultural BMPs, work will not be allowed to proceed in the additional workspace until Guardian determines an appropriate course of action. Unforeseen but necessary increases in right-of-way width will be discussed with construction personnel, right-of-way agents, the landowner or tenant, the AI, the AM, and FERC, as appropriate. Guardian will use the additional workspace only if allowed by the easement and approved by the AI and the FERC (if necessary).
6. Guardian has generally avoided certified organic farming operations whenever possible. However, if a certified organic farm cannot be avoided, Guardian will demarcate the boundaries of certified organic farming operations to alert construction personnel that special construction techniques will apply.



NOTES

1. CONFIGURATION DOES NOT INCLUDE ADDITIONAL TEMPORARY WORKSPACE AT CROSSINGS.
2. 4 FEET COVER OVER TOP OF PIPE.
3. UP TO 12" TOPSOIL REMOVAL FROM WORKING SIDE AND SUBSOIL STORAGE AREAS.
4. TOPSOIL STORED ON SPOIL SIDE AND WORKING SIDE.

PUBLIC

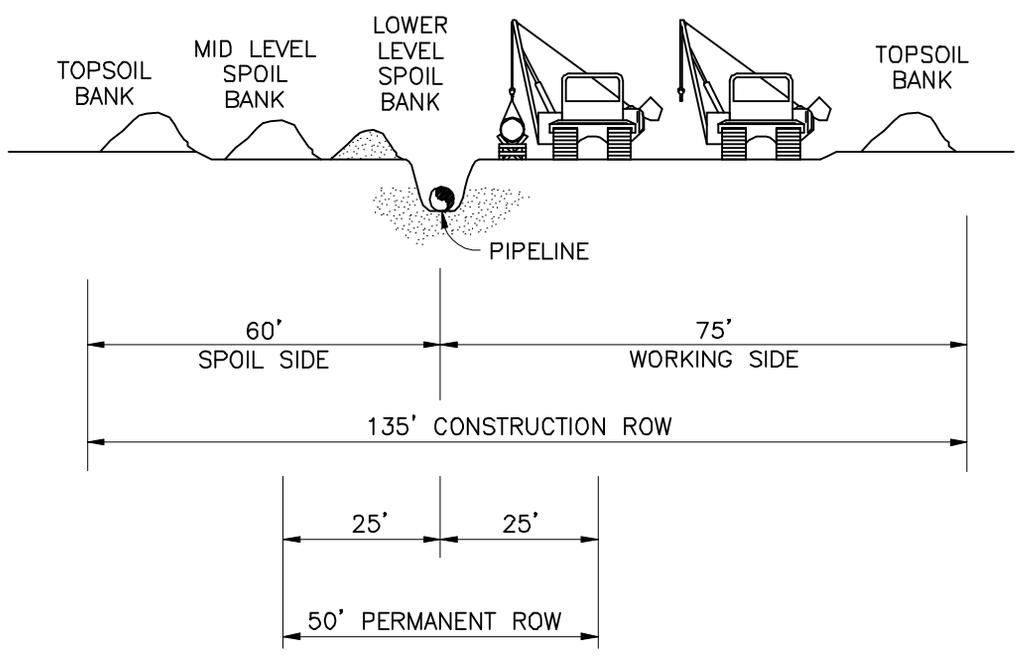
F	FERC SUPPLEMENTAL (JUNE 2007)	05-31-07	JLC	JDB	GCB
E	FERC FILING	10-11-06	---	---	---
D	ISSUED FOR REVIEW	09-22-06	---	---	---
C	FERC DRAFT	08-03-06	JMA	JWR	GCB
REV:	DESCRIPTION	DATE	DRN	CHK	APPR
DRN BY:	JMA	DATE:	07-27-06	APPR BY:	GCB
		DATE:	07-28-06		



**GUARDIAN
PIPELINE**
A SUBSIDIARY OF ONEOK PARTNERS, L.P.

GUARDIAN EXPANSION & EXTENSION PROJECT	
TYPICAL 30" PIPELINE 110' RIGHT-OF-WAY TOTAL TOPSOIL SEGREGATION	
DRAWING NO. FIGURE 1A	REV. NO. F

SCALE: NONE



NOTES

1. CONFIGURATION DOES NOT INCLUDE ADDITIONAL TEMPORARY WORKSPACE AT CROSSINGS.
2. 4 FEET COVER OVER TOP OF PIPE.
3. UP TO 12" TOPSOIL REMOVAL FROM WORKING SIDE AND SUBSOIL STORAGE AREAS.
4. TOPSOIL MAY BE STORED ON SPOIL SIDE AND/OR WORKING SIDE.

PUBLIC

F	FERC SUPPLEMENTAL (JUNE 2007)	05-31-07	JLC	JDB	GCB
E	FERC FILING	10-11-06	---	---	---
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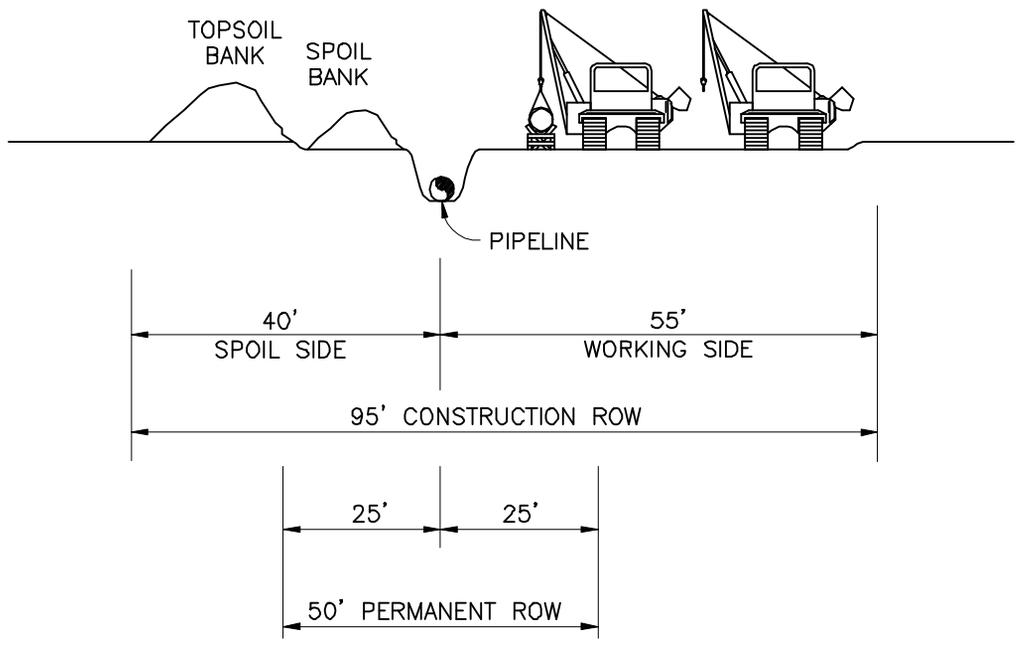
**GUARDIAN
PIPELINE**

A SUBSIDIARY OF ONEOK PARTNERS, L.P.

GUARDIAN EXPANSION & EXTENSION PROJECT

**TYPICAL 30" PIPELINE
135' RIGHT-OF-WAY
TRIPLE DITCHING**

SCALE: NONE



NOTES

1. CONFIGURATION DOES NOT INCLUDE ADDITIONAL TEMPORARY WORKSPACE AT CROSSINGS.
2. 4 FEET COVER OVER TOP OF PIPE.
3. UP TO 12" TOPSOIL REMOVAL FROM WORKING SIDE AND SUBSOIL STORAGE AREAS.
4. TOPSOIL STORED ON SPOIL SIDE.

PUBLIC

F	FERC SUPPLEMENTAL (JUNE 2007)	05-31-07	JLC	JDB	GOB
E	FERC FILING	10-11-06	---	---	---
D	ISSUED FOR REVIEW	09-22-06	---	---	---
C	FERC DRAFT	08-03-06	JMA	JWR	GCB
REV:	DESCRIPTION	DATE	DRN	CHK	APPR
DRN BY: JMA	DATE: 07-27-06	APPR BY: GCB	DATE: 07-28-06		



GUARDIAN PIPELINE
A SUBSIDIARY OF ONEOK PARTNERS, L.P.

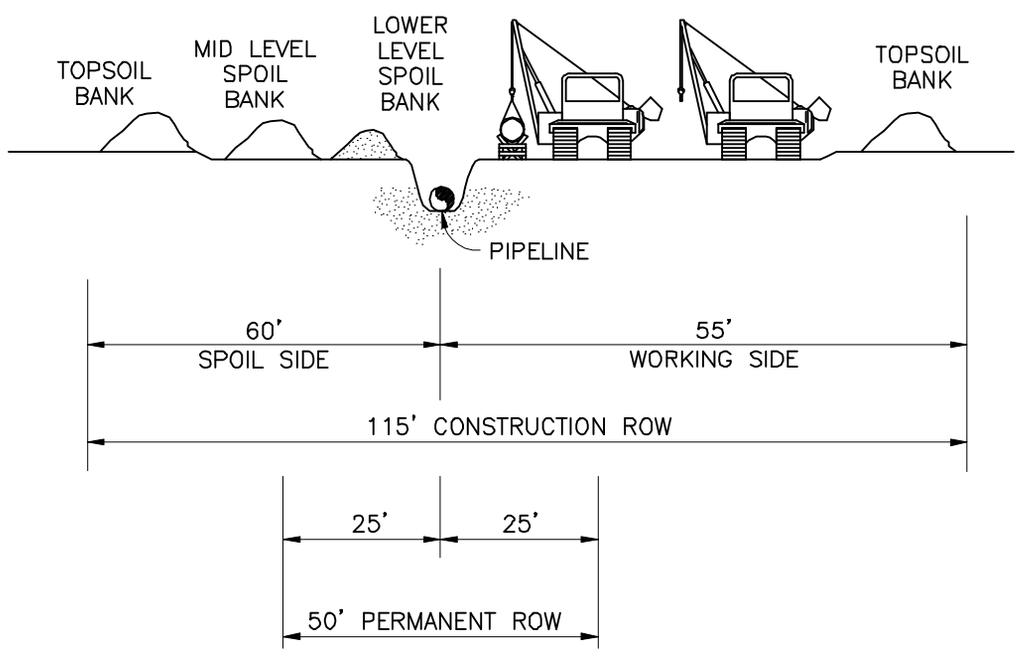
GUARDIAN EXPANSION & EXTENSION PROJECT

**TYPICAL 20" PIPELINE
95' RIGHT-OF-WAY
TOTAL TOPSOIL SEGREGATION**

SCALE: NONE

FILE NAME: G2AT0002B.dgn PROJECT NO.: 51517

DRAWING NO. **FIGURE 2A** REV. NO. **F**



NOTES

1. CONFIGURATION DOES NOT INCLUDE ADDITIONAL TEMPORARY WORKSPACE AT CROSSINGS.
2. 4 FEET COVER OVER TOP OF PIPE.
3. UP TO 12" TOPSOIL REMOVAL FROM WORKING SIDE AND SUBSOIL STORAGE AREAS.
4. TOPSOIL MAY BE STORED ON SPOIL SIDE AND/OR WORKING SIDE.

PUBLIC

F	FERC SUPPLEMENTAL (JUNE 2007)	05-31-07	JLC	JDB	GCB
E	FERC FILING	10-11-06	---	---	---
D	ISSUED FOR REVIEW	09-22-06	---	---	---
C	FERC DRAFT	08-03-06	JMA	JWR	GCB
REV:	DESCRIPTION	DATE	DRN	CHK	APPR
DRN BY:	JMA	DATE:	08-01-06	APPR BY:	GCB
		DATE:	08-01-06		



**GUARDIAN
PIPELINE**

A SUBSIDIARY OF ONEOK PARTNERS, L.P.

GUARDIAN EXPANSION & EXTENSION PROJECT

**TYPICAL 20" PIPELINE
115' RIGHT-OF-WAY
TRIPLE DITCHING**

SCALE: NONE

FILE NAME: G2AT00031.dgn PROJECT NO.: 51517

DRAWING NO. **FIGURE 2B** REV. NO. **F**

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction Within Agricultural Lands
BMP 02 - Topsoil Segregation

Purpose

To preserve the topsoil resource and minimize the potential for topsoil/subsoil mixing. A secondary objective is to standardize the method of topsoil stripping in order to minimize the potential for non-compliance due to human error.

Planning

1. Guardian will identify full right-of-way topsoil segregation as the preferred alternative, but subject to Guardian's approval, landowner requests for alternative methods will be considered. In locations where landowners have requested, and Guardian has approved an alternative method of topsoil segregation, Guardian will not be subject to wet weather shutdown restrictions. Decisions to shutdown construction in specific work areas will be made by the Chief Inspector taking into account the recommendation of the AI and AM.
2. The landowner's selection of a topsoil removal method (other than full right-of-way) will be made known to right-of-way agents, the AI, the Agricultural Monitor and upon request, to the Department of Agriculture, Trade and Consumer Protection (DATCP). Applicable topsoil stripping methods for each parcel will be included in the appropriate construction documents and the line list.
3. Digital soil survey data (NRCS-SSURGO2) will be used to identify topsoil depths along the right-of-way. These depths will be verified by the AI or AM in the field during topsoil stripping. This information will be included in the appropriate construction documents for use by construction and inspection personnel.

Construction

1. Full and partial topsoil stripping alternatives are similar except for the area from which the topsoil is removed. Under partial topsoil stripping topsoil may be removed from the trench and spoil storage area. Under full right-of-way topsoil stripping, topsoil is also removed from the working side (traffic lane) of the right-of-way. Topsoil will not be removed from under the topsoil storage piles.
2. Equipment operators will be trained to discriminate between topsoil and subsoil based on obvious color changes. In locations where topsoil/subsoil color changes are subtle or topsoil depth distribution is variable and complex, the AI may request a soil scientist licensed to practice in Wisconsin to advise Guardian regarding the determination of the topsoil depth.
3. Topsoil will be stripped to a depth of 12 inches or to the actual depth if less than 12 inches of topsoil is present. Guardian has the option to remove topsoil in excess of 12" at its discretion.
4. Subsoil material removed from the pipeline trench will be stockpiled separately from the topsoil stockpile. The subsoil material will be stockpiled in the subsoil storage area.
5. Topsoil will be removed prior to cut/fill grading operations (full right-of-way topsoil removal is required for cut and fill operations).

Before topsoil is removed, the Atterberg field test (Attachment 1) will be applied to assess whether the moisture content in the soil profile is acceptable. Where the test indicates the soil is too wet, stripping may need to be postponed. The AI, based on professional judgment, may allow the removal of topsoil in areas where soils are persistently wet and do not pass the Atterberg field test. Refer to the supplemental BMPs for additional information on protocols for work during wet weather conditions.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 03 - Erosion Control

Purpose

To minimize the effects of erosion on lands affected by construction and adjacent properties, and to prevent sediments from being transported off the right-of-way or into adjacent natural resources.

Planning

1. Guardian will conduct training for inspection and contractor personnel so that all parties have a working knowledge of erosion controls that will be used on the project. The training will include a review of Guardian's Upland Erosion Control, Revegetation and Maintenance Plan (Guardian's Plan), Agricultural Mitigation Plan (AMP), and Best Management Practices (BMPs). Training will identify the authority and responsibility of inspection personnel, the criteria for placement of particular erosion control structures, and procedures to be followed in the event that erosion controls are improperly installed, are ineffective, or need to be maintained.
2. Guardian will advise the construction contractor of areas of special concern, including but not limited to: (1) the location of highly erodible soils, (2) steep or extremely long slopes, (3) site-specific conditions where grading or earth-moving are expected to create temporary and localized erosive conditions, and (4) the location of sensitive natural resources such as high quality wetlands and waterbodies.
3. Guardian will require its construction contractor to structure its work in a manner that is consistent with the requirements of the documents listed in item 1 above, and to maintain an adequate supply of approved erosion control materials necessary for providing an appropriate level of control.
4. Guardian's Environmental Inspection staff, including the AI (with oversight monitoring from the Agricultural Monitor) will be responsible for compliance with the provisions of this BMP.

Construction

Temporary Erosion and Sedimentation Controls

1. Temporary erosion and sediment controls will be constructed promptly after initial soil disturbance, and will be properly maintained throughout construction. Erosion and sediment controls will be inspected as specified in Guardian's Plan and reinstalled as necessary (such as after backfilling of the trench) until they are replaced by permanent erosion controls or restoration is complete.
2. Temporary slope breakers will be constructed where necessary to reduce runoff velocity and divert water off of the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags.
3. Where indicated by the AI, or other Environmental Inspectors, temporary slope breakers will be installed as described in Guardian's Plan. The outfall of each temporary slope breaker will be directed off the construction right-of-way to a stable, well-vegetated area. If well vegetated areas are unavailable the outfall will be directed to an energy-dissipating device at the end of the slope breaker and off the construction right-of-way. The energy-dissipating outlet of the slope breaker will be stable enough to filter sediment from the water and retain the sediment within the existing vegetation or the immediate area of the energy dissipating device.
4. In locations where normal overland flow of water would carry runoff from non-organic farm operations onto adjacent certified organic farmland, or land in transition to organic farmland,

Guardian Pipeline Expansion and Extension Project BMP 03 - Erosion Control - continued

Guardian will take precautions to minimize the potential for discharge water to penetrate the buffer of the certified organic farmland.

5. Sediment barriers will be installed and maintained as described in Guardian's Plan
6. Slope breakers will be of adequate height and width to contain and divert a significant rain event. Additionally, slope breakers will be constructed with a two to eight percent outslope to a stable area. In the absence of a stable area, appropriate energy-dissipating devices will be used to direct the flow off of the construction right-of-way. The slope breaker will be compacted during its construction to prevent the water from eroding through the berm. The inlet end of the berm will be located to prevent water from traveling around the berm.
7. The outlet of the slope breaker will be stable enough to filter sediment from the water and retain the sediment within the existing vegetation.

Temporary Trench Plugs

Temporary trench plugs will be used to limit the channeled flow of water within the pipeline trench. Soft plugs consist of subsoil (not topsoil) tamped into place with a backhoe bucket, or sandbags placed in the ditch following excavation. Hard plugs consist of unexcavated portions of the ditch and also may be used to provide access across the trench for livestock or for irrigation systems.

- Hard plugs will be left in place at stream crossings if there is a potential for water from the stream to flow into the open trench in agricultural land;
- Soft plugs will be installed at the boundaries of certified organic farming operations;
- Soft plugs constructed to hold water will be longer along the trench line than they are tall, constructed in tamped layers, and inspected regularly to prevent breaching.
- Installation of plugs will be coordinated with installation of temporary slope breakers to effectively divert water off of the right-of-way or workspace.
- Water accumulated behind the plugs will be pumped out onto a well-vegetated area or filtered before the plug is removed. Precautions will be taken to prevent water pumped from the trench from flowing onto adjacent certified organic farms or land in transition to organic farmland.

Mulch and Temporary Cover Crops

1. In general, mulch will not be used as an erosion control measure in agricultural lands. In the event mulch is required by Guardian in consultation with the AI and the landowner in agricultural lands, the mulch will be applied according to recommendations in Guardian's Plan.
2. If restoration of active cropland is completed during the growing season, Guardian may plant a temporary cover crop of oats, winter wheat or similar crop. The decision to plant a temporary cover crop will depend on the date that restoration is complete, the potential for erosion, and input from the landowner or tenant.

Permanent Trench Breakers

1. To prevent subsurface flow of water through the pipe trench after restoration, permanent trench breakers will be installed in accordance with Guardian's Plan.
2. The following reference table can be used to locate trench breakers on slopes greater than 5 percent.

Guardian Pipeline Expansion and Extension Project
BMP 03 - Erosion Control - continued

<u>Slope (%)</u>	<u>Spacing Recommendations (feet)</u>
5 – 15	300
>15 - 30	200
> 30	100

Trench breakers will be installed prior to backfilling and will consist of sandbags, earth-filled sacks or other approved material. Topsoil will not be used to construct trench breakers. Trench breakers are required to have a minimum bottom width of two sacks wide.

3. Trench breakers will be installed to a minimum elevation of one-foot above the top of the pipe. The top of the trench plug must be two feet or more below the restored surface on agricultural land.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 04 - Drain Tile

Purpose

To ensure that tile lines damaged during construction are repaired to pre-construction, or a functionally equivalent condition, and to avoid adverse impacts on planned or proposed drainage systems.

Planning

1. Identify fields containing drain tiles through contact with landowners, the local Land Conservation District, County Drainage Board and Districts, and the staff of the USDA-Natural Resources Conservation Service.
2. Determine the location of planned drainage systems likely to be constructed within three years of Guardian's construction. Plans for new drainage systems must be submitted to Guardian's right-of-way agents within 90 days of the publication of the Agricultural Impact Statement (AIS) to be considered. Plans for new drainage systems must be prepared by an experienced designer or installer. At locations along the construction right-of-way where future underground tile is proposed, the pipeline trench will be excavated to the required depth to provide the specified clearance (see below: Construction, Item 1).
3. Only drain tiles whose precise location is known will be flagged within the right-of-way after clearing and grading.
4. Upon written notice from the landowner, Guardian will repair or correct tile or drainage problems caused by construction or restoration of the pipeline for a period of three years following such construction or restoration action, landowner and weather permitting. Repairs will be conducted unless Guardian can demonstrate that the problem identified by the landowner was not caused by actions performed during such construction or restoration.

Construction

1. The pipeline trench shall provide a minimum of 12 inches clearance, where practicable, between the pipe and the drainage tile. In most situations, the pipe will be installed under the drainage tile. However, where drain tiles are deeper than 8 feet (e.g., main lines and tie-ins), Guardian may elect to install the pipe above the drainage tile.
2. Guardian will install its pipe to accommodate future drain tile installations where the location has been identified (as described above under step 2 of Planning), and intentions to construct new drain tile systems have been submitted to Guardian within 90 days of the publication of the Agricultural Impact Statement.

General Conditions

1. Guardian will use qualified drain tile contractors to repair tile lines damaged during pipeline construction. In addition, Guardian will use its best efforts to employ local tile contractors to replace, relocate or reconfigure existing tile lines damaged or cut during pipeline construction.
2. Where tile lines adjacent to the pipeline's right-of-way are adversely affected by the construction of the pipeline, Guardian will take the necessary actions to assure the performance of the tile lines is equivalent to pre-construction conditions. This may include the relocation, reconfiguration, and replacement of adjacent existing and undamaged tile lines.
3. If necessary, Guardian will install any additional drainage tiles or other drainage measures on agricultural land necessary to properly drain wet areas on the permanent or temporary

Guardian Pipeline Expansion and Extension Project

BMP 04 – Drain Tile – continued

easements of the pipeline caused by the construction of the pipeline. Guardian will not install new drain tile in areas designated by the NRCS as farmed wetland, unless the landowner can demonstrate that a functional drain tile system was in place in that area prior to construction, and that installation of the pipeline has interfered with that drainage system.

4. In consultation with the AI, and a qualified drain tile contractor, Guardian will determine where subsurface intercept drain tiles should be installed to prevent surface seeps because construction of the pipeline has changed soil hydraulic characteristics and surface drainage patterns within the right-of-way or on adjoining agricultural lands.
5. Guardian and its drain-tile contractors will consult with the landowner about the modification of the in-field drain tile installations.
6. The quality of clay and concrete drain tile and corrugated polyethylene tubing to be installed will be appropriate for the work as determined by the AI and/or qualified drain tile repair contractor. Material to be installed will meet American Society of Testing Materials (ASTM) standards.
7. Drain tile removed from the pipeline trench will not be reused. Damaged drain tile will be considered construction debris and disposed of appropriately.

Locating Damaged Drains

1. Drain tiles found during trenching will be flagged. Flags will be placed in the subsoil storage pile adjacent to the tile location.
2. Prior to permanent repairs drain tiles will be probed (examined) for damage within the area of disturbance (right-of-way).

Temporary Repairs

1. Exposed tiles will be capped or screened to protect against soil intrusion and animals when the trench is dug, whether repaired immediately or later.
2. Flowing tile line will be repaired as soon as practicable with solid tubing, until permanent repairs can be made.
3. Temporary repairs are needed if a flowing drain will be stopped for longer than 24 hours.

Permanent Repairs

1. Permanent tile lines damaged within the trench area will be repaired prior to backfilling at the respective location. Damage to tile lines in the construction right-of-way will be repaired before the topsoil is replaced.
2. Where tile lines are severed by construction of the pipeline trench, angle iron, three-sided steel channel iron, I-beams, full round slotted pipe, perforated plastic pipe or half pipe will be used to support the repaired tile line. The support members will extend a minimum of 2-feet into previously undisturbed soil. If the tile repairs involve clay or concrete tile, the support member will extend to the first tile joint beyond the minimum 2-foot distance.
3. The tile drain's slope (gradient) will be maintained by providing sufficient support to prevent the drain line from sagging. Sandbags, bags of concrete, or Sakrete can be used as support under repaired tile lines. The grade of the tile line should remain unchanged.
4. If the tile is clay, ceramic, or concrete, any connection with new material must be made with commercially available connectors, or wrapped with plastic or sealed with concrete to prevent soil intrusion.
5. To avoid the risk of damaging (crushing) the tile lines with large soil clumps or stones during backfilling, loosened native subsoil free of large soil clumps and stones should be placed on

Guardian Pipeline Expansion and Extension Project
BMP 04 – Drain Tile – continued

top of, and to the sides of, the tile line. Where appropriate native subsoil is not available, imported subsoil free of clumps and stones, or coarse sand or bank-run sand can be used to cushion the tile line.

6. Filter-covered drain tiles will be used where the existing tile line is covered with a filter and the landowner requests the repairs be made with similar tile material.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 05 - Trench Dewatering and Discharge of Hydrostatic Test Water

Purpose

Control the flow rate of water from trench dewatering or hydrostatic testing to avoid:

- Erosion and scour;
- Damage to adjacent agricultural land, crops, or pastureland;
- Inundating crops for more than 24 hours, including rainfall;
- Depositing gravel in fields, pastures, or watercourses; and
- Damaging organic farming operations.

General requirements for trench dewatering and discharge of hydrostatic test water are described in Guardian's Wetland and Waterbody Construction and Mitigation Procedures (Procedures). The requirements described below will also apply if water is discharged on agricultural land. Compliance with this BMP will be the responsibility of the Agricultural Inspector with monitoring oversight from the Agricultural Monitor.

Planning

1. Guardian and its construction contractors will identify suitable areas for the discharge of water accumulated within the pipe trench or other excavated areas.
2. Guardian will require its construction contractors to obtain Guardian's approval of dewatering discharge locations and techniques that occur outside the construction work area on agricultural land. The AI will approve these locations in consultation with the landowner.
3. Guardian will require its construction contractors to structure the work to minimize the accumulation of water within the trench.
4. In the event it is not possible to avoid water-related damages as described above, Guardian will:
 - Reasonably compensate the landowner for the damages, and
 - Restore the cropland and crops, pastureland, water courses, and any other damaged lands to their pre-construction condition.

Construction

1. Dewatering activities will be conducted in accordance with Guardian's Procedures and in compliance with applicable drainage laws, and applicable state and federal regulations.
2. If discharging water onto cropland cannot be avoided, every effort will be made to limit discharge such that crops will be inundated (flooded) for less than 24 hours.
3. The dewatering activities should not deposit gravel, heavy sediment (mud) or other debris onto agricultural land.
4. Backfill activities will begin as soon as possible after pipe installation to prevent the trench from refilling with water in high water-table conditions.
5. Discharge of water from the trench of non-organic farm operations will not be allowed to flow onto adjacent organic farm operations or adjacent farms in transition to organic certification.
6. Rainwater or groundwater that collects in the trench will be pumped:
 - Onto a well-vegetated area that will prevent the water from returning to the right-of-way, or
 - Into a filter bag or a settling basin constructed of straw bales when adequate vegetation is absent or when in the vicinity of a wetland or waterbody.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 05 - Trench Dewatering and Discharge of Hydrostatic Test Water

Purpose

Control the flow rate of water from trench dewatering or hydrostatic testing to avoid:

- Erosion and scour;
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3. Guardian will require its construction contractors to structure the work to minimize the accumulation of water within the trench.
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3. The dewatering activities should not deposit gravel, heavy sediment (mud) or other debris onto agricultural land.
4. Backfill activities will begin as soon as possible after pipe installation to prevent the trench from refilling with water in high water-table conditions.
5. Discharge of water from the trench of non-organic farm operations will not be allowed to flow onto adjacent organic farm operations or adjacent farms in transition to organic certification.
6. Rainwater or groundwater that collects in the trench will be pumped:
 - Onto a well-vegetated area that will prevent the water from returning to the right-of-way, or
 - Into a filter bag or a settling basin constructed of straw bales when adequate vegetation is absent or when in the vicinity of a wetland or waterbody.

Wisconsin 2006 Expansion Project
BMP 05 – Trench Dewatering – continued

Additionally, sediment barriers or similar erosion control measures may be used as necessary to divert the flow of pumped water.

7. To minimize the extraction of silt or sediment from the trench the intake will be prevented from touching the bottom or side of the trench. A flotation device or a support will be attached to the intake of the suction line to prevent sucking up soil and other debris from the trench.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 06 - Soil Restoration

Purpose

To restore agricultural land to maintain its quality, contour and productivity by:

- Avoiding the mixing of topsoil with subsoil,
- Alleviating compaction from subsoil and topsoil layers that experience heavy equipment traffic,
- Compressing trench backfill and/or crowning the trench such that pre-construction contours are reestablished after the trench backfill settles, and
- Removing rocks such that the rock content of the reclaimed topsoil surface and the surface of the underlying soil exposed by topsoil stripping is not increased.

Planning

1. Guardian will consult with landowners to identify suitable rock disposal location(s) on the construction right-of-way (ROW), or off-site at another approved disposal location. Rock disposal sites will comply with applicable federal, state, and local regulations involving fill and disposal of construction debris.
2. Successful restoration of the soil requires that the proper equipment be used, in the proper sequence, under the correct soil moisture conditions. The Atterberg Field Test (Attachment 3) will be used by the AI to determine when the soil is suitable for tillage down to the effective depth of decompaction equipment. Each step in the restoration process (Attachments 1 and 2) is completed before the next step.

Construction:

Backfilling

1. The trench will be backfilled with material from the subsoil storage piles. In locations where three-lift soil handling procedures are used, backfilling the trench shall be conducted in accordance with BMP 10.
2. Rock excavated from the trench and separated from trench spoil may be included with backfill, provided the rock content does not significantly increase compared to pre-construction conditions. In areas where the trench is excavated in consolidated rock, after padding the pipe, Guardian will backfill the trench with excavated rock up to the top level of the existing bedrock profile. In the event excess rock cannot be returned to the trench without substantially increasing pre-existing rock content, the excess rock will be considered construction debris and disposed of along the right-of-way or at other approved locations off the site.

Re-establishing Pre-Construction Contours

1. Crowning the trench area and/or compressing trench backfill to near preconstruction levels will compensate for ground settling or subsidence and prevent water ponding above the trench area.
2. Construction equipment will traverse the trench during backfill operations to compress backfill. Compressing backfill minimizes the quantity of soil material needed to crown the trench.
3. Where needed, a trench crown will be constructed with native topsoil material. However, not more than two inches of topsoil can be taken from adjacent right-of-way areas. Topsoil from adjacent ROW areas may be needed to avoid the potential for mixing of subsoil and

Guardian Pipeline Expansion and Extension Project BMP 06 – Soil Restoration – continued

topsoil during cultivation. The AM will be consulted regarding the height of the crown based on soil type and moisture content.

4. The height of the crown will generally be equal to, or less than, 12 inches in height at the center. The crown will be graded outward to meet normal ground elevation as close to the edge of the trench line as possible.
5. Breaks will be left in the crown to accommodate existing surface drainage so that runoff does not pond upslope of the trench crown.

Subsoil and Topsoil Decompaction: Full and Partial Topsoil Stripping Options

Decompaction, penetrometer testing/decisions, and the other activities for the full corridor topsoil removal option are shown in Process Flow Charts provided as Attachment 1.

Subsoil decompaction will be routinely performed at optimal moisture contents on heavily trafficked working areas. Stripped topsoil is then spread over the decompacted and rock-picked subsoils of the working area of the right-of-way prior to a second decompaction performed, as needed, after topsoil has been returned to the working side, the trench, and the subsoil storage area. Additional decompaction may be needed in areas where penetrometer testing indicates additional decompaction is necessary.

Should a landowner request partial corridor topsoil removal, a separate subsoil decompaction step is not required as the trench and spoil storage areas do not receive sufficient heavy equipment traffic to substantially compact the subsoil. Decompaction under the partial topsoil stripping option is performed after topsoil has been spread over the trench and spoil storage areas.

Decompaction Testing

1. On vs. off right-of-way penetrometer testing for compaction will be routinely performed after each pass of ripping (deep tillage) to evaluate the success of the initial decompaction effort and to determine if subsequent passes are needed.
2. In specific situations where the Atterberg test indicates that the soil is too wet for decompaction efforts to be successful, penetrometer testing (Attachment 4) will be performed on and off right-of-way to determine the degree of residual soil compaction. Should testing show that the decompaction effort is not successful after additional passes, a change in the decompaction equipment used would be appropriate. The Atterberg Field Test will determine when further attempts at decompaction should be postponed due to moisture levels, with guidance from the Agricultural Inspector.

Decompacting the Subsoil

1. Deep subsoil ripping will be conducted on traffic and work areas of the right-of-way where full corridor stripping of topsoil occurred. This includes the workspaces, temporary workspaces, and temporary access roads. It does not include the area over the trench or the spoil storage area, unless there is an indication that these areas are compacted. The contractor may elect to decompact these areas to facilitate turning of tillage equipment.
2. Decompaction of the subsoil will occur when the subsoil condition is friable/tillable in the top 18-inches of the subsoil profile as determined by the Atterberg Field Test (see Attachment 3) conducted by the AI. On a site-specific basis, the AI may recommend that it is preferable to proceed with decompaction at less than optimal soil moisture conditions.
3. The Contractor's choice of ripping equipment could include v-rippers, chisel plows, paraplows, or equivalent.

Guardian Pipeline Expansion and Extension Project
BMP 06 – Soil Restoration – continued

4. The typical depth of subsoiling tillage is 18 inches. The AI will provide guidance on the appropriate depth of rip in unique situations or soil types. For example, a subsoil cultivation depth of 6 to 8-inches may be appropriate on well-drained and moderate-to-coarse textured soils that are not sensitive to compaction. A depth of 22-inches may be appropriate for a deeply and severely compacted area. In areas with drain tile, Guardian will adjust stripping depths to avoid tile damage.
5. The optimal spacing of the shanks will depend on the ripping equipment, soil type and moisture content, but will typically be in the range of 8 to 24-inches. Shanks are at their optimum spacing when the implement shatters the soil area between the shanks. Shatter is evidenced by the soil lifting between the shanks as the implement passes. The AI can assist the contractor in selecting the appropriate shank spacing.
6. Soil compaction will typically be alleviated by traversing the same area of soil a sufficient number of times in different directions. Multiple passes (if necessary) across the same soil can be achieved in the narrow pipeline right-of-way by weaving the implement back and forth across the area being ripped.
7. Penetrometer tests for residual compaction will be performed on decompacted subsoil areas according to the procedures in Attachment 4
8. If decompaction is successful based on penetrometer testing, the reclamation process will proceed to the removal of any excess rocks brought to the surface during decompaction (Attachment 1).
9. If penetrometer testing indicates compaction remains after three deep ripping passes, the AI will assess the situation and determine an appropriate course of action:
 - If significant residual compaction is thought to be the result of inappropriate shank spacing, shank ripping depth, or the pattern used in the initial decompaction effort, the AI may advise an additional ripping effort with appropriate equipment and pass configuration followed by penetrometer testing. Areas with substantial residual compaction remaining after repeated decompaction efforts will be identified on the construction line list. Additional testing and possible deep ripping through the topsoil may be performed in these locations during the post-reclamation monitoring phase (BMP 08).
 - Guardian will record the location of areas where decompaction efforts are unsuccessful and additional equipment traffic would aggravate existing compaction levels. These areas will be subject to possible future decompaction efforts under more favorable conditions.
10. Atterberg testing (Attachment 3) may indicate areas too persistently wet to decompact. On-vs.-off right-of-way penetrometer tests (Attachment 4) will be recorded for reference. In these areas, topsoil will be returned to the tested areas and spread with low ground weight equipment in preparation for decompacting through the topsoil when moisture conditions are favorable.

Rock Removal from Subsoil

Subsoil ripping may bring rocks to the surface. Rocks brought to the surface will be removed to achieve the same density and size observed prior to the pipeline construction right-of-way decompaction or observed on and off the pipeline right-of-way.

Guardian Pipeline Expansion and Extension Project
BMP 06 – Soil Restoration – continued

Repair Damaged Drain Tiles and Heavy Equipment Ban

1. Following rock removal from decompacted areas, equipment operating on the right-of-way will be limited to low-ground-weight construction equipment or standard farm equipment.
2. In the event tile drains are damaged by construction or restoration equipment, repairs will be performed as specified in BMP 04 – Drain Tile.

Topsoil Replacement

1. Before proceeding with topsoil replacement, the Atterberg Field Test will be used to determine that the topsoil's consistency in the storage pile is friable/tillable.
2. Where there is weed growth on stockpiled topsoil that could result in weed seed production the AI will determine an appropriate course of action. If a spraying option is chosen, the landowner/tenant will be consulted to avoid carryover of herbicide to planned cover crops or next year's agricultural crop. In areas adjacent to certified organic farms herbicide spraying will not be implemented.
3. Topsoil will be replaced across the spoil storage, trench, work, and traffic areas for the full topsoil stripping option. Where a landowner has requested the partial topsoil stripping option, topsoil will be replaced across the spoil storage and trench areas. It is Guardian's intent that the layer of replaced topsoil will be consistent with pre-construction topsoil depths across the right-of-way.
4. Topsoil will be replaced with small tracked machinery or equivalent low-ground-weight equipment to avoid compaction of the topsoil and subsoil layers. Rubber tired motor graders may be used to spread and level topsoil to address unevenness in the field due to pipeline construction. In areas where minimal tillage, no-till, or level land farming practices are employed, a motor grader may be needed to establish final grades.
5. Penetrometer tests will be performed as directed by the AI on areas of the right-of-way and in extra workspace areas receiving additional equipment traffic or exhibiting potential compaction risk. Areas exhibiting residual compaction will undergo decompaction through the topsoil according to the procedures described below.

Decompacting Through the Topsoil

1. Under the full corridor topsoil removal option, decompaction through the topsoil may be necessary: 1) if the subsoil and/or topsoil are compacted during topsoil replacement activities and 2) in areas where decompaction was postponed due to persistent wet subsoil conditions. The penetrometer test procedure (Attachment 4) will be applied to appropriate sections of the right-of-way in areas of full topsoil stripping that were identified and recorded as potentially requiring additional decompaction efforts.
2. Because the topsoil is not stripped from the working areas under the partial topsoil removal option, decompaction through the topsoil is the only decompaction effort required. After replacement of the topsoil on the trench and subsoil storage areas, decompaction of the subsoil through the topsoil will be conducted on traffic and work areas of the right-of-way and additional temporary workspace(s). Routine decompaction will not be performed over the trench or the spoil storage side of the right-of-way unless there is an indication of compaction or if the contractor needs to use the area for equipment turning.
3. Decompaction equipment used for this purpose should not mix the subsoil with the topsoil. The AI will assist the contractor in equipment selection. The penetrometer test may indicate that deep cultivation (up to 12-inches depth) with standard farm equipment will be sufficient

Guardian Pipeline Expansion and Extension Project BMP 06 – Soil Restoration – continued

to alleviate compaction in some areas. In other locations specialized subsoiling equipment such as v-ripper, chisel plow, paraplow or equivalent may be indicated.

4. A friable/tillable soil consistency, as determined by the Atterberg Field Test (see Attachment 3), in the top 18-inches is necessary before decompacting through the topsoil.
5. The normal depth of subsoiling tillage is about 18 inches. The AI will provide guidance on the appropriate depth of ripping in unique situations or soil types. For example, a depth of 6 to 8-inches may be appropriate on well-drained, coarse-textured soils that are not easily compacted. A depth of 22-inches may be appropriate for a deeply and severely compacted area. Tilling only the topsoil (12 inches) may be sufficient on some soils.
6. The optimal spacing of the shanks will depend on soil type and moisture content, but will typically be in the range of 8 to 24-inches. Shanks are at their optimum spacing when the implement shatters the soil area between the shanks. Shatter is evidenced by the soil lifting between the shanks as the implement passes.
7. Soil compaction will typically be alleviated by traversing the same area of soil a sufficient number of times in different directions. Multiple passes (if necessary) across the same soil can be achieved in the narrow pipeline right-of-way by weaving the implement back and forth across the area being ripped.
8. If penetrometer testing indicates compaction remains after one or more deep ripping passes, the Agricultural Inspector will assess the situation and determine an appropriate course of action as described above in Decompacting the Subsoil.

Final Rock Removal

Replacing and/or decompacting through the topsoil may bring rocks to the surface. Excess rock will be removed either manually or using a mechanical rock picker, until the size and distribution of rocks on the right-of-way matches rock characteristics in non-construction areas adjacent to the right-of-way.

Final Cleanup

1. Areas of previously restored right-of-way should not be traversed by unnecessary equipment traffic. In the event any area of previously restored right-of-way that was traversed by heavy equipment (e.g., to reach a hydrostatic test location) that results in further compaction as determined by penetrometer testing at the direction of the AI, the area will be decompacted again following the procedure in “Decompacting Through the Topsoil” section of this document.
2. All construction-related debris, including litter generated by the construction crews, will be removed from the landowner’s property and disposed of appropriately.
3. Final clean-up begins after the other above-mentioned sequence of restoration activities operations are completed. Final clean-up includes installation of permanent erosion control measures and disposal of construction debris and will be completed within 20 days after backfilling in the area, weather permitting, or as soon as possible thereafter. Final clean-up shall not be delayed until the end of the next seeding season. If final clean-up is not completed within the 20-day time period, temporary erosion controls will be installed.

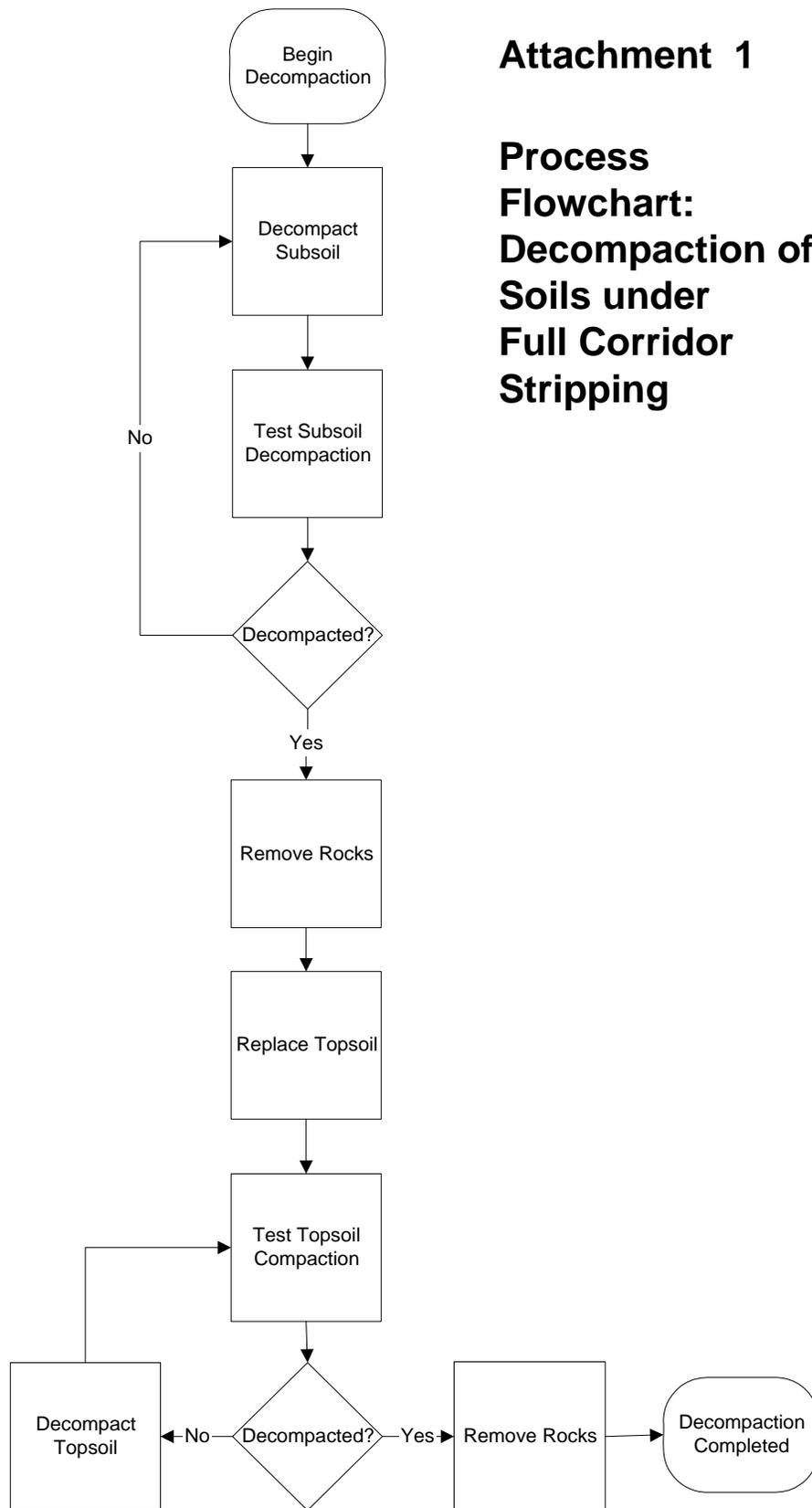
Note To Contractor – “Final Clean-up” as expressed within this BMP is defined as generally including installation of permanent erosion control measures, disposal of construction debris, and other activities a landowner or tenant would expect to be consistent with the term. However, it is not meant to be confused with or replace the FERC’s “Final Clean-up” requirements and timing which are long established federal requirements well known throughout the pipeline construction industry.

Guardian Pipeline Expansion and Extension Project
BMP 06 – Soil Restoration – continued

4. Further soil restoration steps that follow final cleanup are described in BMP 07 – Seeding and Seed Bed Preparation.

Attachment 1

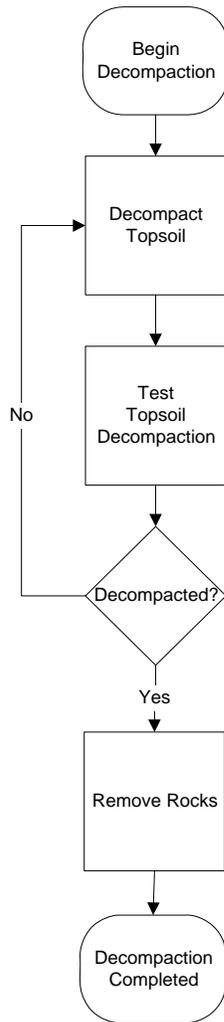
Process Flowchart: Decompaction of Soils under Full Corridor Stripping



Note: The Agricultural Inspector in concert with the Agricultural Monitor will determine an appropriate course of action if decompaction is not successful after one or more passes.

Attachment 2

**Process
Flowchart:
Decompaction of
Soils under
Partial Corridor
Stripping**



Note: The Agricultural Inspector in concert with the Agricultural Monitor will determine an appropriate course of action if decompaction is not successful after one or more passes.

Attachment 3

Atterberg Field Test Procedure

Purpose:

To determine when soil is suitable for tillage operations.

Process:

The Agricultural Inspector will determine the soil's consistency using the following procedures:

1. Pull a sample soil plug at the maximum depth to be tilled, or from within the topsoil pile.
2. Roll a portion of the sample between the palms of the hands to form a wire with a diameter of one-eighth inch.
3. The soil consistency is:
 - a. Tillable if the soil wire breaks into segments not exceeding $\frac{3}{8}$ of an inch in length.
 - b. Plastic (not tillable) if the segments are longer than $\frac{3}{8}$ of an inch before breaking.
4. This procedure is to be used prior to decompacting the subsoil; on the topsoil prior to stripping and stockpiling; on the topsoil prior to replacement; and prior to decompacting through the topsoil.
5. One determination of soil consistency is adequate until the next precipitation event.

Attachment 4

Penetrometer Test Procedure

Purpose:

To provide a method to compare the compaction level in restored work areas to undisturbed areas.

Process:

1. The soil shall be randomly tested to determine whether decompaction has been achieved.
2. The Agricultural Inspector will measure remaining soil compaction with a U.S. Army Corps of Engineers style, or similar, cone penetrometer (Waterways Experiment Station, 1948; ASAE, 1992). Generally, compaction will be tested in areas where soil type or conditions change. Sufficient tests must be conducted to document that compaction has been alleviated throughout the project area.
3. A test location will consist of two sample sites: one on the working side of the trench and the second on undisturbed soil near the edge of the right-of-way. At least five penetrometer readings will be randomly taken within each sample site to determine: a) the maximum soil penetration resistance, and b) the average depth to maximum soil penetration resistance.
4. Test locations along the right-of- way should include at least three widely spaced locations per agricultural field. The test locations would be approximately 400 feet apart across the 1,320-foot dimension of a forty (40) acre field.
5. Additional test locations should also be selected where soil type or soil moisture content changes,
6. Test data will be recorded on a data collection form.
7. Soil is considered decompacted when average penetrometer readings at the work area test site are no more than 20% greater than the undisturbed test site.

References

Waterways Experiment Station. 1948. Trafficability of soils – Development of testing instruments. U.S. Army Corps of Engineers WES, Vicksburg, MS.

American Society of Agricultural engineers. 1992. American Society of Agricultural engineers Standards. 39th Ed. ASAE, St. Joseph, MI.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 07 - Seeding and Seed Bed Preparation

Purpose

- To appropriately revegetate agricultural land.
- To protect exposed, restored right-of-way in active cropland from erosion between completion of right-of-way restoration and seedbed preparation for the following year's crop.
- To prepare the seedbed for planting, germination, and plant growth by tilling and fertilizing.

Planning

During the pre-construction phase, Guardian will identify properties where cropland or pasture will need to be seeded. In areas of row crops the landowner will decide if revegetation is required. Permanent pasture and rotated pasture will be reseeded according to landowner specifications, but will generally be planted to pre-construction vegetation. Land enrolled in the Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP) will be reseeded using appropriate seed mixes required by NRCS or FSA to maintain the landowner's eligibility for these programs. Areas of the right-of-way that are actively cropped will typically be left fallow unless a cover crop is required to stabilize the ROW prior to the next planting season.

1. Seed mixtures for permanent seeding will be determined in consultation with the NRCS and/or the landowner where possible.
2. During recommended seeding periods, seedbed preparation will follow soil restoration (see BMP 06 – Soil Restoration) as soon as weather conditions and individual right-of-way requirements permit.
3. Seeding will occur promptly after completing seedbed preparation, weather permitting. Temporary erosion control measures will be used if this timeframe cannot be met (see BMP 03 - Erosion Control).
4. For seeding outside of the recommended seeding periods, temporary erosion control methods will be employed (see BMP 03 - Erosion Control).
5. Guardian has avoided certified organic farms whenever possible. If a certified organic farming operation is impacted, Guardian will not apply soil amendments or seed to organic farms, without consulting with the landowner regarding how, or if, reseeding should be accomplished.

Construction

Seed Selection

1. Seed mixes will be selected based on recommendations from appropriate land management agencies and/or landowner preferences.
2. Seed, properly tested and tagged in accordance with Pure Live Seed (PLS) specifications will be used within 12 months of testing. PLS is a relative value representing the quality of the seed. PLS is calculated by multiplying the percent germination times the percent purity. For example, the PLS for a batch of seed containing 95 percent pure seed with an 80 percent germination is $(95 \times 80)/100 = 76$ percent.
3. All legumes (Alfalfa, Bird's Foot Trefoil, etc.) will be treated with the manufacturer's recommended inoculum prior to seeding, unless pre-inoculated seeds are used.

Guardian Pipeline Expansion and Extension Project
BMP 07 – Seeding and Seed Bed Preparation – continued

Seedbed Preparation for Conventional, Broadcast and Hydroseeding

1. The optimum condition for conventional seeding is a smooth, firm, clod-free soil for seed placement with drills or cultipacker seeders. The soil should be firm enough at planting for an adult footprint to sink no deeper than 3/8-inch. Avoid overworking the soil because rainfall following seeding may crust the surface, preventing seedling emergence.
2. If the area to be seeded has been recently loosened and will provide an adequate seedbed, no additional tillage will be required.
3. If the area to be seeded has been compacted or crusted, the top layer of soil will be tilled.
4. If necessary, fertilizer and lime will be applied on the right-of-way before tilling, to be thoroughly mixed into the soil. Fertilizer and lime may be applied according to standard application rates or application rates may be determined by a soil sample tested by a Wisconsin Farm Services Agency-approved soil testing lab at the landowner's request and expense.
5. Spike-toothed harrows may also be used during seedbed preparation. The spikes of the harrow will dig lightly into the soil to break up soil masses. Harrows may also be used to cover broadcast seed.
6. The seedbed will be scarified to create sites for seed to lodge and germinate where broadcasting the seed or hydroseeding will be used.

Seeding

1. Seeding of permanent cover will be conducted, whenever possible, during the seeding date ranges for introduced grasses and legumes as recommended by NRCS.
2. If permanent-cover seeding cannot be accomplished before the recommended seeding date, it will be conducted in conformity with the Critical Area Planting conservation practice standard of the NRCS, or temporary erosion controls will be implemented and the seeding of permanent cover will occur at the beginning of the next seeding season. See BMP 09 - Agricultural Land Winter Stabilization Contingency Plan.
3. Soil disturbance occurring outside of the recommended seeding deadline date, or any bare soil left unstabilized by vegetation, will be treated as a winter construction condition. See BMP 09 - Agricultural Land Winter Stabilization Contingency Plan.
4. After seedbed preparation, the seed mixes of the permanent grasses or legume plantings will be applied at the rate recommended by the USDA-Natural Resources Conservation Service (NRCS) or negotiated with the landowner.
5. In areas where a different seed mix is proposed, seeding will conform to the Critical Area Planting conservation practice standard of the NRCS.
6. Grassed waterways and terraces will be seeded or covered with sod to re-establish grass cover similar to preconstruction conditions. Erosion control measures, such as mulch or erosion control fabric, will be used in conjunction with seeding.
7. Conventional seeding uses drills or cultipacker seeders to place the seed into the soil at measured quantities, locations, and spacing.

Note To Contractor – “Final Clean-up” as expressed within this BMP is defined in BMP 06.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 08 - Crop Compensation Plan

Purpose:

Guardian will offer farmland owners and/or tenants (owner/tenant) a five-year compensation plan for crop damages which includes provisions for owner/tenant to identify crop yield deficiencies at any time after construction. The crop compensation payment will be calculated on 300 percent crop value based on historical crop yields. The payment covers a five year period which includes the year of construction (See the Crop Compensation Plan below for details). Under this plan, the owner/tenant will be paid 100 percent of the total crop deficiency payment prior to construction. The owner/tenant can farm the land during the five year period, harvest, and sell or use the crops at his/her discretion. After the five year period has concluded, Guardian will continue to work with the owner/tenant for the life of the pipeline.

The Crop Compensation Plan will be based on the following formula:

100 percent payment = A X B X C, where:

A= yield in bushels per acre. The yield will be calculated by averaging the last three-year historical yields as evidenced by the owner/tenant's documentation, or the published three-year county average yield history, if the owner/tenant documentation is not available. This information will be acquired from the U.S. Department of Agriculture, National Agricultural Statistics Service data for the county affected by the pipeline (<http://www.nass.usda.gov/QuickStats/>).

B=Acres. Acres will be calculated using the area affected by pipeline construction activities (e.g., right-of-way, extra work areas, access roads, and yards).

C=price per bushel or ton. The price will be calculated by using the owner/tenant's contracted price, a copy to be provided to Guardian, or by the previous 2-year average price of the commodity for Wisconsin and the January 31, 2007 market price, if the owner/tenant documentation is not available. This information is listed by the U.S. Department of Agriculture, National Agricultural Statistics Service (<http://www.nass.usda.gov/QuickStats/>). In the event that the 3 year average commodity prices at the time of construction are more than 10% greater than the agreed upon prices for the commodities at the time of easement negotiations, then the prices for the commodities will be adjusted to reflect the increase.

80 percent payment = A X B X C X .80

60 percent payment = A X B X C X .60

40 percent payment = A X B X C X .40

20 percent payment = A X B X C X .20

The 300 percent payment is determined by the following formula:

- Year 1 - Construction 100 percent payment
- Year 2 following construction 80 percent payment

Guardian Pipeline Expansion and Extension Project

BMP 08 - Crop Compensation Plan (continued)

- Using the procedures attached to this BMP or described in the current version of the USDA – Farm Service Agency Handbook on Crop Appraisals for the State and County Offices (5-CP), or similarly acceptable procedures that have been reviewed by WDATCP.

If performed, diagnostic test results and recommendations will be provided to the owner/tenant for consideration as to the mitigation measures that may be implemented to resolve the problem. If the owner/tenant and Guardian are unable to agree upon the mitigation measures to be employed to improve crop productivity of the field, Guardian will consult with a local soil conservation authority for a recommendation of a mitigation measure.

Proven deficiency claims will be paid until the yields reach 90% of the documented average for the adjoining off right-of-way yields. If all mitigation measures have been exhausted and the yield is still not at 90%, Guardian will negotiate with the owner/tenant a one time compensation for all future crop losses with a release signed by the owner/tenant. If Guardian and the owner/tenant are unable to reach a mutually agreed upon settlement for all future crop losses, Guardian and the owner/tenant agree to have damages ascertained and determined by three disinterested persons, one of whom will be appointed by the owner/tenant, one of whom will be appointed by Guardian, and one of whom will be appointed by the two aforementioned persons. The disinterested persons shall base their analysis on the formulas and criteria set forth herein, and the agreed upon award of any two of the three disinterested persons shall be final and conclusive.

Guardian Pipeline Expansion and Extension Project

BMP 08 - Crop Compensation Plan (continued)

ATTACHMENT A

Crop Yield Estimation Procedures

The following outline describes the methods that may be used to compare post-construction crop yields on and off the construction Right-of-Way (ROW). These areas should be representative of field conditions and topography. Due to modern technologies associated with the measurement of crop yield via electronic yield monitoring equipment, hand yield checks on portions of the project may not be necessary. The most reliable and efficient yield measurement methods will be used.

Table 1 Row Length to Sample For 1/1,000th of an Acre	
ROW Width in Inches	Length of ROW for 1/1,000 of an Acre
42	12'5"
40	13'1"
38	13'9"
36	14'6"
34	15'5"
32	16'4"
30	17'5"

Table 2 Row Length to Sample For 1/5,000th of an Acre	
ROW Width in Inches	Length of ROW For 1/5000 of an Acre
22	4'9"
20	5'3"
15	7'0"
10	13'5"
7.5	13'11"
6	17'5"

Table 3 Standard Weights and Moistures		
	Bushel Weight/lbs	Moisture %
Corn	56	15.5
Soybeans	60	13
Oats	32	13
Wheat	60	13
Barley	48	13
Rye	56	13
Hay	See table 4 on page 9	

Guardian Pipeline Expansion and Extension Project

BMP 08 - Crop Compensation Plan (continued)

Corn

1. Harvest grain from 1/1,000th of an acre. Use Table 1 for row spacing to determine what length of row to harvest.
2. Weigh the grain from the 1/1,000th of an acre and measure its moisture.
3. Convert corn weight to 15.5% moisture:

If the corn moisture is 18%:

$$(100\% - \text{wet corn at } 18\%) / (100\% - \text{dry corn a } 15.5\%) = \text{Factor}$$

Factor x the Total grain weight from above = Weight at 15.5%

Weight at 15.5% / 56# per bushel x 1,000 = bushels per acre

Example:

Harvest all of the corn from 17'5" of row when the field is planted with 30" row spacing.

Remove the kernels from all of the cobs and weigh the kernels. Take a moisture reading of the kernels.

Results: Total kernel weight = 10#
 Moisture = 22%

Formula:

- $(100\% - \text{wet corn at } 22\%) / (100\% - \text{dry corn a } 15.5\%) = 0.923$ (Factor)
- $0.923 \times 10\# = 9.23\#$ (Weight at 15.5%)
- $9.23 \times 1,000 = 9230$ dry weight per acre
- $9230/56 = \mathbf{165 \text{ bu/acre}}$ (estimated dry yield per acre)

Guardian Pipeline Expansion and Extension Project

BMP 08 - Crop Compensation Plan (continued)

Wheat

(Also use this calculation for oats and barley but adjust weight per bushel as identified in Table 3)

1. Harvest grain from 1/5,000th of an acre. Use Table 2 for row spacing to determine what length of row to harvest.
2. Weigh the grain from the 1/5,000th of and measure its moisture.
3. Convert wheat weight to 13% moisture and a test weight of 60 pounds:
If wheat moisture is 18%:

$$(100\% - \text{wet wheat at } 18\%) / 100\% - \text{dry wheat } 13\% = \text{Factor}$$

$$\text{Factor} \times \text{Total wheat weight from above} = \text{Weight at } 13\%$$

$$\text{Weight at } 13\% / 60\# \text{ per bushel} \times 5,000 = \text{bushels per acre}$$

Example:

Harvest all of the wheat seed from 13'11" for wheat planted with 7 1/2" rows

(Under optimal conditions, each wheat plant has 20-21 well-developed spikelets containing 3 seeds each.)

Weigh the wheat seed collected and test the moisture:

Results:	Total seed weight	=	0.9#
	Moisture	=	17%

Formula:

- $(100\% - \text{wet wheat at } 17\%) / (100\% - \text{dry wheat at } 13\%) = 0.954$ (Factor)
- $0.954 \times 0.9\# = 0.856\#$ (Weight at 13%)
- $0.856\# \times 5,000 = 4,280\#$ dry weight per acre
- $4280/60 = 77$ **bu/acre** (estimated dry yield bushel per acre)

Guardian Pipeline Expansion and Extension Project

BMP 08 - Crop Compensation Plan (continued)

Soybeans

1. Harvest seeds from 1/5,000th of an acre. Use Table 2 for row spacing to determine what length of row to harvest.
2. Weigh the grain from the 1/5,000th of an acre and measure its moisture.
3. Convert soybean seed weight to 13% moisture.
4. If soybean moisture is 20%:

$$(100\% - \text{wet wheat at } 20\%) / 100\% - \text{dry wheat } 13\%) = \text{Factor}$$

$$\text{Factor} \times \text{Total grain weight from above} = \text{Weight at } 13\%$$

$$\text{Weight at } 13\% / 60\# \text{ per bushel} \times 5,000 = \text{bushels per acre}$$

Example:

Remove all of the soybean seed from 13'5" row of soybeans planted with 10" rows. Weigh the seed and test the moisture.

Results: Total seed weight = 1.2#
 Moisture = 23%

Formula:

- $(100\% - \text{wet soybeans at } 23\%) / 100\% - \text{dry soybeans at } 13\%) = .67 \text{ (Factor)}$
- $.67 \times 1.2\# = 0.8\# \text{ (Weight at } 13\%)$
- $0.8\# \times 5,000 = 4,000\# \text{ dry weight per acre}$
- $4,000\# / 60\#/bu = \mathbf{67 \text{ bu/acre}}$ (estimated dry yield per acre)

Guardian Pipeline Expansion and Extension Project

BMP 08 - Crop Compensation Plan (continued)

Hay

Weight Method to Estimate Forage Yield

Adapted from Forage Loss Adjustment Standards Handbook 25150

USDA-FCIC 2003

- Construct a 2-foot by 2-foot frame from PVC tubing to be used to measure a four square foot area.
- Toss the measuring frame into a representative area of the field to be evaluated. Cut all plants within the sample area at about 1-inch from the soil surface.
- Weigh sample (in ounces) in the field. At the same time take a sub-sample of forage and measure the moisture with a forage moisture meter (as an alternative the sub-sample of forage may be sent in a plastic zip-lock bag to a lab to determine the % moisture when dried at 80 degrees C).
- Minimum representative sample:
 - 0.1 to 10 acres - 3 samples.
 - 10.1 to 40 acres – 4 samples.
 - >40 acres – 1 additional sample per 40 acres (or fraction thereof).
- Calculate the tons of forage per acre as follows:

Tons of forage per acre = Average ounces of forage per square foot multiplied by the factor from the Moisture and Weight Adjustment Table on the following page.

Guardian Pipeline Expansion and Extension Project

BMP 08 - Crop Compensation Plan (continued)

**Table 4
Moisture and Weight Adjustments for Forage Yield Calculations**

Percent Moisture	Factor	Percent Moisture	Factor
85	.231	50	.773
84	.246	49	.788
83	.262	48	.803
82	.277	47	.819
81	.293	46	.834
80	.308	45	.850
79	.324	44	.865
78	.339	43	.881
77	.355	42	.896
76	.370	41	.912
75	.386	40	.927
74	.401	39	.943
73	.417	38	.958
72	.432	37	.974
71	.448	36	.989
70	.463	35	1.005
69	.479	34	1.020
68	.494	33	1.036
67	.509	32	1.051
66	.525	31	1.067
65	.540	30	1.082
64	.556	29	1.097
63	.571	28	1.113
62	.587	27	1.128
61	.602	26	1.144
60	.618	25	1.159
59	.633	24	1.175
58	.649	23	1.190
57	.664	22	1.206
56	.680	21	1.211
55	.695	20	1.237
54	.711	19	1.252
53	.726	18	1.268
52	.742	17	1.283
51	.757	16	1.299
		15	1.314
		14	1.330
		13	1.345
		12	1.361

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 09 - Winter Stabilization Contingency Plan

Purpose

To implement protective measures on agricultural lands when restoration cannot be completed before the end of the construction season.

Planning

In the event adverse weather conditions cause the right-of-way to become unfavorable for restoration activities, the Chief Inspector, based on recommendations from the Agricultural Inspector (AI) and consultation with the Agricultural Monitor, will determine if the remaining steps of initial restoration should be postponed until the following seeding season. If such a determination is made, temporary winter stabilization measures should be completed as soon as possible.

Construction

The AI will determine which of the following practices will apply when restoration cannot be completed during construction season. Areas of winter stabilization will be recorded to facilitate the completion of restoration the following spring.

1. Areas where rock removal from the subsoil is required per BMP 06 - Soil Restoration.
2. Record the locations where soil moisture conditions do not allow decompaction of the subsoil. If soil moisture conditions improve prior to the onset of winter, these areas may be rechecked to confirm compaction levels and decompaction may be performed.
3. Replace topsoil if soil conditions allow. If full topsoil stripping was used, decompaction will be in accordance with procedures described in BMP 6 for decompaction through topsoil.
4. If topsoil will remain stockpiled, it will be stabilized with mulch or a winter cover crop if conditions will allow the seed to germinate and become established.
5. Perform final restoration to the maximum extent possible including removing bridges and timber mats in areas that are fully restored and are no longer required for ingress and egress to other portions of the ROW.
6. Install erosion and sediment control measures per Guardian's Erosion Control Revegetation and Maintenance Plan. Guardian will consult with the AI before applying these controls.
7. At the landowner's request, seed a winter cover crop (e.g., winter ryegrass, winter wheat) in areas that could not be restored.
8. Return to the recorded areas the following spring when topsoil and subsoil moisture conditions allow, as determined by the Atterberg Field Test, to finish decompaction operations. The AI may decide spreading of the stored topsoil pile is necessary to dry it, if it fails to pass the Atterberg Field Test by a certain date. If soil moisture conditions permit, decompaction and restoration will proceed as specified in BMP 06 - Soil Restoration.
9. Once decompaction is conducted, final restoration/clean-up activities will be completed as soon as soil conditions allow, as specified within BMP 06 - Soil Restoration for restoration activities within agricultural areas.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 10 - Three-Lift Soil Handling

Purpose

To maintain the crop rooting zone over the trench area to the extent practicable through management of the topsoil, subsoil and gravel/rock layers in areas where the subsoil qualifies for this three-lift protocol. Candidate three-lift soils are generally characterized by fine- to medium-textured topsoil and near surface subsoil underlain by gravelly and cobbly coarse-textured outwash.

Planning

1. Guardian will conduct a preliminary assessment of soil map units along the construction right-of-way using NRCS SSURGO2 spatial and attribute data at the scale of the county soil survey. Guardian will compile a list by mile post of soils at risk for potential mixing of fine textured upper subsoil layers with underlying coarse-textured gravelly or cobbly lower subsoil during excavation of the trench. Identified soils will be overlain onto property boundaries. Parcels with at least 40 percent of qualifying soils will be considered possible tracts for implementation of triple-lift soil handling. This list of qualifying "candidate" soils and parcels will be provided to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP), Guardian's Agricultural Inspectors, and the Agricultural Monitor.
2. Where the preliminary assessment identifies a potential need to apply triple-lift soil handling, Guardian will attempt to obtain sufficient work space on the spoil side of the trench location for placement of the upper subsoil layer pile and the lower, coarser textured materials.
3. The criteria for soils qualifying as "candidates" for the three-lift soil handling procedure are as follows:
 - Where the lower subsoil layers (parts of the "B" soil horizon) or underlying glacial outwash (the "C" soil horizon, or parent material) are made up of at least 35% material greater than 2 mm, or else more than 20% of the material is greater than 4.7 mm, or both. To qualify for the three-lift method, this coarse-textured material must comprise at least half the trench depth below the lower depth of the second lift material.
 - Where the upper subsoil layers of the B horizon are present which contain no more than 15% of material greater than 2 mm, and which are in aggregate at least 6 inches in thickness.
 - The tract being considered must have at least 40% qualifying soils that will be encountered by the pipeline trench excavation, except as determined by the Chief Inspector in the field in consultation with the AI, based on the length and agricultural extent of the tract.
 - The land use involves cultivated croplands, rotated pastureland, or government set-aside program land.
4. Where applicable, Guardian will inform landowners possessing lands that contain three-lift handling candidate soils and offer those landowners the option of implementing the three-lift soil trenching procedure on their property during construction. The landowners will be informed that use of the three-lift soil handling procedure will require additional workspace which will result in a greater area of impact on their property.
5. Guardian will review this process and the potential locations with the selected construction contractor during the construction "kick-off" meeting. The three-lift soil handling process will be included in Guardian's environmental training sessions.

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BMP 10 - Three-Lift Soil Handling - continued

Construction

1. The contractor will be responsible for implementing the three-lift soil-handling method. The Agricultural Inspector will be available to assist in making "field calls" such as identifying boundaries between soil layers.
2. Guardian may perform additional soil sampling to confirm the depth and extent of soil layers requiring segregation.
3. Topsoil will be stripped and stockpiled per BMP 02.
4. After topsoil has been removed (first lift) and trenching begins, a backhoe will remove the upper portion of the subsoil (second lift) and place this layer as far from the trench as the reach of the equipment permits on the spoil side of the construction ROW.
5. Where the subsoil material changes to cobbles or gravelly material, the backhoe operator will place this underlying material (third lift) between the trench and the second-lift pile on the spoil side of the right-of-way. Since the depth at which the underlying material is encountered will vary from location to location, the boundary between the upper subsoil and the underlying material will be determined visually by the construction and inspection team, with the advice of the AI when necessary. In order to have a sufficient volume of soil to be handled separately, the second lift generally must be at least 12 inches thick.

Guardian will attempt to store both the upper subsoil layer and the underlying gravelly or cobbly lower subsoil/parent material layers on the spoil side of the construction right-of-way. Depending on the available workspace and the volume of soil involved, maintaining complete separation between these two piles may not always be possible, nor is it necessary. Guardian will perform field adjustments as necessary in conjunction with the contractor and AI to ensure gravelly/cobbly subsoil or parent material does not become mixed with the upper subsoil by the proper placement of the spoil piles to the extent practicable.

6. Should the spoil portion of the construction right-of-way not have adequate space to store both the glacial outwash and the trenched subsoil, the upper subsoil horizon may be excavated and placed on the working side of the construction right-of-way and the glacial outwash or rocky material will be placed on the spoil portion of the construction right-of-way.
7. During backfilling, the operator will make every effort to place the cobbly/gravelly subsoil pile material (third lift) of the spoil material in the trench first, and will only then replace the upper subsoil layer (second lift) in the trench. The second lift material will not be used to pad the pipe. If additional soil is required to pad the pipe, Guardian will import appropriate material with which to pad the pipe.

Guardian Pipeline Expansion and Extension Project
Best Management Practices for Construction within Agricultural Lands
BMP 11 – Certified Organic Farms

Purpose

This BMP identifies mitigation measures that apply specifically to farms that are Certified Organic or farms that are in active transition to become Certified Organic, and is intended to address the unique management and certification requirements of these operations.

The provisions of this BMP will apply to Certified Organic farms (Organic Agricultural Land) for which the Landowner or Tenant has provided to Guardian a true, correct and current version of the Organic System Plan within 60 days after the signing of the Easement for such land or 60 days after the issuance of a Certificate of Public Convenience and Necessity (CPCN) to Guardian by the Federal Energy Regulatory Commission (FERC), whichever is sooner, or, in the event the Easement is signed later than 60 days after the issuance of the CPCN, the provisions of this BMP are applicable when the Organic System Plan is provided to Guardian at the time of the signing of the Easement. Guardian recognizes that Organic Agricultural Land is a unique feature of the landscape and will treat this land with the same level of care as other sensitive environmental features.

Definitions

Unless otherwise provided to the contrary in this BMP, capitalized terms used in this BMP shall have the meanings provided below and in the AMP. In the event of a conflict between this BMP and the AMP with respect to definitions, the definition provided in this BMP will prevail but only to the extent such conflicting terms are used in this BMP. The definition provided for the defined words used herein shall apply to all forms of the words.

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| Apply | = | To intentionally or inadvertently spread or distribute any substance onto the exposed surface of the soil. |
| Certifying Agent | = | As defined by the National Organic Program Standards, Federal Regulations 7 CFR Part 205.2. |
| Decertified or
Decertification | = | Loss of Organic Certification. |
| Organic Agricultural
Land | = | As defined in 7 CFR Part 205.100, or organic farming operations exempted from certification under 7 CFR Part 205.101. |
| Organic Buffer Zone | = | As defined by the National Organic Program Standards, Federal Regulations 7 CFR Part 205.2. |
| Organic Certification
or Organic Certified | = | As defined by the National Organic Program Standards, Federal Regulations 7 CFR Part 205.100 and 7CFR Part 205.101. |
| Organic System Plan | = | As defined by the National Organic Program Standards, Federal Regulations 7 CFR Part 205.2. |
| Prohibited Substance | = | As defined by the National Organic Program Standards, Federal Regulations 7 CFR Part 205. 600 through 7 CFR Part 205.605 using the criteria provided in 7 USC 6517 and 7 USC 6518. |

Guardian Pipeline Expansion and Extension Project

BMP 11 – Certified Organic Farms - continued

Planning

Guardian will identify the location of Certified Organic farms, and farms that are in active transition to become Certified Organic in advance of construction. Guardian will work with the landowner or tenant and the certifying agency

Construction

Organic System Plan

Guardian recognizes the importance of the individualized Organic System Plan (OSP) to the Organic Certification process. Guardian will work with the Landowner or Tenant, the Landowner or Tenant's Certifying Agent, and/or a mutually acceptable 3rd party Organic Certifier as consultant to identify site-specific construction practices that will minimize the potential for Decertification as a result of construction activities. Possible practices may include: equipment cleaning, use of drop cloths during welding and coating activities; removal and storage of additional topsoil; planting a deep-rooted cover crop in lieu of mechanical decompaction; applications of composted manure or rock phosphate; restoration and replacement of beneficial bird and insect habitat (if disturbed by construction); maintenance of organic buffer zones; use of organic seed for any cover crop; or similar measures. In the event the pipeline route crosses an organic farm that is producing vegetable crops that are susceptible to tobacco mosaic virus, Guardian will institute measures to prevent the introduction of disease vectors from tobacco use. Guardian recognizes that Organic System Plans are proprietary in nature and will respect the need for confidentiality.

Prohibited Substances

Guardian will avoid the Application of Prohibited Substances onto Organic Agricultural Land. No herbicides, pesticides, fertilizers or seed will be applied unless requested and approved by the Landowner. Likewise, no refueling, fuel or lubricant storage or routine equipment maintenance will be allowed on Organic Agricultural Land. Equipment will be checked prior to entry to make sure that fuel, hydraulic and lubrication systems are in good working order before working on Organic Agricultural Land. In the event that a mechanical problem develops during construction within Organic Agricultural Land, the construction contractor will make the necessary repairs at the point of the problem, rather than moving the equipment off the right-of-way before undertaking repairs. Guardian feels this approach will result in fewer potential impacts on Organic Agricultural Land.

Soil Handling

Topsoil and subsoil layers that are removed during construction on Organic Agricultural Land will be stored separately and replaced in the proper sequence after the pipeline is installed. Unless otherwise specified in the site-specific plan described above, Guardian will not use this soil for other purposes, including creating access ramps at road crossings. No topsoil or subsoil (other than incidental amounts) may be removed from Organic Agricultural Land. Likewise, Organic Agricultural Land will not be used for storage of soil from non-Organic Agricultural Land.

Erosion Control

On Organic Agricultural Land, Guardian will, to the extent feasible, use permanent erosion control methods consistent with the Landowner or Tenant's Organic System Plan. On land adjacent to Organic Agricultural Land, Guardian's erosion control procedures will be designed so that sediment from adjacent non-Organic Agricultural Land will not flow onto the right-of-way and will not be deposited on Organic Agricultural Land. Treated lumber, non-organic hay bales,

Guardian Pipeline Expansion and Extension Project

BMP 11 – Certified Organic Farms - continued

non-approved metal fence posts, etc. will not be used in erosion control on Organic Agricultural Land.

Water in Trenches

During construction, Guardian will leave an earthen plug in the trench at the boundary of Organic Agricultural Land to prevent trench water from adjacent land from flowing into the trench on Organic Agricultural Land. Likewise, Guardian will not allow trench water from adjacent land to be pumped onto Organic Agricultural Land.

Weed Control

On Organic Agricultural Land, Guardian will, to the extent feasible, implement weed control methods consistent with the Landowner or Tenant's Organic System Plan. Prohibited Substances will not be used in weed control on Organic Agricultural Land. In addition, Guardian will not use Prohibited Substances in weed control on land adjacent to Organic Agricultural Land in such a way as to allow these materials to drift onto Organic Agricultural Land.

Mitigation of Natural Resource Impacts

Guardian will not use Organic Agricultural Land for the purpose of required compensatory mitigation of impacts on natural resources such as wetlands or woodlands unless approved by the Landowner/Tenant.

Monitoring

In addition to the responsibilities of the Agricultural Monitor described in the AMP, the following will apply:

- The Agricultural Monitor or a USDA-approved Organic Certifier retained by Guardian will monitor construction and restoration activities on Organic Agricultural Land for compliance with the provisions of this BMP, and will document activities that could result in Decertification.
- Instances of non-compliance will be documented according to Independent Organic Inspectors Association protocol consistent with the Landowner's OSP, and will be made available to the DATCP, the Landowner, the Tenant, the Landowner's or Tenant's Certifying Agent, and to Guardian.

If the Agricultural Monitor is responsible for monitoring activities on Organic Agricultural Land, he/she will be trained, at Guardian's expense, in organic inspection, by the Independent Organic Inspectors Association, unless the Agricultural Monitor received such training during the previous three years.

Compensation for Construction Damages

The settlement of damages will be based on crop yield and/or crop quality determination and the need for additional restoration measures. Unless the Landowner or Tenant of Organic Agricultural Land and Guardian agree otherwise, at Guardian's expense, a mutually agreed upon professional agronomist will make crop yield and crop quality determinations. If the crop yield and/or crop quality determinations indicate the need for soil testing, the testing will be conducted by a commercial laboratory that is properly certified to conduct the necessary tests and is mutually agreeable to Guardian and the Landowner or Tenant. Field work for soil testing will be conducted by a Professional Soil Scientist licensed by the State of Wisconsin or a

Guardian Pipeline Expansion and Extension Project

BMP 11 – Certified Organic Farms - continued

Professional Agronomist. Guardian will be responsible for the cost of sampling, testing and additional restoration activities, if needed. Landowners or Tenants may elect to settle damages with Guardian in advance of construction on a mutually acceptable basis or to settle after construction based on a mutually agreeable determination of actual damages.

Compensation for Damages Due to Decertification

Should any portion of Organic Agricultural Land be Decertified as a result of construction activities, the settlement of damages will be based on the difference between revenue generated from the land affected before Decertification and after Decertification so long as a good faith effort is made by the Landowner or Tenant to regain Certification. Landowner or Tenant will provide to Guardian a copy of the Decertification provided by the Certifying Agent.