PERMITTEE: Hermiston Foods, LLC  
2250 S. Hwy 395  
Hermiston, OR 97838  
File Number: 104738

SOURCE LOCATION: Hermiston, Oregon

SOURCE CONTACT: Craig Williams  
Telephone Number: 541-567-8448

PERMIT WRITER: Carl Nadler  
Telephone Number: 541-298-7255, ext. 227

PROPOSED ACTION: Renewal of a Water Pollution Control Facilities (WPCF) wastewater disposal permit

SOURCE CATEGORY: Minor Industrial

TREATMENT SYSTEM CLASS: N/A

COLLECTION SYSTEM CLASS: N/A

SUMMARY

Hermiston Foods, LLC operates a vegetable processing plant and an industrial wastewater treatment facility near Hermiston, Oregon. The company operates the wastewater treatment facility under Water Pollution Control Facilities (WPCF) Permit 101385, which has an expiration date of March 31, 2009. On January 15, 2009, the Department received Hermiston Foods’ renewal application. Therefore, in accordance with Oregon Administrative Rule (OAR) 340-045-0040(2), WPCF Permit 101385 was administratively extended until such time as the Department takes final action on the renewal application.

The company’s wastewater treatment facility includes a land application component. Land application of wastewater is a feasible treatment method provided it is performed in a controlled manner that is protective of the environment. Agronomic application of wastewater nitrogen and prevention of both run-off and deep percolation are key elements of an environmentally protective land application treatment system. Each of these elements is addressed in the proposed renewal permit.

The proposed renewal permit is necessary for continued operation of the wastewater disposal facility pursuant to provisions of Oregon Revised Statutes (ORS) 468B.050. The Department proposes to issue the permit. This permit evaluation report addresses waste disposal limitations, minimum monitoring and reporting requirements, compliance conditions and schedules, and special conditions included in the proposed renewal permit.

FACILITY DESCRIPTION

Hermiston Foods' wastewater treatment facility and land application system are located in Umatilla County, south of Hermiston on U.S. Highway 395. Built in 1990, the processing plant operates seasonally to process asparagus, peas, sugar snap peas, carrots and lima beans. The company generates wastewater from vegetable processing, washing, grading, and transporting. Boiler blow-down, condenser water and storm water are also discharged to the treatment facility.
Currently, Hermiston Foods applies wastewater on land owned and operated by Art and Chet Prior (Windblown Ranch, see Figure 1, Site Map) under a twenty-year agreement with Hermiston Foods that expires at the end of December 2009. Hermiston Foods supplies wastewater and Windblown Ranch manages farming operations under the agreement. This permit and a Department-approved Operations, Monitoring and Management (OM&M) Plan also regulate the operation. In January 2009, Hermiston Foods informed the Department that the company plans to relocate its land application operations on the adjacent Chowning (220 acres) and Koester (300 acres) Farms (see Figure 1, Site Map), which the company owns, and then abandon operations on Windblown Ranch at the end of the year. The company recently installed groundwater monitoring wells and is conducting site and groundwater characterizations at the new properties in order to obtain site authorization from the Department. Irrigated portions of the proposed new site consist of approximately 477 acres.

Principal components of Hermiston Foods’ current wastewater treatment system include side hill screens, sediment basins, concrete lined gutter flush system, collection sump and pump station, an underground pipeline, and land application system. The Windblown Ranch land application site includes a HDPE-lined three-million gallon surge pond, pump station, flow meters, two 125-acre center-pivot irrigation circles, and 14.6 acres of hybrid poplar trees. However, the company is prohibited from irrigating wastewater on the poplar trees due to significant crop mortality and the absence of beneficial use. Hydraulic structures at the surge pond allow irrigation of process wastewater directly from the plant or from the storage pond. In addition, process wastewater and supplemental water from an irrigation ditch system can be commingled and irrigated. Seven groundwater monitoring wells are used to detect impacts to the shallow groundwater aquifer at the Windblown Ranch site.

Hermiston Foods generates approximately 100 million gallons (MG) of wastewater annually, mostly between June and November. The annual average Total Kjeldahl Nitrogen (TKN) concentration after mixing with supplemental water is approximately 30 milligrams per liter (mg/l). The facility is located within the Lower Umatilla Basin Groundwater Management Area (LUBGWMA), which was designated as such based on elevated groundwater nitrate concentrations over a widespread area. Therefore, careful attention to land application of Hermiston Foods nitrogen-rich wastewater is necessary to prevent further impact to groundwater (see Environmental Issues, below).

Process related residuals, or waste solids, consist of asparagus greens, pea pods, reject peas, carrot greenery, carrot reject scraps, rock, silt and tare dirt. Vegetable waste solids are utilized offsite as livestock feed. Rock, silt, and tare dirt are returned on a pro rata basis to the individual growers who supply raw carrots to the plant.

Industrial storm water is collected and discharged into the wastewater system for land application. Sanitary sewage is discharged to the Hermiston sewage treatment plant.

**PERMIT HISTORY**

This section summarizes the Department’s permit actions that have occurred to date.

<table>
<thead>
<tr>
<th>Effective Date</th>
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<tr>
<td>December 22, 1989</td>
<td>Permit issuance. The permit prohibited discharge to surface waters and required the permittee to land apply wastewater in accordance with a Department-approved wastewater management plan. In addition, the permit limited objectionable odors, flies, mosquito breeding, other nuisance conditions and leaching of nitrogenous compounds. Groundwater contamination was prohibited. Wastewater facility and groundwater monitoring was required in accordance with the approved plans. Expiration date: December 31, 1994.</td>
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Effective Date | Action
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June 18, 1996 | Permit renewal. The permit prohibited nitrogen loading in excess of the maximum agronomic rates established by Oregon State University fertilizer guides and it prohibited leaching below the root zone. Provisions for storm water disposal in dry wells, or underground injection controls (UICs), were included in the permit. Specific groundwater monitoring requirements were included in the permit; however, wastewater facility monitoring was required to be in accordance with the approved Operations, Monitoring and Management (OM&M) Plan. The permit required submittal of revised OM&M and Groundwater Monitoring Plans, along with submittal of a Water Quality Analysis Report with proposed groundwater concentration limits.
Expiration date: May 31, 2001

September 5, 1996 and September 17, 1996 | Permit modifications. The Department modified the permit on two occasions to extend compliance dates for submittal of revised OM&M and Groundwater Monitoring Plans.

February 14, 1997 | Permit modification. The Department modified the permit to extend the compliance date for submittal of a Water Quality Analysis Report with proposed groundwater concentration limits.

April 1, 2004 | Permit renewal. The permit established groundwater concentration limits for Total Dissolved Solids (TDS), Nitrate-Nitrogen (NO₃-N) and Chloride (Cl⁻) in monitoring well MW-4. Specific facility monitoring requirements were included in the permit and the list of required groundwater monitoring parameters was increased. An additional groundwater monitoring well was required to be installed and a Water Quality Analysis Report with proposed groundwater concentration limits was required for the new monitoring well.
Expiration date: March 31, 2009

COMPLIANCE HISTORY

This section summarizes water quality complaints received, inspections and enforcement actions regarding Hermiston Foods’ wastewater facility since the permit was renewed on April 1, 2004.

Complaints

The Department has not received any complaints.

Inspections

On January 8, 2009, the Department inspected the facility. No violations were documented at the time of the inspection.

Enforcement Actions

On March 3, 2008, the Department issued Warning Letter (WL) ERP-08-025 to Hermiston Foods for nitrogen loading in excess of the approved agronomic rate. It was a Class II violation of the Department’s Enforcement Rules. Class I violations are the most serious violations; Class III violations are the least serious. Hermiston Foods was required to ensure that wastewater was managed in accordance with permit requirements.

On February 10, 2009, the Department issued WL ERP-09-011 to Hermiston Foods for nitrogen loading rate exceedances and for failing to certify its annual report. As noted above, the facility is located within the LUBGWMA. Nitrogen loading rate exceedances within groundwater management areas are Class I violations. Failure to certify the report is a Class II violation. To correct the nitrogen loading rate violation, the company was
prohibited from land applying wastewater on the hybrid poplars and was required to ensure that nitrogen from all sources did not exceed the agronomic rates for the receiving crops. To correct the certification violation, the company was required to re-submit the annual report with a certification. In addition, as a result of the Class I violation, Hermiston Foods was issued a Notice of Permit Violation (NPV) and required to certify that the company was operating in compliance with its permit or to submit a proposal to bring the facility into compliance with the permit. On March 16, 2009, the Department received Hermiston Foods certification that it was operating in compliance with its permit.

ENVIRONMENTAL ISSUES

Hermiston Foods’ land application fields are located within the Lower Umatilla Basin Groundwater Management Area (LUBGMA). The area has been designated as such by the Department because groundwater nitrate concentrations currently exceed 70% of the groundwater reference level (10 mg/l) in a widespread area. At concentrations greater than 10 mg/l, orally ingested nitrate can be hazardous to infants. A joint agency investigation of the LUBGMA identified irrigated agriculture, land application of food processor wastewater, confined animal feeding operations (CAFOs), on-site septic systems, and military operations to have contributed in varying amounts to the problem. Historically, food-processing facilities have been prone to apply process wastewater nitrogen in excess of the agronomic rate required for crop maintenance. Typically, this problem was caused by a lack of sufficient crop acreage over which the nutrient rich wastewater could be applied at agronomic rates.

A 2007 update to the LUBGMA study concluded that facility operations at the existing site have impacted groundwater quality because (1) upgradient wells exhibited decreasing trends while down gradient wells exhibited increasing trends and (2) downgradient nitrate concentrations exceed upgradient nitrate concentrations. On the other hand, the study concluded that water quality is beginning to improve beneath the site because downgradient trends have recently began decreasing or are less steeply increasing.

The proposed WPCF permit prohibits application of nitrogen from all sources in excess of the maximum agronomic rates needed by the receiving crops on an annual basis. This includes the application of commercial fertilizers. The permit also limits hydraulic loading to the crop-specific evapotranspiration (ET) rate on a monthly basis. Soil storage of wastewater is prohibited. Therefore, Hermiston Foods will need to construct lined storage at the new land application site that is large enough to contain all wastewater generated during the non-growing season. In addition, the permit prohibits leaching below the root zone without prior written approval from the Department. Routine wastewater quantity and quality monitoring, along with routine soil and groundwater monitoring, are required to ensure that the nitrogen and hydraulic loading limitations are not exceeded.

The Department has determined that site management practices for the land application program at Hermiston Foods will ensure continued agricultural, horticultural, or silvicultural production and not reduce the productivity of land if materials are applied in strict compliance with an approved OM&M Plan and all applicable statutes, rules, permits, plans, and federal guidance. However, this finding does not negate the responsibility of Hermiston Foods to take additional measures should unforeseen reduction in land productivity occur. Remedies for unforeseen reductions in land productivity may result in degradation of groundwater quality, the remedy of which would also be the responsibility of the Permittee.

PERMIT DISCUSSION

The following discussion pertains to selected portions of the proposed WPCF Permit for the Hermiston Foods wastewater facility.

Face Page

The face page identifies that Hermiston Foods, as Permittee, is permitted to dispose of process wastewater, storm water, and process related residuals solids. The permit will expire approximately ten years from the date of issuance.
Schedule A - Waste Disposal Limitations

Schedule A identifies the wastes permitted for disposal and the authorized land application sites for the permitted wastes. It allows for addition of the newly acquired Chowning and Koester Farms if approved in writing by the Department. In addition, Schedule A prohibits direct discharge of wastewater or contaminated drainage to waters of the state and it requires the Permittee to manage and dispose of authorized wastes in a manner that will prevent violation of the Department’s Groundwater Quality Protection Rules. Schedule A includes groundwater concentration limits for the Windblown Site and it allows for addition of groundwater concentration limits at the newly acquired Chowning and Koester Farms upon incorporated into the permit by addendum.

Schedule A requires that all activities pertaining to the management, treatment, and disposal of the permitted wastes shall be conducted in accordance with the approved OM&M Plan and Waste Solids Management Plan. It establishes a minimum pond freeboard of two (2) feet in order to protect the containment structure of the pond. Schedule A contains land-application conditions to ensure protection of surface waters and groundwater and to control odors, vector creation, and nuisance conditions.

Schedule A establishes nitrogen and hydraulic loading limitations and it prohibits leaching below the crop root zone for the protection of groundwater. Land application of wastewater during the non-growing season is prohibited. Schedule A requires that management and disposal of waste solids be in accordance with the approved Waste Solids Management Plan and it requires that the wastewater holding pond be managed to prevent odors, vector attraction and other nuisance conditions.

Schedule B - Minimum Monitoring and Reporting Requirements

Schedule B requires the Permittee to monitor the facility in accordance with the approved OM&M Plan. Specific items or parameters that are to be included in the minimum monitoring program are listed. Additional monitoring parameters may be included in the plans, which are required to be submitted under Schedule C of this permit.

Schedule B requires the Permittee to perform groundwater monitoring in accordance with the approved Groundwater Monitoring Plan. Specific items or parameters that are to be included in the minimum monitoring program are listed. It also requires the Permittee to take action in the event monitoring data indicate a significant increase (e.g. increase or decrease for pH) in the value of a parameter monitored.

Schedule B requires the Permittee to retain sufficient records, including monitoring records, for the Department to determine compliance with the permit for a period of at least five calendar years. And, it requires the Permittee to report instances of non-compliance and to submit annual reports to the Department.

Schedule C - Compliance Conditions and Schedules

Schedule C requires the Permittee to submit a revised OM&M Plan to the Department for review and approval not later than November 30, 2009. The Chowning and Koester Farms must be included in the plan if the Department has granted site authorization. The OM&M Plan must be reviewed and updated annually. Revisions must be implemented upon the Department’s approval. Similarly, the Waste Solids Management Plan must be reviewed and updated annually.

Schedule C requires the Permittee to submit a plan to properly abandon the wastewater pond on Windblown Farm not later than September 1, 2009. Upon Department approval, the plan must be implemented.

Schedule C requires the Permittee to submit a revised Groundwater Monitoring Plan and a water quality analysis report with proposed groundwater concentration limits for other land approved in writing by the Department.

Schedule C requires the Permittee to notify the Department of any lapsed compliance date that has been established by this schedule.
Schedule D - Special Conditions

Schedule D requires the Permittee to receive the Department’s approval of detailed plans and specifications prior to constructing or modifying wastewater management, treatment and disposal facilities. It requires a contingency plan and employee education for the prevention and handling of spills and unplanned discharges. And, it requires the Permittee to designate an environmental supervisor to coordinate and implement all necessary functions related to maintenance and operation of waste management, treatment, and disposal facilities.

Schedule D requires the Permittee to notify the Department in the event of any malfunction of the wastewater system. It requires that sanitary wastewater be discharged to the City of Hermiston’s municipal treatment system. And, it requires the Permittee to maintain written agreements with second party owners of each of the land application sites.

Schedule D requires the Permittee to perform maintenance on components of the wastewater treatment and disposal system and it identifies monitoring well management and maintenance requirements.

Schedule F - General Conditions

These conditions are standard to all WPCF permits.
Figure 1. Site Location Map

Hermiston Foods, LLC
2250 Highway 395, South
Hermiston, Oregon 97838
T4N R29E

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(SOURCE: USGS 7.5 Minute Topographic Maps of Oregon on CD-ROM, TOPO2 Software ©2008 NGHT, Inc.)