ENVIRONMENTAL ANALYSIS AND DECISION ON THE NEED FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS)
Form 1600-8

Department of Natural Resources (DNR)

Region or Bureau SCR
Type List Designation Type II

NOTE TO REVIEWERS: This document is a DNR environmental analysis that evaluates probable environmental effects and decides on the need for an EIS. The attached analysis includes a description of the proposal and the affected environment. The DNR has reviewed the attachments and, upon certification, accepts responsibility for their scope and content to fulfill requirements in s. NR 150.22, Wis. Adm. Code. Your comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before 4:30 p.m., September 21, 2009
(date)

Contact Person Mark R. Cain
Title Wastewater Engineer
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Applicant: Jim Herman, Inc.

Address: 233 East Main St.
Marshall, WI 53599

Title of Proposal: Request for Plan Review and Issuance of a Wisconsin Pollution Discharge Elimination Permit to Consolidate Existing Beef Operation, Abandon Four Existing Facilities, and Construct One New Facility

Location: Canal Street

County: Dane Town of Medina

Township: 8N Range: 12E Section(s): 2

PROJECT SUMMARY – DNR Review Information Based on:

1. General Project Description

This environmental analysis is associated with Wisconsin Pollutant Discharge Elimination System (WPDES) permitting and approval actions for a proposed expansion of a beef operation named Jim Herman, Inc. and associated review/evaluation activities associated with manure storage, composting, feed storage, and runoff control facilities.

Jim Herman, Inc. (Herman Farms) is a beef farm located near the Village of Marshall. The operation has not held a WPDES permit in the past. Permits are normally issued for up to five years. The WPDES application date is August 4, 2009 and the DNR is processing the application.

The operation currently uses five sites: Home Site, Hwy 73 Site, Springer Site, Stark Site, and Langer Site. The Home and Hwy 73 Sites are located within the Village of Marshall near residential and commercial areas. The Home Site is adjacent to the

Maunesha River and runoff from the site had been observed discharging into the river. The HWY 73 Site is also a surface water concern. The remaining three sites are located north of the village in agricultural areas. In 2007, the Department determined that the operation required a WPDES permit based on the number of total animal units and the water quality concerns associated with the operation. As a prerequisite to being issued a WPDES permit, the Department required the operation to remove the animals from the Home and Hwy 73 Sites because of the concerns for runoff into the Maunesha River from these sites. Herman Farms is planning to consolidate and expand their operation by constructing a new facility at the Springer Site, moving all animals from the other four sites to the Springer Site, and increasing its total number of animals. The operation currently houses 1,900 steer (1,900 animal units) divided between the five sites. The proposed actions would increase the number of steers over the next five years to 2,250 (2,250 animal units), all of which would be housed at the Springer Site.

The proposed consolidation of the operation will occur over two years. In the fall of 2009, construction of the new facilities at the Springer Site will begin. The new facilities will include a manure compost pad and runoff collection system, manure storage structure, feed bunker with leachate collection system, barn, commodity building, and access road. Housing facilities are expected to be built in the winter of 2009/2010, and manure storage facilities are expected to be built in the spring of 2010. The majority of the new barn will have a clay-lined floor bedded with corn stalks and the remainder will be concrete feed lanes that will be scraped daily. Removal of animals from the Home, Hwy 73, Stark, and Langer Sites will occur on June 1, 2010, after construction at the Springer Site has ended. The facilities at the Home and Hwy 73 Sites will be retained and used for equipment storage and the land at those sites will be sold. The Stark and Langer Sites will be retained and the facilities will be used for storage. Additional animals will be added to the operation at the Springer Site over the next five years after construction has been completed.

The project cost for this expansion is estimated at $788,266.47

The Department of Natural Resources has the following authorities regarding this operation:

- Wisconsin Pollutant Discharge Elimination System (WPDES) Permits for Concentrated Animal Feeding Operations (CAFO), under s. 283, Wis. Stats and ch. NR 243, Wis. Adm. Code
- Review and approval authority of manure storage facilities, transfer systems, feed storage and runoff control systems—s. 281.16, Wis. Stats.
- Nutrient Management Plan review, ch. Nr 243, Wis. Adm. Code and NRCS technical standard 590
- Environmental Analysis and Review Procedures for Department Actions, NR 150, Wis. Adm. Code
- Emission limitations from s. NR 415.04, Wis. Adm. Code, covering fugitive dust sources and s. NR 415.05, Wis. Adm. Code, covering emissions of particulate matter from processes
- Odor control requirements may be imposed by order of the Department if the Department determines that a violation of s. NR 429.03 – Malodorous Emissions, Wis. Adm. Code, occurs
- If construction activities disturb one or more acres, the operation must obtain a storm water construction permit (WI-0067831-1) per NR 216, Wis. Adm. Code
- Massive failure of manure storage facilities per NR 706, Wis. Adm. Code
- NR 108, Wis. Adm. Code, review and approval authority of manure storage facilities and runoff control systems
- Nutrient Management Plan review and approval
- Annual Spreading Report review and approval

2. List documents, plans, studies or memos referred to and provide a brief overview

The following documents have been used in conducting this environmental analysis:

- WPDES Permit application
- Environmental Analysis Questionnaire for Livestock Operations completed by Shaun Verbout, Tiry Engineering, Inc.
- Plans and specifications for proposed manure storage facility completed by Michael J. Tiry, Tiry Engineering, Inc.
- Preliminary Manure Management Plan prepared by Eric Galdi, Landmark Service Cooperative
- Soil survey maps, topographic maps, wetland maps and aerial photographs
- Internal Department correspondence regarding possible environmental impacts associated with the operation

3. **Attachments**

- Topographic Map with Site Plan
- Aerial Photograph with Site Plan
- Aerial Photographs with Site Locations (2 maps)

DNR EVALUATION OF PROJECT SIGNIFICANCE (complete each item)

1. **Environmental Effects and Their Significance**

Discuss the short-term and long-term environmental effects of the proposed project, including secondary effects, particularly to geographically scarce resources such as historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered species or ecologically sensitive areas, and the significance of these effects. (The reversibility of an action affects the extent or degree of impact.)

Physical

For the proposed consolidation and expansion of the operation at the Springer Site, the site has most recently been used for cropland or other agricultural related purposes (e.g., contained agricultural related structures such as a barn or farmhouse). In many respects, the proposed expansion will result in the conversion of the land from one type of agriculture use to another. Approximately 13 acres of land will be disturbed over a period of approximately 12 months between the summer of 2009 and spring of 2010 as a direct result of the construction of the facilities associated with the consolidation and expansion of the operation. Short-term physical impacts would be primarily associated with construction activities at the site. Disturbance of former cropland or agricultural related lands, noise and dust from machinery and traffic from construction equipment are the expected short-term environmental impacts. Since construction of the proposed expansion will disturb more than one acre of soil, the facility has obtained a Construction Site Storm Water Runoff permit (FIN 41380). The Department's Construction Site Erosion Control permit requires the operation to implement best management practices (BMPs) to address impacts from storm water runoff. Stormwater runoff controls must be in place to control and manage runoff due to rainfall and snowmelt events. The required BMPs should minimize siltation and sediment delivery from the construction site and prevent silt and sediment from reaching wetlands and surface waters.

No construction activities are proposed at the Home, Hwy 73, Stark, and Langer Sites. Some of the land at the Home and Hwy 73 Sites is proposed to be sold and converted from agricultural use to residential or another use. The structures at all of these sites will be maintained and used for equipment storage. There are no manure storage units at any of the sites. Short-term physical impacts at these sites would be primarily associated with traffic associated with moving animals and equipment from the sites to the Springer Site. Noise and dust from transportation equipment are the expected short-term environmental impacts. If the activities at any of these sites will result in the disturbance of one or more acres, the operation will be required to obtain coverage under another storm water construction site general permit (WI-0067831-1), which requires the operation to implement BMP's to address impacts from storm water runoff.

Long-term physical impacts from the proposed expansion at the Springer Site include visual impacts. The expansion of the operation will result in visual changes at the Springer Site as a result of new facilities (e.g., manure storage facilities) or buildings. There will also be noise and possibly dust associated with increased traffic in the area associated with the transportation of livestock and feed, Road access to the facility needs to be managed in a way that minimizes the increased disturbance from noise and dust to area residents and their properties. Because the expansion will concentrate a higher density of animals on this agricultural land, it may increase nutrient levels above crop needs on the areas used for application of manure generated by this application. Given that much of the land near the Springer Site is used for agriculture and is relatively sparsely populated, increased traffic and visual impacts are not considered to be significant. In addition, while the physical appearance of the site will be substantially changed, the use of the site will remain agricultural in nature.

The proposed actions will also result in visual impacts at the Home, Hwy 73, Stark, and Langer Sites, as a result of the removal of animals at these sites. Since the Home and Hwy 73 Sites are located within the Village of Marshall, an area with a higher

population density than the area near the Springer Site, the removal of animals from these sites is expected to result in a decrease of noise and dust associated with traffic in the area associated with the transportation of livestock and feed.

Accounting for both the proposed expansion at the Springer Site and the proposed abandonment of the Home, Hwy 73, Stark, and Langer Sites, it is expected that the net visual, noise, and dust impacts will be less than the current state after the proposed actions.

Ambient Air Emissions

Livestock operations result in ambient air emissions. Sources of air emissions from livestock operations include the livestock themselves, manure handling and storage, land application of manure, as well as vehicles and vehicle traffic, grain and feed handling, grain drying, grain storage, feed milling, feed storage, fertilizer and pesticide handling and application. The most commonly noted form of air pollution associated with livestock operations is odor. In addition, livestock operations result in air emissions of particulate matter and various hazardous air pollutants, especially hydrogen sulfide and ammonia.

In 2003, the National Academy of Sciences, National Research Council, published a comprehensive report, "Air Emissions From Animal Feeding Operations: Current Knowledge, Future Needs." The key findings relevant to this assessment include the following: 1) Standardized methodologies for odor measurement have not been adopted in the United States, and 2) Estimating air emissions from animal feeding operations by multiplying the number of animal units by existing emission factors is not appropriate for most substances. As noted in this report, the existing emission factors for animal feeding operations are generally inadequate because of limited numbers of measurements on which they are based, as well as the limited generality of the models for which the emission factors have been developed. The NAS recommends that the science be strengthened, that a standardized odor measurement methodology be adopted, and that a process-based emissions estimation methodology be developed.

In response to these findings and recommendations, the United States Environmental Protection Agency (US EPA) has initiated a national effort to develop an emissions estimation methodology for animal feeding operations, through US EPA's Animal Feeding Operation Air Quality Compliance Agreement. Emissions monitoring will occur at farms that sign on to the agreement. These farms will represent major animal groups (e.g. swine, dairy, and poultry), different types of operations, and different geographic regions. The sign-up period for this agreement ended on August 12, 2005. The monitoring study, expected to end in 2009, will provide EPA with the essential data needed to develop emissions estimating methods and tools, which will assist the industry and EPA in determining the air impact and compliance status of animal feeding operations. EPA is required to publish the methodology and tools for estimating emissions within 18 months of the end of the monitoring study. Under the current timeline for study completion, the methodology would be published in January 2011. Animal feeding operations will then be required to determine their emissions and comply with all applicable regulatory requirements. Pollutants to be monitored include particulate matter (PM) (TSP, PM10 and PM2.5), hydrogen sulfide (H_2S), volatile organic compounds (VOCs), and ammonia (NH3).

In the interim, a limited number of other states have adopted methodologies to evaluate the potential air impacts of livestock operations. For example, the Minnesota Pollution Control Agency (MPCA) has adopted an air quality impact analysis methodology. The MPCA environmental assessment methodology for livestock operations is established in law and is supported by guidance materials developed by the MPCA as part of their environmental assessment program. The Department has not adopted this methodology and does not typically conduct analysis of air emissions from CAFOs. Instead the Department has made a conscious decision to coordinate its work in this area with the outcome of the national monitoring effort described above.

Odor

As noted above, standardized methodologies for odor measurement have not been adopted in the United States. The Department has not adopted a methodology to predict the potential odor impact of proposed livestock operations. Thus a quantification of predicted odor impact of the proposed project is not included in this assessment.

Wisconsin's odor rule is established in s. NR 429.03, Wis. Adm. Code. This rule establishes general limitations on objectionable odor, defines the tests for what constitutes objectionable odor, and sets abatement or control requirements.

Particulate Matter

As noted above, a national effort to develop an emissions estimation methodology for animal feeding operations is underway, as established with the EPA Animal Feeding Operation Air Quality Compliance Agreement. The monitoring protocol includes measurement of particulate matter (TSP, PM10, and PM2.5).

Wisconsin's fugitive dust rule, s. NR 415.04, Wis. Adm. Code, establishes general limitations on fugitive dust and sets specific precautions for limiting fugitive dust emissions.

Ambient air quality standards for particulate matter are established in s. NR 404.04, Wis. Adm. Code. These standards are established at levels protective of public health and welfare. The primary standards for PM10 are 150 micrograms per cubic meter - maximum 24-hour concentration not to be exceeded more than once per year, and 50 micrograms per cubic meter - annual arithmetic mean. The secondary standard for total suspended particulate matter is 150 micrograms per cubic meter - maximum 24-hour concentration, not to be exceeded more than once per year. An ambient air quality standard for fine particulate matter (PM2.5) has been established at the federal level. The federal PM2.5 standards are 15.0 $\mu g/m^3$, annual arithmetic mean, and 35 ug/m^3, 24-hour average. As of this writing, there are no particulate matter non-attainment areas in Wisconsin.

Hazardous Air Pollutants

As noted above, a national effort to develop an emissions estimation methodology for animal feeding operations is underway, as established with the EPA Animal Feeding Operation Air Quality Compliance Agreement. The monitoring protocol includes measurement of hazardous air pollutants, specifically hydrogen sulfide and ammonia.

In Wisconsin, hazardous air pollutant emissions are regulated under ch. NR 445, Wis. Adm. Code. This rule establishes ambient air standards for specific hazardous air pollutants, off the source's property. The criteria for determining which pollutants are regulated and how the standards are established is set in s. NR 445.13, Wis. Adm. Code. The criteria include conditions based on determinations by the International Agency for Research on Cancer, the National Toxicology Program, the American Conference of Governmental Industrial Hygienists, and the US EPA.

An updated version of ch. NR 445, Wis. Adm. Code, was published on July 1, 2004. The updated version of this rule provides a 36 month exemption for livestock operations, from July 2004 to June 2007. The Department is in the process of extending the exemption period through July of 2011 to account for studies underway at the federal and state levels which will advance our understanding of livestock operation air emissions and best management practices. As described above, US EPA is working to create an emissions estimation methodology for animal production areas through its Animal Feeding Operation Air Quality Compliance Agreement. In addition, the Department is working with other state agencies and organizations to study the effectiveness of various best management practices at animal production areas to control emissions and odors from a number of livestock operations across the state. The results of these studies will help support implementation of the NR 445 requirements. After this exemption period, new livestock operations are required to comply upon start up and existing livestock operations will have an additional 12 months to comply. The rule provides several compliance options, including demonstration of compliance via dispersion modeling analysis. A special compliance option for livestock operations is established in the updated rule, specifically, the implementation of best management practices as approved by the Department.

As stated in a note within s. NR 445.08(3)(c), Wis. Adm. Code, NR 445 was not developed with the purpose of regulating emissions of hazardous air contaminants associated with agricultural waste or byproducts. The Department believes that using best management practices is the preferred approach to regulate and control emissions from these types of sources.

Over the past several years, in response to complaints about air pollution associated with livestock operations, the Department has conducted a limited amount of ambient air monitoring for hazardous air pollutants near a variety of livestock operations. The monitored concentrations have not exceeded the acceptable ambient concentration standards established in ch. NR 445, Wis. Adm. Code. As established in ch. NR 445, Wis. Adm. Code, the acceptable ambient concentration for ammonia and hydrogen sulfide are 418 and 335 micrograms per cubic meter, respectively, both on a 24 hour average basis, per. ch. NR 445. The Department continues to engage in ambient monitoring for these compounds at livestock operations.

Since the project that is associated with this Environmental Assessment will result in increases in the number of livestock present at the operation, there is a likely potential that odors and air emissions of ammonia, hydrogen sulfide and particulate matter will increase at the site. For a number of reasons stated above, the Department does not typically conduct analysis of air emissions from CAFOs. Thus the Wisconsin DNR has not conducted a further analysis of the impact of air emissions from the proposed project. It is expected that the potential for impacts from odors and air emissions will be lessened by the proposed actions, since 900 steer will be moved out of the Village of Marshall to a more sparsely populated area.

Biological

Threatened and Endangered Species

The Department performed a Natural Heritage Inventory search and determined the immediate farm site contains no documented endangered species. The immediate farm area, former cropland, would be expected to provide habitat for common animal species acclimated to farm operations.

Surface and Ground Water

Provided manure land spreading is limited to existing croplands and application practices avoid increased nutrient loading to surface waters (see later discussion in this section), no serious threat to sensitive resources in the vicinity would be expected. Therefore, long-term significant impacts on terrestrial animals and vegetation are not expected.

An unnamed creek flows through the southeast corner of the Springer Site. The proposed location of the new facilities is located approximately 700 feet from the creek. The unnamed creek drains into the Maunesha River approximately 5,000 linear feet downstream of the Springer Site. The Maunesha River has been identified as a high priority stream on the 303d impaired waterway list because of low dissolved oxygen and degraded habitat due to sediment and total phosphorus loading. The fisheries of neither the unnamed creek nor the Maunesha River have been evaluated by the Department. Short-term impacts on area surface waters or wetland resources are not expected during construction of the operation if BMPs are implemented and maintained for storm water runoff control.

An intermittent field stream will be re-routed as a result of this project. DNR Water Management Specialist Cami Peterson visited the property and determined this waterway to be non-navigable. Since this waterway is considered to be non-navigable, no DNR permits are required to re-route this waterway. This intermittent stream drains into a tributary to the Maunesha River. No navigable waters or aquatic resources will be re-routed or altered as a result of this project.

After construction is completed, there will be three wells in operation at the five sites owned by Jim Herman, Inc. The operation has not estimated the water usage associated with cattle drinking and cleaning operations. If the operation's water usage from wells on site is 70 gallons per minute or greater, the operation is required to obtain a high capacity well approval and water impacts to the water table would be evaluated. As of the writing of this EA, Herman Farms have not applied for a high capacity well nor indicated that they plan to construct one as part of this project. If 70 gallons per minute is used only during the construction process, a temporary dewatering approval is required. Groundwater is estimated to be 55 feet from ground level at the site, except for some localized perched water conditions in the area.

The most significant possible long-term biological impact is associated with the production of manure at the site. The operation anticipates producing approximately 2,028 tons of manure and 1,917 tons of bedding annually. Nutrients associated with manure can have detrimental impacts on groundwater (nitrogen) and surface waters (nitrogen and phosphorus) if not properly land applied. Biochemical oxygen demand associated with manure can reduce dissolved oxygen levels in surface waters. In addition, ammonia in the manure can be toxic to fish and aquatic life.

Since the cattle will be held in buildings where they are totally confined and manure from these buildings will be transferred to a storage facility, long-term nutrient impacts on wetlands and surface waters from the cattle housing area are not expected. The manure storage facility itself was designed to meet appropriate USDA-Natural Resources Conservation Service (NRCS) design standards to ensure that groundwater impacts do not occur.

The operation has proposed that 2,400 tons of manure and bedding will be composted on the proposed compost pads and sold as fertilizer. The remainder of the manure and bedding, approximately 1,545 tons, will be spread according to their 590 Nutrient Management Plan. The composting pad has been designed to meet NRCS 313 standards. Compost material consists of animal manure and corn stover used for bedding material. The material is removed from the barn scrape alleys daily and packed in windrows on the bituminous stacking area. Additionally, the manure from the bedded packs will be routinely removed from the pens and also placed into the windrows for composting. The windrows will undergo controlled and monitored composting operations. The compost product will be moved from the windrows to a cure pile for completion of the composting process. After adequate cure time, the final product will be removed from the site and taken to market.

Leachate from the manure compost pads and the high moisture feed storage bunker will be collected in a composite clay/GCL lined storage pond sized for 210 days of storage and eventually land applied. The storage pond will have a capacity of 3.15 million gallons. The operation currently has 1,537.5 acres (1,108.5 acres owned and 429 acres rented) available for the land application of manure. The land application of manure on area cropland poses the greatest risk of environmental impact if it is not done properly. Impacts from nutrient loadings, biochemical oxygen demand and ammonia are water quality concerns with surface waters. Since this operation will require coverage under a WPDES permit due to its size, landspreading of its manure is regulated in accordance with a Department approved Manure Management Plan. The Manure Management Plan can be an effective tool to proactively address possible problems that would otherwise be associated with poor manure landspreading activities. Following conditions in the Manure Management Plan for setback distances, appropriate application rates and timing, and record keeping should result in direct benefits to the environment.

The draft permit includes injection and incorporation requirements based on proximity to surface waters which are intended to ensure that manure does not runoff to surface waters and cause short-term impacts associated with biochemical oxygen demand and ammonia.

Examples of specific restrictions include that manure shall not be landspread:

- in a waterway, terrace channel or any areas where there may be concentration of runoff
- on fields with soils less than 10 inches thick over fractured bedrock
- beyond the cropping boundaries of fields identified in the Manure Management Plan
- restrictions on landspreading on frozen and snow covered ground
- such that ponding on or run off from sites occur

Proper nutrient management practices are important in maintaining the current water quality. In order to protect against increased phosphorus loadings to area surface waters, the proposed WPDES permit would require that the operation's Manure Management Plan address phosphorus loadings from fields where the operation landspreads manure. While phosphorus is a critical component of ensuring healthy crop growth, excessive phosphorus that is applied on land can make its way to surface waters where it contributes to excessive algal growth. Excessive algal growth contributes to such problems as low dissolved oxygen in surface waters, a problem that has caused the listing of the Maunesha River as a high priority river on the 303d list for impaired waterways. The permittee will need to implement field and site specific restrictions to take into account existing soil nutrient levels, buffers, crop rotations, and other relevant factors. Specific restrictions may also be identified that are designed to address phosphorus impacts associated with the operation's landspread manure. In addition, the permittee is required to comply with a number of changes to ch. NR 243, Wis. Adm. Code that went into effect in July of 2007. Examples of applicable restrictions in the revised NR 243 include:

- Additional restrictions on frozen and snow covered ground
- Increased landspreading setbacks from surface waters
- Maximum allowable time requirements before manure is incorporated after landspreading (e.g., 72 hours maximum with further restrictions based on proximity to waterways)

Once approved by the Department, all landspreading activity must be completed in accordance with the management plans. A certified crop consultant must develop the plans.

Landspreading manure leachate in accordance with an acceptable Manure Management Plan is advantageous to both the farmer and the environment. The nitrogen and phosphorus from the manure leachate provide nutrients for crop growth and lowers the need for commercial fertilizer. In many instances, the net nutrient application will not change, only the type of fertilizer. When manure is spread in suitable amounts and promptly tilled into the soil, the potential of runoff causing off-site problems is minimized. Since all proposed landspreading will involve liquid leachate, it is expected that soil incorporation will be rapid and the potential for runoff will be low. The proposed WPDES permit will regulate the application rates, applied acreage, spreading techniques and other specifications through the Manure Management Plan. The operation will also be required to conduct manure and soil sampling to determine appropriate application rates, depending on soil and crop types.

If the operation conducts landspreading in accordance with an approved Manure Management Plan, maintains an adequate land base for landspreading, and properly inspects and maintains manure storage facilities and runoff control systems, the threat to groundwater and surface water should be minimal under normal operating and climatic conditions.

Cultural

Per an April 2, 2009 contact with Mark Dudzik, Department Archeologist, there are no known archeological or historical resources that will be impacted by the operation.

The site will not be significantly changed in terms of type of land use as a result of the proposed operation expansion. The site is zoned for agriculture, which is the predominant land use in the area, and will not need to be changed as a result of this project. However, there may be adverse indirect impacts associated with the proposed operation expansion, primarily related to non-agricultural uses of lands in the area. There may be decreases in land values associated with residential uses within areas zoned as agricultural due to concerns, real or perceived, associated with the operation (increased traffic, odors, etc.). The Department has reviewed literature regarding impacts from livestock operations on property values. The literature deals primarily with impacts from hog operations on property values, which may or may not be relevant to the proposed project. The literature draws a general conclusion of decreasing property values the closer the property is to a given hog operation and the more hogs located on the operation, especially for those parcels of land with a house on it. One of the studies also looked at beneficial impacts of larger-scale hog operations. This literature suggests beneficial impacts to local communities as a result of the operation's expenditures.

The area's economy will change through jobs associated with the operation and an increase in the area's tax base. The operation currently employs two full-time employees and expects to add two more employees after constructing the new facilities. It is also estimated that the proposed expansion will contribute to the local economy as a result of added employment opportunities and business such as the operation's purchase of feed from local farmers. In addition, there may be permit conditions affecting the management of the operation that may be beneficial to the current land use. It is difficult to assess the extent or existence of such impacts on property values and these impacts are beyond the regulatory authority of the Department.

2. Significance of Cumulative Effects

Discuss the significance of reasonably anticipated cumulative effects on the environment (and energy usage, if applicable). Consider cumulative effects from repeated projects of the same type. Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

There is a trend in the livestock industry toward larger-scale facilities of this kind. Large scale operations have rapidly become an economic necessity due to changing pricing structures and the need to reduce capital inputs while maximizing production. Economies of scale associated with CAFOs have allowed producers to increase production without increasing costs. If numerous projects of this type are proposed in this area there is a concern that the land base available for landspreading manure could be overwhelmed and would make a number of such projects nonviable, primarily with respect to costs associated with hauling manure long distances for landspreading. The Department is not aware of additional projects of this type in such a vicinity that the availability of land for manure application would be inadequate.

Any future projects will be examined at the appropriate time. With each new operation or expansion proposed, cumulative effects such as impacts from manure landspreading activities are considered. Unless these facilities are poorly sited or concentrated in a small area, the cumulative impacts to the environment should not be significant.

3. Significance of Risk

3a. Explain the significance of any unknowns which create substantial uncertainty in predicting effects on the quality of the environment. What additional studies or analysis would eliminate or reduce these unknowns?

Current regulations require that there be no discharge of pollutants from any manure storage facilities, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas, or other area of the operation to navigable waters, except in the event a 25-year, 24-hour rainfall event, or a chronic rainfall event, causes a discharge of pollutants to navigable waters from a facility, structure or area which is properly designed for a 25-year, 24-hour rainfall event. In addition, current regulations prohibit 1) overflow of manure storage facilities, 2) direct runoff from a feedlot or stored manure to waters of the state, 3) unconfined manure piles/stacks in water quality management areas, and 4) unlimited access by livestock to waters of the state in locations where high concentrations of animals prevent maintenance of adequate sod cover.

The proposed compost pad and associated runoff collection system and manure storage facility are proposed to be constructed in the spring of 2010. Proposed manure storage and runoff control facilities at the operation will be built in accordance with currently accepted standards to minimize the risks of ground and surface water contamination. Plans and specifications for proposed facilities must be reviewed and approved by Department staff prior to construction.

Ensuring the manure storage facilities and runoff control systems meet currently accepted standards is intended to address possible adverse impacts to ground and surface waters. Once the proposed permit is issued, the operation will be required to obtain Department approval of all proposed new manure storage and runoff control facilities prior to construction to ensure that the facilities meet current standards.

The operation must comply with its WPDES permit and associated Manure Management Plan. Consequently, the landspreading of manure leachate should not yield any substantial increase in risk to the environment. The Manure Management Plan will include acres that may not have previously been managed in accordance with a nutrient management plan, which could mean environmental benefits compared to existing manure application practices.

The nutrient content of manure temporarily stored in the storage facility may vary. Unidentified variations in nutrient content may result in over-application of nutrients (nitrogen in particular) that could impact groundwater. The WPDES permit issued to this operation will require manure and soil testing to ensure this does not occur. These factors are sufficient to indicate that the risk of environmental harm is not significant.

3b. Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.

Possible operating problems that could impact the environment include failure of manure handling and storage facilities or poor manure land application practices that lead to nutrient runoff to surface waters or leaching of nutrients to groundwater.

Department review of any proposed manure storage facilities or evaluation of existing manure storage facilities to ensure that they are appropriately designed (for example, berm slopes and storage volume) makes the probability of failure of storage facilities highly unlikely. In addition, the operation will need to address small-scale manure spills as part of their operation and maintenance plan for the operation (as part of the review process of manure storage facilities or as part of the proposed WPDES permit). This plan typically addresses spills associated with general operation and maintenance of the operation. These small "spills" may not represent an immediate environmental impact but may need to be addressed by the operation (e.g., scraping areas where small amounts of "spilled" manure have collected, changing operating procedures to avoid small "spills") to ensure that impacts to waters of the state, primarily through runoff resulting from storm events, do not occur. Massive failure of the manure storage facility would likely be formally defined as a spill under Ch. NR 706, Wis. Admin. Code. Chapter NR 706 describes requirements for immediate notification of the Department in the case of a spill. A requirement to follow Ch. NR 706 is included in the proposed WPDES permit. Inappropriate or inadequate responses (i.e., time frame of response and action taken to eliminate or mitigate environmental impact) to spills and associated environmental impact are subject to Department enforcement. However, Department and permittee action is contingent on a case-by-case evaluation of actual environmental impact and correction actions taken by the operation.

Department inspections based on complaints or general compliance efforts will help to serve to evaluate whether the operation is properly addressing minor "spills." In addition, the operation will be required to conduct inspections of storage facilities to ensure that more significant problems are addressed prior to any sort of massive facility failure.

Proposed fencing around storage facilities will minimize the risk of people or animals falling into the pond.

Manure will be landspread in accordance with a Department approved Manure Management Plan, which will does not allow poor land application practices; thus, operating practices should have minimal impacts on the environment.

4. Significance of Precedent

Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Describe any conflicts the proposal has with plans or policy of local, state or federal agencies. Explain the significance of each.

No. All future projects will be evaluated by their own specific adverse and beneficial impacts. There are other similarly sized operations in Wisconsin. Each individual project is considered separately based on its own merits.

The Department primarily considered issues that fall under our regulatory authority as part of this analysis. The project is not known to conflict with plans or policy of local, state, or federal agencies. The operation will need to apply for and receive the appropriate approvals from all involved agencies prior to operating. Permitting this operation would not foreclose future options for taking necessary actions to protect the environment (i.e., revocation, modification of the permit). In actuality, through enforcement of the WPDES permit, the Department has a means to avoid or address possible environmental impacts associated with the operation.

5. Significance of Controversy Over Environmental Effects

Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.

There is the possibility that public controversy may be generated as a result of the permitting of this operation. State and area citizens may express concerns about the environment such as possible air and water quantity/quality issues. The Department has some authority to address odor complaints should they arise. The Department is starting a process to study and address odor and air toxics issues from livestock operations on a statewide basis. This study is expected to develop standards and voluntary best management practices to reduce or minimize potential problems from CAFOs. Water quantity issues are addressed to a certain extent if the operation is required to obtain a high capacity well approval. However, neither of these issues is addressed by the issuance of the proposed WPDES permit, which is strictly intended to address the water quality concerns.

There may also be socio-economic concerns such as animal treatment issues, the trend towards large-scale farming in the state, impacts larger-scale farming may have on the viability of smaller operations and concerns of smaller operations and non-farming rural inhabitants regarding changes in the agricultural landscape associated with CAFOs. The socio-economic issues are difficult to quantify and there is significant disagreement as to the validity of these concerns. These socio-economic issues are beyond the scope of the proposed WPDES permit and the Department's overall regulatory authority. At this point, these issues can be addressed through local zoning and through implementation of comprehensive land use planning by the local unit of government.

ALTERNATIVES

Briefly describe the impacts of no action and of alternatives that would decrease or eliminate adverse environmental effects. (Refer to any appropriate alternatives from the applicant or anyone else.)

Herman Farms is consolidating their operation at this time in order to remove its current animals from within the Village of Marshall and adjacent to the Maunesha River where runoff from those sites to the Maunesha River has been observed. It is believed that removing all of the operation's animals from these sites will result in a more environmentally safe operation. Herman Farms is also expanding their operation in order to maximize the investments in facilities and equipment needed to accommodate its herd at the Springer Site. It is for this reason that neither reducing the herd size nor maintaining the current herd size after consolidation is considered the best economic alternative for this operation.

PROPOSED EXPANSION ALTERNATIVES

1. Consideration was given to consolidating and expanding on the Stark or Langer Sites. The Springer Site was favored over the Stark Site because the existing structures at the Springer Site were better suited for expansion. Additionally, the Springer Site provides better proximity to other sites than at the Langer Site. Based on these reasons, the Springer Site was selected as the most economically feasible location for consolidation and expansion.
2. Consideration was given to consolidating and expanding at a different location on the Springer Site south of the proposed location. That site had a static water level closer to the surface, however.
3. Consideration was given to not expanding and maintaining current herd sizes. This would limit profitability and efficiency due to the need to build the new facilities without an increase in cattle to pay for the construction activities.
4. Consideration was given to not consolidating and maintaining current herd sizes. The proposed consolidation and expansion requires Herman Farms to remove animals from the Home and Hwy 73 Sites, where operations are near residential settings and runoff has been observed flowing from the farm sites to surface waters. The consolidation also requires the operation to obtain a WPDES permit which requires a zero (no) discharge from the production area which protects nearby surface waters and a

Phosphorus-based Manure Management Plan which will help prevent negative impacts to groundwater related to land application of manure.

REVIEW OF NEW FACILITIES

The Department's alternatives for review of proposed runoff control and/or manure storage facilities either as part of processing a permit or the permit itself are:

- Deny the plans and specifications for the design of the proposed facilities based on water quality concerns and require re-submittal of plans and specifications.
- Approve the plans and specifications for the design of the proposed facilities without conditions.
- Approve the plans and specifications for the design of the proposed facilities, but with conditions requiring additional components to the facilities' design or operation based on water quality concerns.

The selected alternative will be based on the information collected as part of this environmental analysis and further Department review.

WPDES PERMIT

Within the constraints of the Department's existing permitting authority for CAFOs, the Department has limited alternatives to the issuance of a WPDES permit for the operation. Based on the information available to the Department, the Department cannot justify denial of the proposed WPDES permit for the operation since it is expected that the operation will be able to comply with the conditions of the proposed permit and not cause an exceedance of water quality standards. The Department could require more stringent conditions in the permit if it determined the conditions were necessary to protect water quality. The Department will use the information collected as part of the environmental analysis as well as part of the public comment period associated with the issuance process of a WPDES permit to makes its final determination on issuance of the permit and to determine if additional restrictions in the proposed permit are necessary.

SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

List agencies, citizen groups and individuals contacted regarding the project (include DNR personnel and title) and summarize public contacts, completed or proposed.

- Mike Tiry, Design Engineer, Tiry Engineering, Inc.
- Shaun Verbout, Atmospheric/Soil Scientist, Tiry Engineering, Inc.
- Ed Herman, Owner, Jim Herman, Inc.
- Mark Cain, Wastewater Engineer, DNR – South Central Region
- Aaron Johnson, Water Resources Management Specialist, DNR – South Central Region
- Eric Heggelund, Wastewater Specialist, DNR – South Central Region
- Cami Peterson, Water Management Specialist, DNR – South Central Region
- Catherine Bleser, Conservation Biologist, DNR – South Central Region
- Steve Struss, Livestock Facility Siting Engineer, DATCP
- Pat Sutter, County Conservationist, Dane County Land Conservation Division
- Steve Ottelein, Soil and Water Conservationist – Dane County Land Conservation Division
- Eric Galdi, Precision Agricultural Specialist, Landmark Services Cooperative

The Department is currently reviewing plans and specifications for manure storage facilities at the operation.

The proposed WPDES permit for the operation will be public noticed for comments as part of the permit issuance process. If necessary, an informational hearing will be held on the proposed WPDES permit to receive additional comments.

DECISION (This decision is not final until certified by the appropriate authority)

In accordance with s. 1.11, Stats., and Ch. NR 150, Adm. Code, the Department is authorized and required to determine whether it has complied with s. 1.11, Stats., and Ch. NR 150, Wis. Adm. Code.

Complete either A or B below:

A. EIS Process Not Required X

The attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion, therefore, an environmental impact statement is not required prior to final action by the Department on this project.

B. Major Action Requiring the Full EIS Process _____

The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator	Date Signed 9/3/09
Noted: Regional Staff Specialist or Bureau Director	Date Signed

Number of responses to news release or other notice: 1

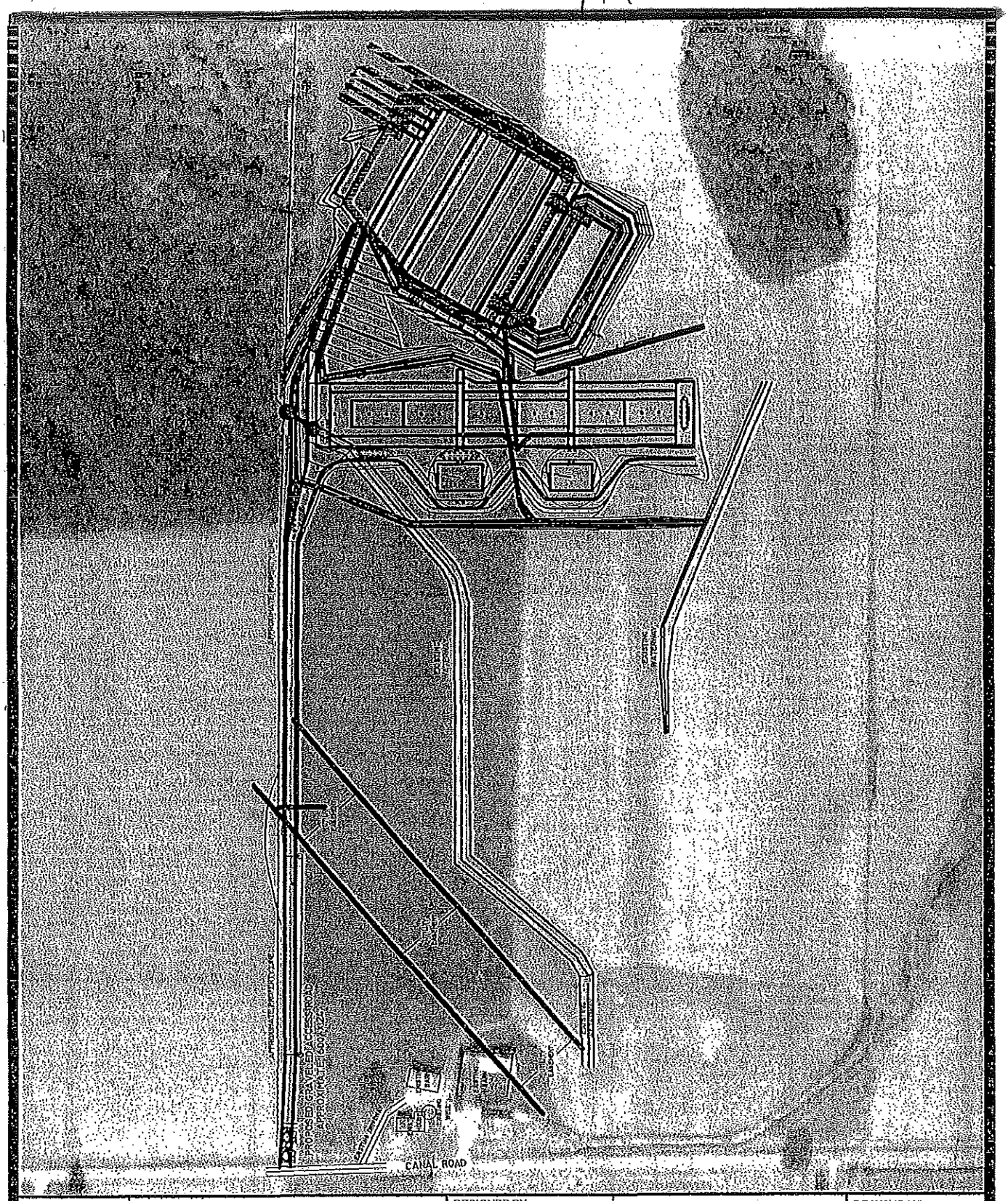
CERTIFIED TO BE IN COMPLIANCE WITH WEPA	
Regional Director or Director of BISS (or designee)	Date Signed 9/25/09

NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. Such a petition shall be filed with the appropriate circuit court and shall be served on the Department. The petition shall name the Department of Natural Resources as the respondent.

Attachment C



Tiry Engineering, Inc.
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220 1/2 N. Bridge Street
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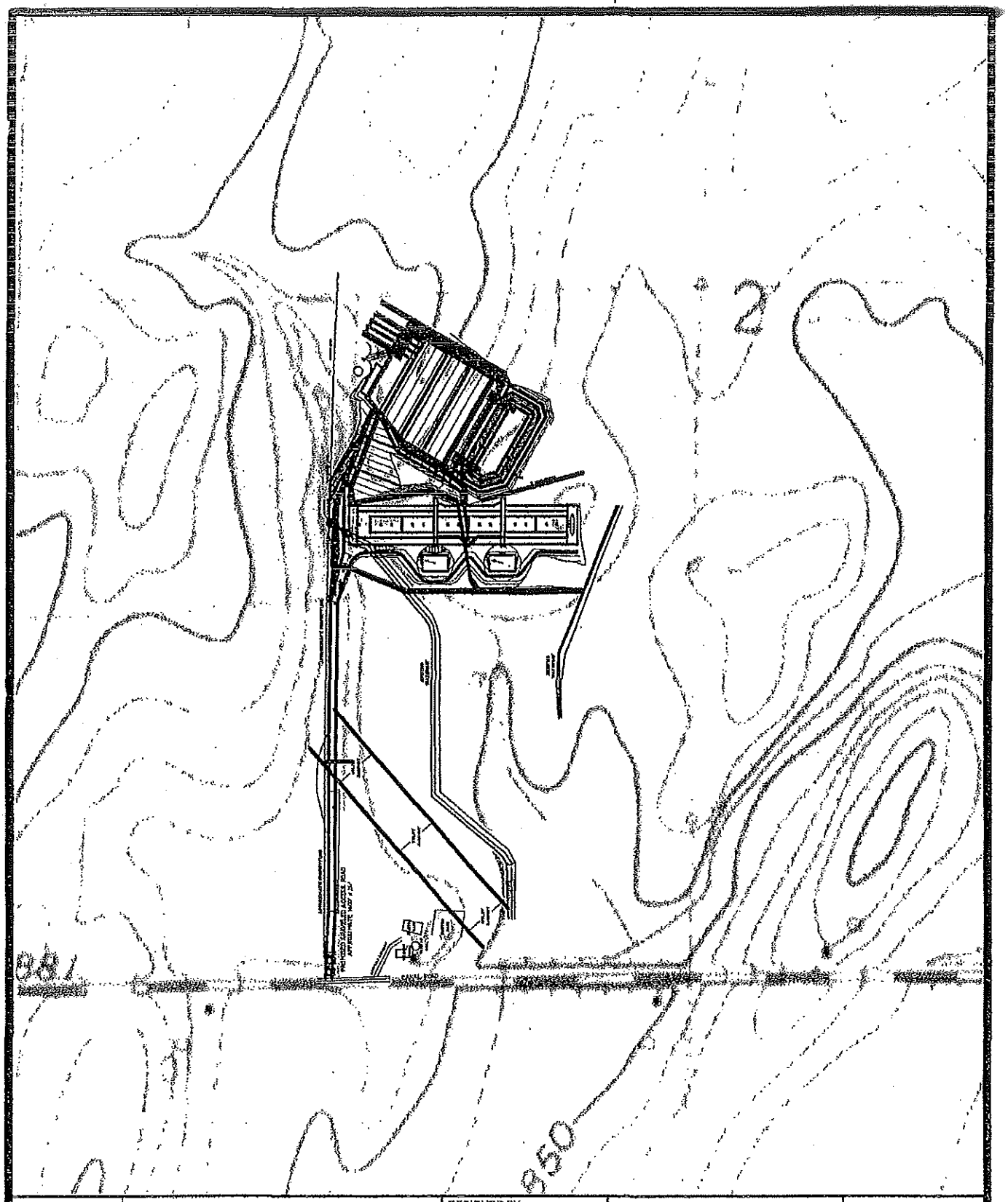
Office: (715) 723-6777
Fax: (715) 723-6842
www.tiryengineering.com

DESIGNED BY:	-SHEET DESCRIPTION- SITE PLAN		DRAWING NO. HERM-02-09
DRAWN BY:			DATE: 06-01-09
PROJECT MANAGER: M.J.T.	-CLIENT- Jim Hermen, Inc.		SHEET 1 OF 1

Attachment 1



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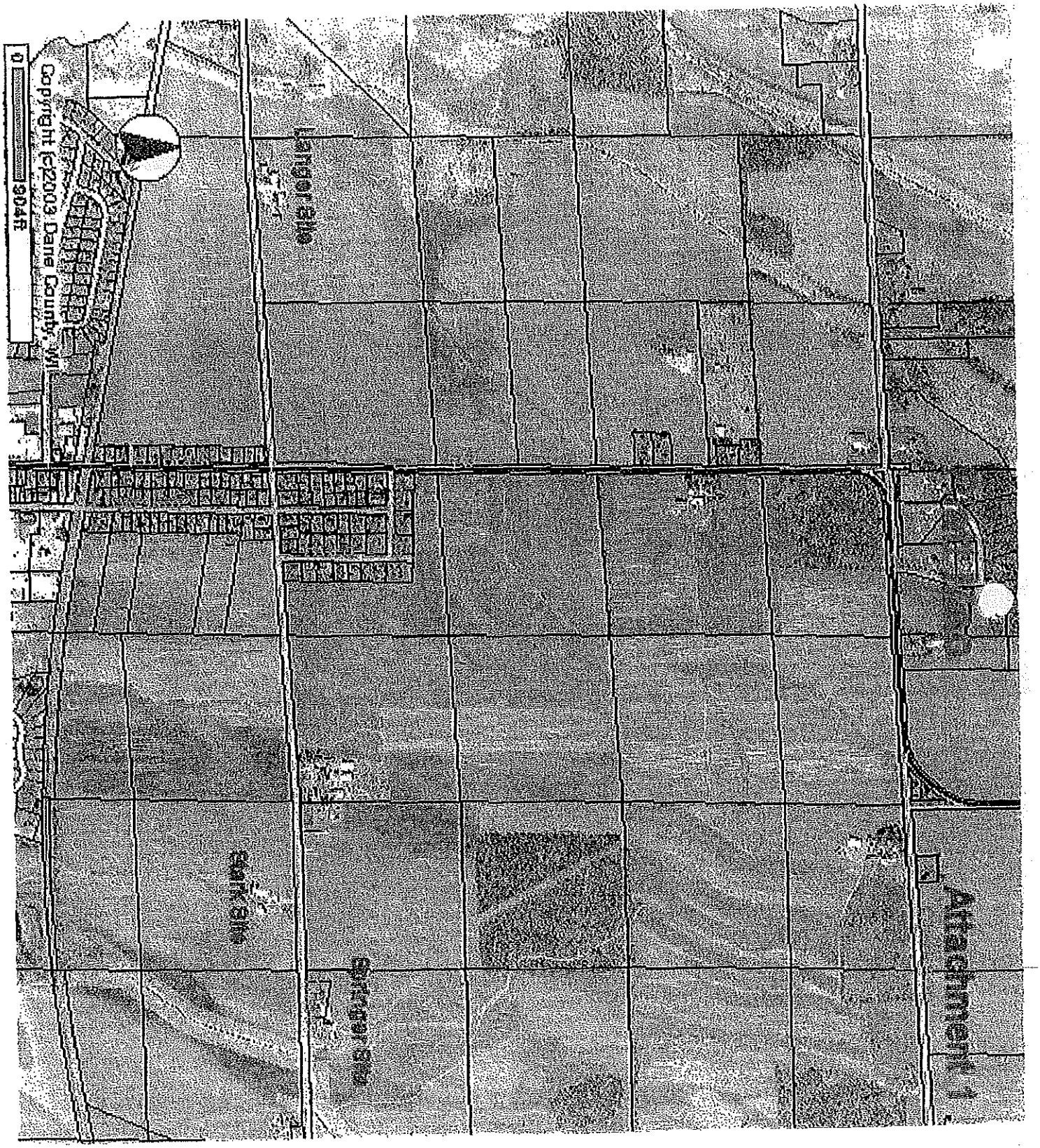
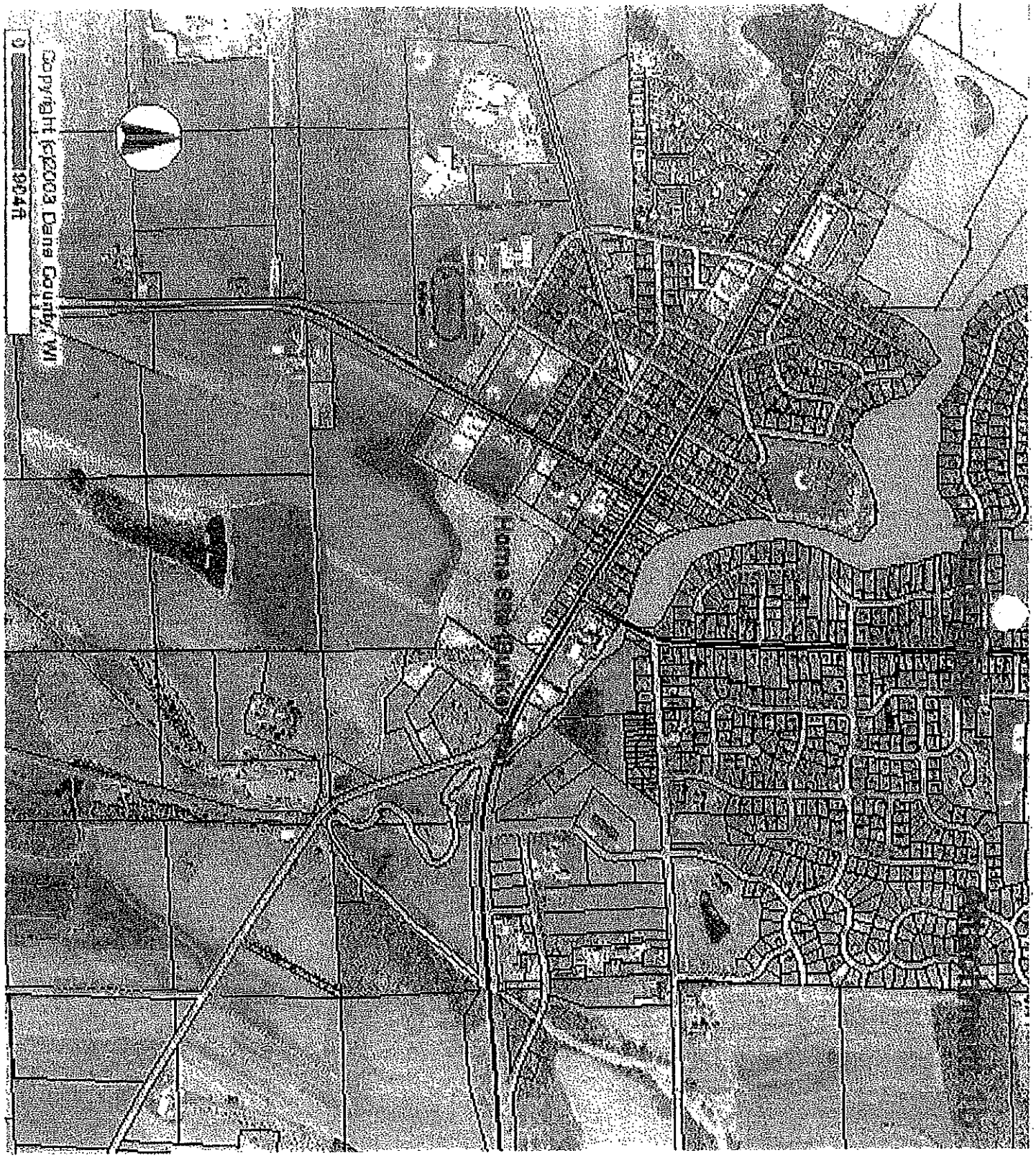
DESIGNED BY: *	-SHEET DESCRIPTION- *	DRAWING NO. *
DRAWN BY: *	-CLIENT- Jim Hermen, Inc.	DATE: 06-01-09
PROJECT MANAGER: *		SHEET * OF *

Attachment 3 A



Attachment 3B



Addendum 1

Cain, Mark R - DNR

From: Eric Galdi [ericgaldi.landmark@gmail.com]
Sent: Tuesday, September 22, 2009 8:04 AM
To: Cain, Mark R - DNR
Subject: Herman Inc EA

Mark

When through the EA for Herman. I talked with Ed last night. Just a few modifications

Ed is planning on all manure to be spread as solid or semi-soild waste, no liquid. page 6 is correct on spreading soilds after composting. Page 7 states "Since all proposed landspreading will involve liquie leachate" is not a correct statment. Some acres will have the mix of leachate and solid manure but some acres will only recive solid manure.

I am double checking animal numbers with Ed still. I will let you know if any changes needed to them.

Herman Inc NMP is still on track for a mailing of next week Monday or Tuesday to you. Larson's is not far behind either.

Eric

--
Eric Galdi
Senior Research Associate
Transgene Dev TI PESTS SS-CB
Herbicide Trait Development
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Johnston, IA 50131-0552