

**FACT SHEET FOR STATE WASTE DISCHARGE
PERMIT NO. ST-5507**

**TWIN CITY FOODS, INC
ELLENSBURG**

**DATE OF THIS FACT SHEET – DECEMBER 5, 2006
DATE OF EXPIRING PERMIT - JANUARY 31, 2012**

SUMMARY

Twin City Foods, Inc. (TCF) is seeking reissuance of the State Waste Discharge permit for its Ellensburg, Washington vegetable processing facility. The facility processes approximately 100 million pounds per year of peas, corn and carrots into frozen products. The peak processing season runs from June through November, although repacking activities take place throughout the year.

The TCF facility discharges process wastewaters generated by the washing and conveyance of vegetables and by washing equipment. Process wastewater is screened onsite, then conveyed through a 21-inch pipe to the company's sprayfield, located approximately 2 miles to the south of the plant. The sprayfield is located immediately south of Ellensburg on the Yakima River floodplain. TCF has utilized part of this sprayfield to land treat its process wastewater since 1967.

During the previous permit cycle the company installed a groundwater monitoring well network to determine the nature and extent of wastewater impact on groundwater quality. Groundwater sampling over the last two years has shown elevated concentrations of total dissolved solids, chloride, total kjeldahl nitrogen, manganese and iron, as compared to background levels.

In response to the demonstrated degradation of groundwater quality beneath the sprayfield the Department required the Permittee to submit an Engineering Report to determine "all known, available and reasonable methods of prevention, control and treatment," or AKART, for the facility's wastewater. The required AKART analysis report has been approved by the Department. The Permittee, under a Schedule of Compliance, is required to provide the Department with an update on its AKART choice of alternatives; submit approvable engineering plans; and a construction schedule leading to a fully operational wastewater treatment process by the end of the proposed permit term.

Nutrient analysis on each individual harvested crop and crop yield per individual field is required to characterize the nutrient balance between wastewater applied to the sprayfield and nutrients removed through harvest.

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	1
INTRODUCTION	4
GENERAL INFORMATION	5
DESCRIPTION OF THE FACILITY	5
Production Processes	5
Treatment Processes	6
Re-Route of Pea Brine Water	7
Grit Settling Pond	7
Sprayfield.....	7
Groundwater	8
PERMIT STATUS.....	8
SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMITS	9
WASTEWATER CHARACTERIZATION	9
GROUNDWATER CHARACTERIZATION.....	10
PROPOSED PERMIT LIMITATIONS.....	14
TECHNOLOGY-BASED EFFLUENT LIMITATIONS	15
GROUNDWATER QUALITY-BASED EFFLUENT LIMITATIONS	15
COMPARISON OF PROPOSED LIMITATIONS WITH THE EXISTING PERMIT.....	17
MONITORING REQUIREMENTS	17
WASTEWATER MONITORING.....	17
SOIL MONITORING.....	17
CROP MONITORING	18
GROUNDWATER MONITORING	18
OTHER PERMIT CONDITIONS	18
REPORTING AND RECORDKEEPING	18
IRRIGATION AND CROP MANAGEMENT PLANS	18
OPERATIONS AND MAINTENANCE.....	19
SOLID WASTE PLAN	19
SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN.....	19
SCHEDULE OF COMPLIANCE	19
GENERAL CONDITIONS	20
RECOMMENDATION FOR PERMIT ISSUANCE.....	20
REFERENCES FOR TEXT AND APPENDICES.....	21

APPENDIX A --PUBLIC INVOLVEMENT INFORMATION 22

APPENDIX B -- GLOSSARY 23

APPENDIX C -- RESPONSE TO COMMENTS 28

INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-5507. The Department of Ecology (Department) is proposing to issue this permit, which will allow discharge of wastewater to waters of the State of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. Regulations adopted by the state include procedures for issuing permits (Chapter 173-216 WAC), and water quality criteria for groundwaters (Chapter 173-200 WAC). They also establish requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix C--Response to Comments.

GENERAL INFORMATION	
Applicant	Twin City Foods, Inc.
Facility Address	501 West Fourth Street Ellensburg, WA 98926
Type of Facility	Processing of fresh vegetables into frozen food products
Type of Treatment	In-plant solids separation and land treatment at a nearby sprayfield
Discharge Location	Latitude: 46° 13' 00" N Longitude: 120° 32' 30" W
Legal Description of Application Area	Sections 11, 12, 13, 14, Township 17 N, Range 18 E. W. M.
Contact at Facility	Name: Tom Foster Telephone No. 509-962-9806
Responsible Official	Name: Rolf T. Skrinde Title: Manager, Corporate Environmental Affairs Address: PO Box 699 Stanwood, WA 98902-0699 Telephone No. 206-417-8235 FAX No. 206-417-8235

DESCRIPTION OF THE FACILITY

Twin City Foods Inc. (TCF), the Permittee, operates a vegetable processing facility which occupies approximately two square blocks within the city of Ellensburg. The company's 150-acre land treatment sprayfield lies approximately 2 miles south of the processing plant, south of Interstate 90 (I-90), and west of I-82.

Food processing at this facility began in the mid-1960s when the company bought the existing Stokely Foods plant. In 1982 the processing plant was modernized and a 77,000 square foot cold storage building with refrigeration system was added.

Production Processes

TCF processes and freezes corn, peas and carrots grown on nearby farm lands. Raw product is delivered to the site by truck and is fed to the process line where pre-washing, husk and pod removal, blanching, and grading occur. The vegetables are then run through freezing tunnels and packaged in bulk for distribution or stored for repacking at a later date. A large refrigerated warehouse is used to store the finished product.

The operation is seasonal, with peak activity occurring during the months of June through November, although repacking operations are carried out year around. Approximately 97,000 tons of corn, 4,900 tons of peas, and 18,000 tons of carrots are processed annually. During peak periods, 130 workers are employed on each of two shifts.

Water is used in the plant for washing vegetables, for cleaning of equipment and floors, and to transport product in flumes during the processing operations. Cooler condensate is collected and used in the plant.

The *TCF 2004 AKART Analysis* estimated in its water budget for application of wastewater to a 150-acre sprayfield up to 38,800,000 gallons of wastewater generated during the peak of the corn processing season in August. A low discharge rate of 12,500,000 gallons during the month of July occurs between the spring pea processing season where an estimated 20,000,000 a month of wastewater is generated for April, May and June and, the late summer corn processing season tapering off to 13,000,000 gallons in October at the beginning of carrot processing season. The total water balance for the year is 155,100,000 gallons.

From November to March, the months fresh vegetables are not being processed, stored frozen products are repackaged. Approximately 60,000 gallons per day of domestic strength wastewater is discharged to the Ellensburg Publicly Owned Treatment Works (POTW). Wastewater generated from repacking is collected in a sump, and when the float switches in the sump are activated, the wastewater is discharged to the POTW.

Treatment Processes

Process wastewater was originally discharged to the City of Ellensburg POTW. In 1967 the company leased land from the City for spray irrigation and constructed a pump station and irrigation network. Since that time, TCF acquired the rights to use up to 230 acres owned by four separate organizations, the City of Ellensburg, Kittitas County, Burlington Railroad and the U.S. Bureau of Reclamation, which will not renew the TCF lease. As of 2007, unless TCF can find addition land to replace the lost 80 acres the sprayfield size will be reduced to 150 acres.

The TCF treatment system consists of three principal components: in-plant pretreatment, wastewater pumping facilities, and the waste treatment sprayfield. This system is operated 24 hours a day during the processing season.

The principal pretreatment involves removal of solids from the waste stream. Wastewater is collected in a sump adjacent to the processing plant then passes over 60-mesh screens to remove solids. The screened material is removed and later used as silage. Wastewater from the plant flows about 2 miles through a 21-inch-diameter gravity line to the waste pump station, which is located adjacent to and southeast of the Ellensburg POTW. The flow passes over a rotating screen for additional solids removal and then pumped to the irrigation systems by 150-hp

centrifugal pumps. Sediments that collect on the bottom of the sump are conveyed to an adjacent settling pond using an auger.

Re-Route of Pea Brine Water

Pea brine water is collected in tanker truck and then hauled to the Ellensburg POTW. Until 2005 pea brine water was discharged to the sprayfield. In 2003 approximately 194,000 pounds of sodium chloride was used in the pea grading process. This salt contributed to the total dissolved solids (TDS) load at the sprayfield. The AKART analysis provided in the 2004 engineering report indicates that hauling the pea brine water to the POTW significantly reduced the TDS load applied to the sprayfield. The pea brine water is dried in one of the sludge drying bed at the POTW and the solids are hauled off for solid waste disposal.

The proposed permit will require the Permittee to submit to the Department a signed memorandum of agreement or contract between the City and TCF, which specifies the conditions under which TCF may receive treatment of its pea brine water at the POTW and its ultimate disposal.

Grit Settling Pond

In 1968 TCF discovered that grit present in the wastewater was causing impellers and bearings to wear more quickly than expected. Grit consists primarily of the sandy soil particles that cling to the harvested vegetables and are washed off during processing. To correct the problem the company partitioned the pump station wet well with a baffle wall to allow the grit to settle, and constructed the present settling pond near the station. Grit is conveyed from the wet well to the pond utilizing a drag chain and auger.

In 2001 a new grit removal system was constructed at the pump station. It includes two concrete basins, each of which has sufficient capacity to be used alone. Therefore, grit can be cleaned out and hauled away from one basin while the other can be used. In addition, the concrete basins are underlain with 60 mil high density polyethylene plastic liners offering double protection against groundwater contamination.

Sprayfield

Soils in the area are generally gravelly. Crops consist of pasture grass, such as orchard grass, timothy, tall fescue, and rye grass. The grass is mowed, baled for hay, and used for cattle and horse feed.

According to the facility's *Quality Assurance Project Plan* (pp. 2-4), the sprayfield is approximately 230 acres in size and is located between the Burlington Northern Railroad tracks and the Yakima River, approximately 2 miles south of the TCF plant. The system utilizes a 65-acre circle, irrigated with a fixed-distribution and header system, equipped with ten sets of

impact sprinklers that can be operated in any combination. The sprayfield is comprised of several irregularly shaped parcels arranged north, south and west of the Ellensburg POTW.

The northern portion of the sprayfield is near I-90. It comprises 80 acres which were leased from Schaake Packing Company under a 20 year lease established in 1990. In 2005 the United States Department of the Interior, Bureau of Reclamation (USBR) purchased the Schaake property and as of the time of this writing (July 2006) the USBR is not willing to extend the TCF lease beyond December 2006. Without replacement acreage or any additional land for sprayfield use, the available sprayfield acreage will be 150 acres.

The original sprayfield is located south of the facility near the Ellensburg POTW. TCF has leased this sprayfield from the city since 1967. Additional acreage to the south has been leased from Kittitas County since 1991.

Groundwater

The TCF sprayfields are located on relatively level alluvial materials adjacent to the Yakima River. Flood-carried materials have resulted in two primary alluvial deposits in the sprayfield area. The Weirman soils consist of very gravelly sand overlain by very gravelly sandy loam at the surface. The Nitzel soils consist of fine sandy loam underlain by sandy clay loam, and deeper, gravelly sandy clay loam.

The hydrogeologic conditions of the sprayfield area are typical of the Kittitas Valley near the Yakima River; with the hydraulic gradient generally extending from north to south, following the downstream course of the Yakima River. Depth to groundwater below the sprayfield varies seasonally and can be as little as 2 feet, an important consideration in sprayfield management planning.

A Department inspection during November 1991 documented the presence of alternating layers of anaerobic and aerobic soil in augered boreholes. Anaerobic conditions were found to extend down into shallow groundwater. In areas where groundwater was observed to be seeping into surface water (Tjossem Ditch, Blossum Pond, and a backwater of the Yakima River), orange staining of iron bacteria and insoluble iron oxide converted from soluble ferrous iron in the groundwater was observed at several locations. Shallow groundwater concentrations of ferrous iron and manganese exceed State groundwater standards beneath the sprayfield during at least part of each year.

PERMIT STATUS

The current permit for this facility was issued on August 13, 2001. The current permit expires September 30, 2006.

An application for permit renewal was submitted to the Department on October 10, 2005, and accepted by the Department on June 21, 2006.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMITS

The facility was inspected on June 23, 2006.

Due to the demonstrated degradation of ground water beneath the sprayfield, the current permit contained a Schedule of Compliance. On the basis of ground water quality data collected, the permit required TCF to submit an Engineering Report to determine "all known, available and reasonable methods of prevention, control and treatment," or AKART, for the facility's wastewater. The Permittee has fulfilled the Compliance Schedule and the proposed permit will contain limits based upon the approved AKART analysis.

WASTEWATER CHARACTERIZATION

The Department has evaluated the concentrations of pollutants reported in TCF's discharge monitoring reports between October 2001 and October 2005. The minimum, maximum and average concentration or values measured in wastewater discharge samples, sampled prior to land application, is characterized for the following parameters:

Table 1: Wastewater Characterization

Parameter	Minimum	Maximum	Average
5-day Biochemical Oxygen Demand (BOD ₅), in mg/L	480	6,058	3,041
Total Dissolved Solids (TDS), in mg/L	358	3,873	2,294.8
pH, in Standard Units	5.59	7.9	NA
Conductivity, in µohms/cm	382	1,414	1,367.6
Nitrate-Nitrogen (NO ₃ -N), in mg/L	0.02	5.5	0.56
Total Kjeldahl Nitrogen (TKN), in mg/L	20.4	181	80.3
Total Phosphate, in mg/L	4.5	41.6	17.5
Chloride, in mg/L	13.9	1,390	169
Potassium, in mg/L	36.5	227	112
Sulfate, in mg/L	4.2	70.2	23.9

NA-Not applicable

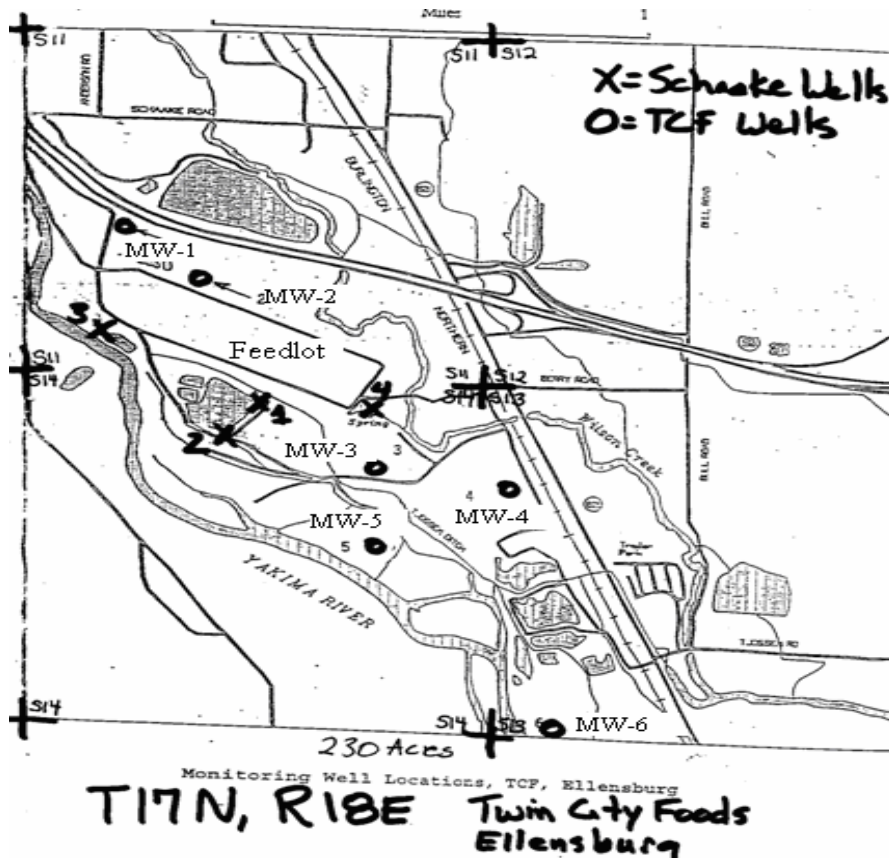
GROUNDWATER CHARACTERIZATION

A characterization of groundwater quality at the sprayfield site was submitted as part of the monitoring requirements for the previous permit. Data from MW-1 reflects background (upgradient) groundwater quality before flowing beneath the sprayfield; data from all other wells reflect groundwater characteristics beneath and downgradient of the sprayfield.

Evidence of impacts to groundwater quality is shown by the concentrations of TDS, Cl, and TKN in downgradient wells, which exceed background concentrations as determined by data from the upgradient well MW-1. Further evidence of wastewater impacts on groundwater quality is the presence of ferrous iron in all wells except the upgradient monitoring well MW-1. MW-2 is the least impacted well. It lies in the northern periphery of the sprayfield with groundwater flowing from the north.

Figure 1 is a map of the sprayfield area with monitoring well locations.

Figure 1: Sprayfield and Monitoring Well Locations



Data collected during the 2000 to 2005 timeframe is presented in time-series diagrams in Figures 2 and 3.

Figure 2 below depicts concentration trends for manganese and iron detected in samples from the six monitoring wells. Monitoring well MW-1 is positioned to sample water that has not been impacted by sprayfield effluent. Water quality data from MW-1 are considered to represent background conditions in the area.

Figure 2: Manganese and Iron Concentrations in Monitoring Wells from 2000 to 2005

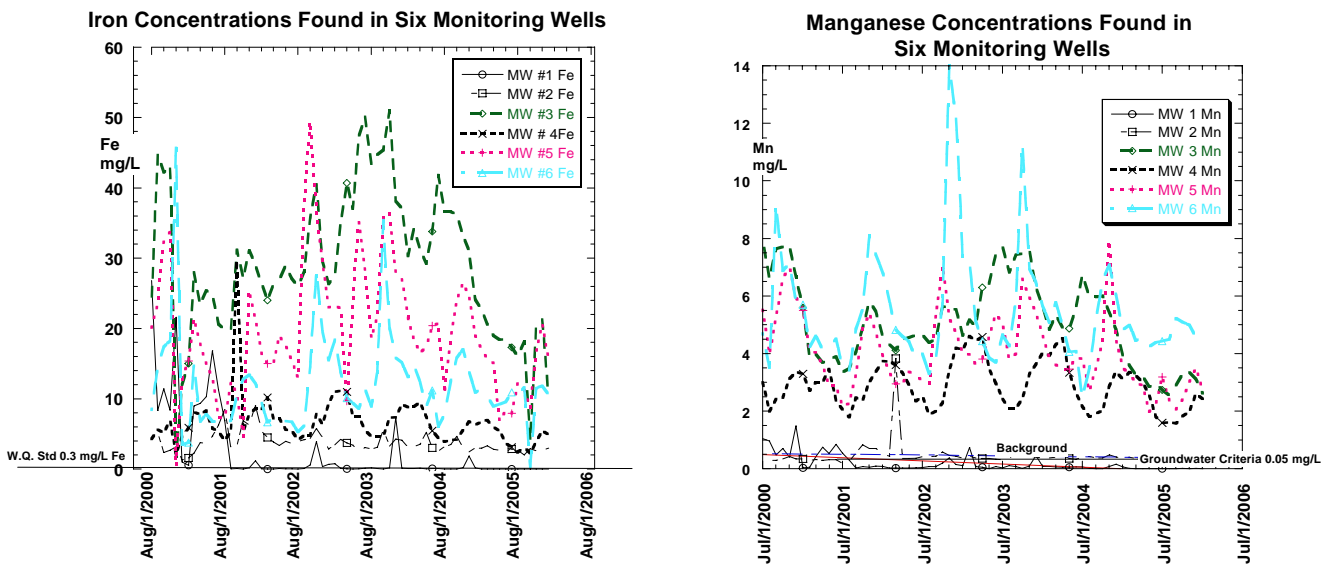
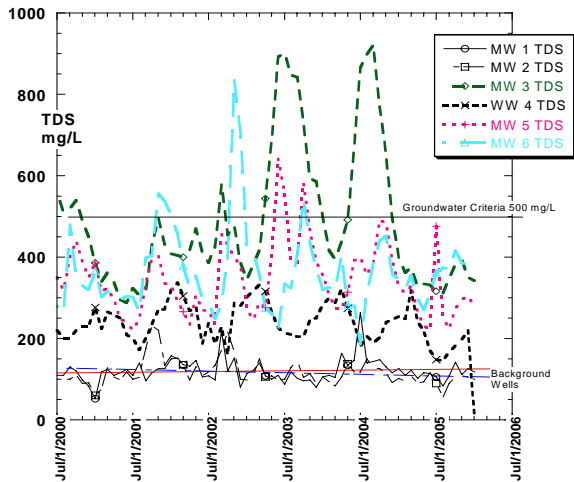


Figure 3 illustrates TDS and Chloride concentration trends found at the six monitoring well locations from July 2000 through October 2005. These trends show evidence of groundwater quality impacts beneath and downgradient of the sprayfield.

Figure 3: TDS and Chloride Concentration in Monitoring Wells from 2000 to 2005

TDS Concentrations Found in Six Monitoring Wells



Chloride Concentrations Found in Six Monitoring Wells

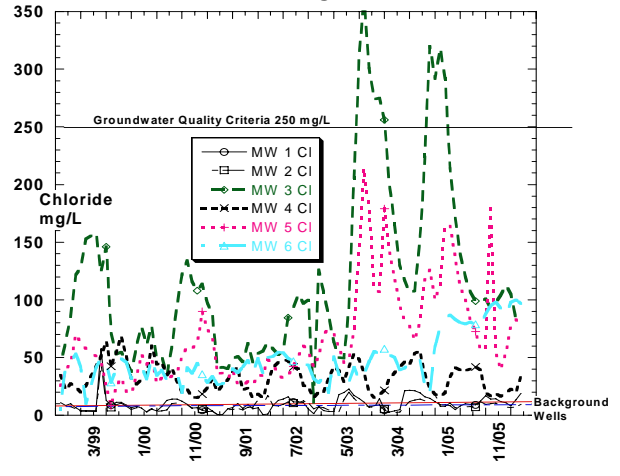


Figure 4 shows the concentration of common cations and alkalinity at each monitoring well location. The data from monitoring wells MW-3 through MW-6 show evidence of groundwater impacts beneath and downgradient of the sprayfield location.

Figure 4: Common Cations and Alkalinity Found in Monitoring Wells from 2000 to 2005

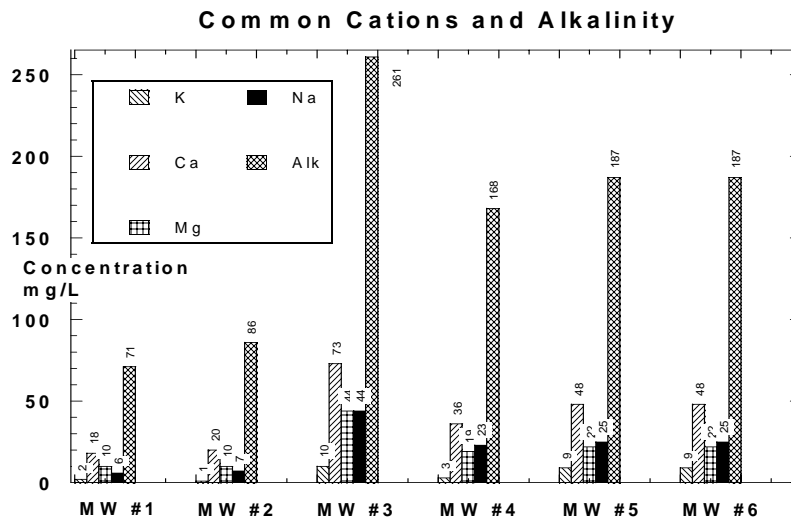
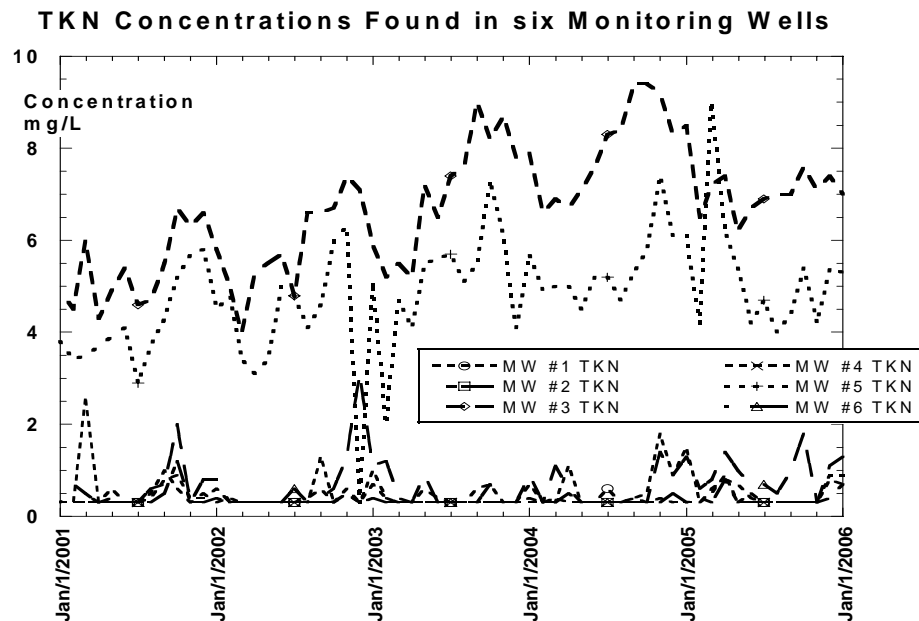


Figure 5 depicts Total Kjeldahl Nitrogen found at the six monitoring well locations. It is not clear what the cause of higher TKN concentrations at MW-3 and MW-5 is except that the wells are downgradient and in close proximity to the site of an abandoned feedlot and primary sewage treatment lagoon.

Figure 5: Kjeldahl Nitrogen Found in Monitoring Well from 2001 to 2005



PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not pollute the waters of the state. The minimum requirements to demonstrate compliance with the AKART standard were determined in the engineering report titled AKART Report and Engineering Addendum Report dated February, 2006, in conformance with *Guidelines for the Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, May 1993.

The permit includes limitations on the quantity and quality of the wastewater applied to the sprayfield that have been determined to be protective of groundwater quality. The approved engineering report includes specific design criteria for this facility. Water quality-based limitations are based upon compliance with the State's Groundwater Quality Standards (Chapter 173-200 WAC).

In addition, during the winter and spring, up to 60,000 gpd of domestic strength wastewater generated during repacking operations is permitted to be discharged to the Ellensburg POTW.

The more stringent of the water quality-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring application of AKART to discharges to waters of the State (WAC 173-216-110). AKART for this facility has been established in the Phase 1 AKART Analysis Engineering Report dated December 2004. The proposed permit requires the Permittee to select one of the alternatives outlined in the report, and to provide the engineering required to implement the selected alternative, and to complete construction of the selected alternative by the end of the proposed permit term.

GROUNDWATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's groundwaters, including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the Groundwater Quality Standards. Drinking water is the beneficial use generally requiring the highest quality of groundwater. Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

The intent of the standards is not to allow degradation of groundwater up to the standards, but rather to protect background water quality to the extent practical. The antidegradation policy mandates the protection of background water quality and prevents degradation of water quality which would harm a beneficial use or violate the Groundwater Quality Standards.

Groundwater monitoring since 2001 indicates the Permittee's discharge does not comply with the state's antidegradation policy. Therefore, the previous permit contained a Schedule of Compliance, which required TCF to prepare an Engineering Report that describes AKART for treating the facility's process wastewater. TCF complied with this requirement by submitting the approvable May 2005 revised Phase 1 AKART Analysis. Based on this analysis, TCF has determined that land treatment is the best option. The report developed design criteria which will allow operation of the sprayfield as a sustainable land treatment system that will not further degrade groundwater quality. (See the SCHEDULE OF COMPLIANCE section of this fact sheet for further information concerning the implementation of the report's recommendations.) Discharge to the ground is restricted to 155.1 million gallons beginning in April and lasting through October of each year. The wastewater portion of the hydraulic loading at the sprayfield may not exceed a maximum monthly rate as determined by TCF in the alternative water balance

for 2004 on 150 acres using the Washington State University Public Agricultural Weather System database (PAWS) data (1989-2001) contained in table 2.

Table 2: Gallons of Wastewater Applied to Sprayfield per Month

MONTH	GALLONS per MONTH	MONTH	GALLONS per MONTH
April	20,000,000	August	38,800,000
May	21,800,000	September	29,000,000
June	20,000,000	October	13,000,000
July	12,500,000	TOTAL	155,100,000

Nutrient loading applied to irrigated lands may not exceed requirements as determined by the Permittee's Crop Management Plan.

The Department has approved an interim wastewater application schedule as requested by TCF. Upon installation of the storage lagoon, or at the end of the permit cycle, the final application schedule will constitute the application limitations as contained in table 2 above. The interim schedule borrows 7 million gallons a month from April and adds that to October, when storage volume needs to be increased to allow TCF continued winter operation. The overall volume of wastewater applied to the sprayfields remains unchanged.

Applicable groundwater criteria as defined in RCW 90.48.520 and in Chapter 173-200 WAC for this discharge are provided in Table 3.

Table 3: Groundwater Quality Criteria

Total Coliform Bacteria	1 Colony/ 100 mL
Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Sulfate	250 mg/L
Nitrate	10 mg/L
pH	6.5 to 8.5 standard units
Manganese	0.05 mg/L
Total Iron	0.3 mg/L
Toxics	No toxics in toxic amounts

COMPARISON OF PROPOSED LIMITATIONS WITH THE EXISTING PERMIT

Table 4: Comparison of Previous and New Limits

Existing Parameter Limitation	Existing Limits	Proposed Limits
Maximum Monthly Average Daily Flow Rate	1.8 MGD	As per Table 2
Annual Discharge	NA*	155.1 MG/Annum
Domestic Strength Discharge to POTW	60,000 gpd	60,000 gpd

* NA- means not applicable

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that groundwater criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

WASTEWATER MONITORING

The monitoring schedule is detailed in the proposed permit under Special Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Monitoring for flow, Conductivity, pH, Soluble BOD, Total BOD, Total Kjeldahl Nitrogen (TKN as N), Nitrate (as N), Ammonia (as N), Total Phosphate (as P), Total Dissolved Solids (TDS), Potassium, Chloride, Sulfate (as S) and Sodium is being required to further characterize the effluent. The pollutants listed can have a significant impact on the quality of the groundwater.

Wastewater discharged to the POTW in the off-processing season (November 1 to March 31) will be required to be monitored monthly for Flow, BOD, TSS and Total Residual Chlorine.

SOIL MONITORING

Special Condition S2.C. in the proposed permit requires the Permittee to perform soil monitoring of the irrigated lands at the start of each irrigation season. This provision also describes the location, depth and method to be used for soil sampling. The Department feels that soil sampling at the beginning of the irrigation season is a minimal requirement to determine the characterization of nutrients and salts in the soil column; therefore, the soil monitoring schedule contained in this permit remains unchanged from the previous permit.

CROP MONITORING

The Department is concerned that the phosphate and nitrogen budget created by additions to the soil through wastewater application and the phosphate and nitrogen removal by crops grown on the sprayfield has been inadequately described. To protect groundwater quality and the quality of surface water in the Yakima River, a crop management plan must ensure that nutrient loading in the soil does not occur. The permit will require the Permittee to monitor crop yield so that each harvest from each individual field is expressed in tons and that each field's harvest is analyzed for total nitrogen and total phosphorous. The data collected is required to be summarized in TCF's Annual Crop Yield and Nutrient Balance Report.

GROUNDWATER MONITORING

Groundwater monitoring at the site is required by the Groundwater Quality Standards, Chapter 173-200 WAC. The Department has determined that this discharge has adversely impacted groundwater quality. Therefore the Permittee is required to evaluate the nature and extent of the impacts on groundwater quality in the sprayfield area.

The groundwater monitoring requirements (i.e., location, frequency and analytes) are changed from the previous permit. Monitoring well, MW-2, is located on land that is no longer used by TCF and no longer under its control. The Bureau of Reclamation now controls the 80 acre site on which TCF maintained a sprayfield; therefore, TCF will not be required to monitor at the MW-2 location during the proposed permit term.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110).

IRRIGATION AND CROP MANAGEMENT PLANS

The irrigation and crop management plan is required to support the engineering report and operations and maintenance manual. An Annual Crop Yield and Nutrient Balance Report is required to assure that wastewater applications are applied at agronomic rates. The report will describe and evaluate various irrigation controls, evaluate the nutrient balance between wastewater loading and crop uptake, and make recommendations for the next crop cycle to assure nutrients are not impacting the groundwater quality.

OPERATIONS AND MAINTENANCE

This permit contains Special Condition S5. as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

The Permittee is required to review the plan annually and update the plan as needed. The Permittee is required to submit the updated plan to the Department.

SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate generated in solid waste from facility operations.

The proposed permit requires, under the authority of RCW 90.48.080 that the Permittee update and submit it to the Department. The solid waste plan is designed to prevent pollution of the waters of the state from this potential source.

SPILL AND SLUG DISCHARGE PREVENTION AND CONTROL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to disrupt the wastewater treatment system or degrade the environment if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a) (1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

This permit requires the Permittee update the Spill and Slug Discharge Prevention and Control Plan, as needed, and review the plan annually.

SCHEDULE OF COMPLIANCE

This permit contains a schedule of compliance, which requires the Permittee to submit an engineering report and schedule of construction leading to a completed wastewater treatment sprayfield configuration in keeping with one of the AKART scenarios as outlined in the previously approved May 2005 AKART analysis. The schedule of compliance is contained in Table 5.

Table 5: Schedule of Compliance

Year Required	Action Required
October 1, 2007	Update on the Sprayfield Project
October 1, 2008	Update on the Sprayfield Project
October 1, 2009	Update on the Sprayfield Project
April 1, 2010	Draft Engineering Report
October 1, 2010	Approvable Engineering Report with Construction Schedule
Date permit expires 2011	Project Completion Letter

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to groundwater permits issued by the Department.

Condition G1. requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2. requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3. specifies conditions for modifying, suspending or terminating the permit. Condition G4. requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5. requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6. prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7. and G8. relate to permit renewal and transfer. Condition G9. requires the payment of permit fees. Condition G10. describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the State of Washington. The Department proposes that the permit be issued for 5 years.

REFERENCES FOR TEXT AND APPENDICES

Faulkner, S.P., Patrick Jr., W.H., Gambrell, R.P., May-June, 1989. *Field Techniques for Measuring Wetland Soil Parameters*, Soil Science Society of America Journal, Vol. 53, No.3.

Raforth, R. Re: Comments on Draft Engineering Report on Land Application of Food Processing Wastewaters, Twin City Foods, Ellensburg, Washington. Washington State Department of Ecology letter, dated June 5, 2000.

Raforth, R. Re: Comments on the Proposed Operations and Maintenance Manual for Twin City Foods, Ellensburg Facility. Washington State Department of Ecology letter, dated May 12, 1998.

Skrinde, R. Re: Dirt Settling Pond, Ellensburg Facility. Twin City Foods letter, dated April 14, 2000.

Skrinde, R. Re: Dirt Sedimentation Pond at TCF Ellensburg Facility. Twin City Foods letter, dated May 8, 1999.

Skrinde, R. Re: Request for Extension of Dates for Permit Report Submittals, Permit Number ST-5507, Twin City Foods at Ellensburg. Twin City Foods letter, dated May 21, 1997. Washington State Department of Ecology, 1993. *Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems*, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology, 1996. *Implementation Guidance for the Groundwater Quality Standards*, Ecology Publication # 96-02.

Washington State University, November, 1981. *Laboratory Procedures - Soil Testing Laboratory*. 38 pp.

APPENDIX A --PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on June 21, 2005 in the Yakima Herald Republic and the Ellensburg Daily Record to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on November 3, 2006 in the Ellensburg Daily Record to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the 30 day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least 30 days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within 30 days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 509/457-7105, or by writing to the address listed above.

This permit was written by Richard A. Marcley.

APPENDIX B -- GLOSSARY

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be “time-composite”(collected at constant time intervals) or “flow-proportional” (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over a short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference— A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge

regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through— A discharge which exits the POTW into waters of the-State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

- a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
- b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills

and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

*FACT SHEET FOR
STATE PERMIT NO. ST-5507
Page 28 of 28*

*TWIN CITY FOODS,
ELLENSBURG FACILITY
EXPIRATION DATE: JANUARY 31, 2012*

APPENDIX C -- RESPONSE TO COMMENTS

No comments were received by the Department of Ecology.