



California Regional Water Quality Control Board Central Valley Region

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28 June 2006

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NOTICE OF ADOPTION RESOLUTION REGARDING REUSE OF FOOD PROCESSING BYPRODUCTS

Resolution No. R5-2006-0052 was adopted by the California Regional Water Quality Control Board, Central Valley Region at its 22 June 2006 meeting. Please note that the Resolution contains a timetable for submitting technical reports. The first due date is **1 August 2006**, when the County shall submit a workplan describing the literature review and any needed study.

Immediately prior to the Regional Board meeting, the County and Board staff came to an agreement on an enhanced monitoring program for the by-products and soils at the land application areas. A copy of the enhanced monitoring program is also enclosed.

In order to conserve paper and reduce mailing costs, a paper copy of the Resolution and monitoring program has been sent only to Stanislaus County. Interested parties are advised that the full text of this Resolution and monitoring program will be available on the Regional Board's web site at http://www.swrcb.ca.gov/rwqcb5/adopted_orders. Anyone without access to the Internet who needs a paper copy of the documents can obtain one by calling Regional Board staff.

If you have any questions regarding the Resolution or monitoring program, please contact me at (916) 464-48356 or by email at wwyels@waterboards.ca.gov.

- Original Signed by Mark List for -

WENDY WYELS, Supervisor
Title 27 and Waste Discharge to Land Section

Enclosures: Resolution No. R5-2006-0052, Monitoring Program

cc w/o enc: see second page

California Environmental Protection Agency

cc w/o enc: Gordon Innes, Division of Water Quality, State Water Board, Sacramento
Daniel Merkley, Division of Water Quality, State Water Board, Sacramento
Terry Brennan, Calif Integrated Waste Management Board, Sacramento
Rob Neenan, California League of Food Processors, Sacramento
Kerri O'Neal, DeltaKeeper, Stockton
Bill Jennings, CSPA, Stockton
Bill Lyons, Mape's Ranch and Lyons' Investments, Modesto
Tim Ruby, Del Monte Foods, Modesto
Martin Reyes, Food Processing By-Products Committee, Winton
Jan Marie Ennenga, Manufacturers Council of the Central Valley, Modesto
Rick Vargas, Stanislaus Foods, Modesto

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2006-0052

REGARDING THE REUSE OF FOOD PROCESSING BY-PRODUCTS
WITHIN STANISLAUS COUNTY

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. In 1978, Stanislaus County established a voluntary Food Processing By-Products Use Program (hereafter "Program") to divert solid and semi-solid food processing by-products from county landfills. Under the Program, the County permits food processors (both within and outside the County) to transport food processing by-products for use in land application, direct animal feed, dehydration, and composting operations. Under current State landfill regulations, the majority of the diverted food processing by-products is too wet to be accepted at landfills.
2. The types of solid and semi-solid food processing by-products historically included in the Program include rejected fruit and vegetable products, solids screened from food processing wastewater, wastewater, and nutrient- and organic-rich sediment generated from the recycling of water in food processing flume conveyance systems.
3. Stanislaus County and its permit holders (i.e., the entities accepting the by-products) state that solid and semi-solid food processing by-product is a valuable commodity which improves soil and nourishes animals; the diversion of such by-products from landfills is of public benefit; and the regulated operations are environmentally sound.
4. Stanislaus County Department of Environmental Resources' program criteria is set forth in the "*Stanislaus County Food Processing By-Products Use Program, May 2006*," (found as Attachment A, which is attached hereto and made part of this Resolution by reference). Any entity wishing authorization to accept solid or semi-solid food processing by-products must submit a permit application containing a detailed plan of operation and allow the County to make inspections and to take any necessary enforcement actions.
5. The County requires that its permit holders submit a performance bond for clean-up and remediation at the permitted site and reimburse the County for all costs incurred for permit administration, including, but not limited to, processing the permit application, enforcing the permit terms, and some monitoring of the permitted activity at the permit location. Annual reports must be submitted at the end of each food processing season.
6. The Program allows food processing by-products to be discharged at four types of sites, and contains specific conditions for each of these re-use operations, as summarized below:
 - a. For *land application operations*: the land must be cropped; the by-products must be applied in a manner that precludes the potential for nuisance odors and vectors; the by-product must be applied at agronomic rates established by a Certified Professional Soil Scientist, a Certified Professional Agronomist, or a Certified Crop Advisor; the by-products must be analyzed for selected constituents; and the soil in the land application areas must be analyzed prior to discharge.

REGARDING THE FOR THE REUSE OF SOLID FOOD PROCESSING BY-PRODUCTS
WITHIN STANISLAUS COUNTY

- b. For *direct (animal) feed operations*: the by-products must be delivered to a cement or asphalt pad; the by-products shall not be fed to animals on open ground; and the volume of by-products delivered shall not exceed that which will be fed or processed within 24 hours of delivery to the site.
 - c. For *dehydration and composting operations*: the by-product shall be delivered to a cement, asphalt, or compacted soil pad and shall be processed within 24 hours.
7. The activities described in this Resolution result in the discharge of waste, as defined in California Water Code (CWC) section 13050. Pursuant to the CWC and implementing regulations, (a) liquid, solid, and gaseous waste substances from a food producing or processing operation are “waste,” (b) an element or compound reasonably expected to be in or derived from such waste is a “waste constituent,” and (c) a waste transformed under natural conditions through biological and chemical processes into waste constituents that will not impair groundwaters is “decomposable waste.”
8. Pursuant to CWC Section 13050, substances from food producing or processing operations referred to in the Program as “food processing by-products” that are comprised of and yields decomposable waste and waste constituents are considered waste that is subject to regulation under the CWC. For purposes of this Resolution these wastes will be referred to as “food processing by-products”.
9. Regional Board staff has reviewed the Program in relation to prevention of water quality impacts and nuisance conditions. In summary:
 - a. For *land application operations*, the Program is adequate as currently implemented to prevent creation of nuisance conditions and to prevent impacts to surface water. In addition, nitrogen loading rates appear protective of water quality. However, a literature review (and possibly additional study) is needed to determine the appropriate regulatory approach, requirements, and best management practices necessary to ensure that the Program is adequate to control, protect and monitor the application of food processing by-products to land to ensure the protection of water quality and the environment. The following issues need to be reviewed, studied, and assessed:
 - (1) Determine an adequate monitoring program for the by-products, soil and groundwater, considering site and by-product characteristics and conditions.
 - (2) Evaluate and determine the actual or potential water quality impacts that (a) high strength and (b) low pH food processing by-products may have in land application practices. Develop proper controls, management measures and prohibitions (given site and waste characteristics and conditions) to address these types of food processing by-products applied to land.

- (3) Determine the percentage of total dissolved solids (TDS) in food processing by-products that is present as volatile dissolved solids (VDS), and how much of this VDS will degrade within the soil profile.
 - (4) Evaluate the actual or potential impacts to groundwater of food processing by-products with a high moisture content that is applied to land prior to the planting of crops.
 - (5) Evaluate the actual or potential impacts to groundwater caused by on-site storage of food processing by-products during rain events. Develop proper controls, management measures and prohibitions given site and waste characteristics to ensure storage of food processing by-products is done in a manner that is protective of groundwater quality.
 - (6) Identify site and waste characteristics and conditions that would prohibit the application of food processing by-products to land, and
 - (7) Establish requirements that prohibit the discharge of liquid wastes to land under the County's program.
- b. For *direct (animal) feed operations*, the Program is adequate as currently implemented to prevent nuisance conditions and adverse impacts to waters of the State.
 - c. For *dehydration and composting operations*, the Program is not adequate to prevent nuisance conditions and adverse impacts to waters of the State with respect to leachate and storm water impacts, and because such facilities have multiple water quality issues, they are more appropriately regulated under either individual or general WDRs. Stanislaus County has agreed that it is appropriate for the Regional Board to regulate these sites outside the scope of this resolution.
10. While the land application of food processing byproducts has great benefit in reducing the amount of material taken to landfills and in enhancing soil structure, there is a possibility that certain aspects may threaten groundwater quality. Stanislaus County has proposed that a literature review, and subsequent study if necessary, be completed to determine (a) the impacts to groundwater from the land application of solid and semi-solid food processing by-products and (b) safeguards to protect water quality from such a discharge. It is appropriate to allow Stanislaus County to continue its Program while additional data is collected, subject to the conditions listed in this Resolution. The literature review and any needed study will be designed to provide information with respect to the effects or threatened effects of food processing by-products on waters of the state and to help determine the appropriate regulatory mechanism for the discharge of food processing by-products on a County-wide or possibly Region-wide basis. This Resolution does not waive WDRs nor delegate responsibility to the County. Instead, it postpones Regional Board action pending outcome of the literature review and any necessary study.

11. Pursuant to CWC section 13225, the Regional Board may require any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water. This Resolution requires Stanislaus County to undertake a literature review (and subsequent study if necessary) to determine any impacts of food processing by-products on groundwater quality, and best management practices to protect water quality. CWC section 13325 also authorizes the Regional Board to request enforcement by appropriate federal, state and local agencies of their respective water quality control laws. This Resolution requires Stanislaus County to adopt an Ordinance or other legal mechanism to fully implement and enforce the Program. This Resolution does not delegate the Regional Board's authority to Stanislaus County, as such delegation is not authorized by the Water Code. This Resolution sets forth tasks that should provide information to support adoption of a Regional Board regulatory program that could include waste discharge requirements (WDRs) or a waiver of WDRs.
12. This Resolution does not limit the authority of the Regional Board to enforce CWC Division 7 or other applicable laws. This Resolution does not constitute WDRs or a waiver of WDRs. This Resolution does not authorize or approve the Program. This Resolution requires the County to undertake a literature review, and a subsequent study if necessary, to address the issues described in Finding No. 9.a. The Regional Board retains its authority to issue WDRs, waive WDRs, and take enforcement action as appropriate. Pursuant to CWC Section 13263(g), discharge is a privilege, not a right, and adoption of this resolution does not create a vested right to continue any discharge that occurs under the Program.
13. Known operators and other interested parties and persons were notified of the intent to adopt a resolution regarding the Stanislaus County Program and were provided an opportunity to submit written comments and for a public meeting.
14. A public meeting was held on 22 June 2006 in Rancho Cordova, California to consider comments concerning this matter.

THEREFORE, BE IT RESOLVED that:

1. Stanislaus County shall continue to implement, inspect, monitor, and enforce its *Stanislaus County Food Processing By-Products Use Program, May 2006* or subsequent revisions thereto;
2. According to the following schedule, Stanislaus County shall oversee a literature review (and if necessary, a study) to determine the impacts of food processing by-products on groundwater quality, and to specifically address the issues listed in Finding No. 9.a. The study team and researchers shall regularly consult with staff of the Department of Food and Agriculture, California Integrated Waste Management Board, and Regional Board.
 - a. By **1 August 2006**, Stanislaus County shall submit a workplan to the Executive Officer describing in detail the work to be completed, any additional soil or by-product monitoring to be completed, the name of the principal investigators and researchers, and the funding

source(s). At a minimum, the workplan shall include:

- A literature review;
 - A technical review of the Stanislaus County Program and existing locally generated data;
 - An assessment of the current local legal authority of Stanislaus County to adequately implement and enforce its program; and
 - Development of a field-ready Manual of Best Practices that includes management methods, waste prevention, and waste minimization actions that will minimize potential water quality impacts at by-product land application sites, including but not limited to: (a) a reduction of the salinity and water content of the food processing by-products applied to land and (b) an increase in the pH of the food processing by-products applied to land.
- b. By **1 January 2007**, Stanislaus County shall submit the results of the literature review.
- c. By **1 April 2007**, Stanislaus County shall submit a review of existing data, including that data collected at County-permitted land application sites from the years 2000 through 2006.
- d. By **1 July 2007**, Stanislaus County shall submit a final report to the Executive Officer. The report shall include the results of all work described in No. 2.a (above), as well as any proposed changes to the Stanislaus County Program to fully protect surface and groundwater quality.
- e. By **1 January 2008**, Stanislaus County shall adopt an Ordinance or other legal mechanism that provides for implementation and enforcement of the Program
- f. Stanislaus County shall submit quarterly progress reports suitable for inclusion in the Executive Officer's report section of the Regional Board agenda (due by 30 September 2006, 30 December 2006, and 30 March 2007).
- g. Stanislaus County shall schedule meetings as necessary to apprise the Executive Officer and staff as to the progress of the work described in Section 2.a (above).

BE IT FURTHER RESOLVED that it is the intent of the Regional Board that the outcome of the study will support the adoption of an appropriate regulatory mechanism (i.e., a waiver of WDRs or similar instrument) for the land discharge of food processing by-products prior to the spring of 2008.

AND BE IT FURTHER RESOLVED that this Resolution does not create a vested right to discharge waste and the Regional Board may modify or terminate this Resolution at any time. Nothing in this Resolution limits the authority of the Regional Board to enforce CWC Division 7 or other applicable laws.

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REGARDING THE FOR THE REUSE OF SOLID FOOD PROCESSING BY-PRODUCTS
WITHIN STANISLAUS COUNTY

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I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 22 June 2006.

Original Signed by
PAMELA C. CREEDON, Executive Officer

Related Documents:

- Attachment A: Stanislaus County Food Processing By-Products Use Program, May 2006

WSW: 6 July 2006

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

AGREEMENT FOR MONITORING AND REPORTING OF
SOLID AND SEMI-SOLID FOOD PROCESSING BY-PRODUCTS APPLIED
UNDER THE STANISLAUS COUNTY PROGRAM

This Monitoring and Reporting Program (MRP) describes the agreement reached between Stanislaus County and Regional Board staff regarding monitoring and reporting for the solid and semi-solid food processing by-products discharged under the Stanislaus County "Food Processing By-products Use Program" (hereafter County Program) and the sites to which the by-products are applied.

Monitoring shall be conducted by either Stanislaus County or by the permittees in the County Program. If conducted by the permittees, then Stanislaus County shall oversee the monitoring and reporting requirements. Stanislaus County shall be responsible for submitting the annual report.

All laboratory results shall be reported to the method detection limit (MDL). Non-detected results shall be reported as less than the MDL (<MDL). Results above the MDL, but below the concentration of the lowest calibration standard for multipoint calibration methods or below the reporting limit for other methods, shall be flagged as estimated.

Analytical procedures shall comply with the methods and holding times specified (and all updated versions thereafter) in: *Methods for Chemical Analysis of Water and By-products* (EPA-600/4-79-020, 1983); *Methods for Determination of Inorganic Substance in Environmental Samples* (EPA/600/R-93/100, 1993); *Standard Methods for the Examination of Water and By-productwater, 20th Edition* (WEF, APHA, AWWA); *Soil, Plant and Water Reference Methods for the Western Region, 2003, 2nd Edition, 2003* (hereafter Western Region Methods) and *Test Methods for the Examination of Composting and Compost*.

DIRECT ANIMAL FEED OPERATIONS

Daily records shall be kept detailing the name of each facility permitted under the County Program, the type and amount of food processing by-product delivered, the hauler, the source of the by-product, and the type of receiving pad to which by-product is delivered.

LAND APPLICATION OPERATIONS

The remainder of this Monitoring and Reporting Program applies to sites at which solid and semi-solid food processing by-product is applied to cropland.

A. BY-PRODUCT CONSTITUENT MONITORING

Samples shall be collected from the food processing by-products delivered to each site, and shall be monitored for the following parameters: moisture, total nitrogen, organic carbon, total dissolved solids, sodium, chloride, sulfate, potassium, calcium, magnesium, phosphorus, and metals (i.e., arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc). Results shall be reported on both a wet weight and dry weight basis. Each sample shall be a composite of a number of samples collected from the same load. Samples shall be collected from at least 2% of all loads taken to a site, and the sampling program shall ensure that each by-product source/type is represented. Results shall be reported for each site and for each source of food processing by-product.

Alternatively, Stanislaus County may submit a *Solid Food Processing By-Product Characterization Report* containing a compilation of analytical data collected during the previous 15 years for by-products applied to permitted land application sites. The data shall be sorted by type of food processing by-product (i.e., tomatoes, olives, peaches, etc.). If the data shows that certain constituent concentrations are relatively constant for a particular by-product stream, then the County may request a reduced sampling program for that type of by-product and that constituent(s). Until this report is submitted and approved by the Executive Officer, the by-product constituent monitoring described in the first paragraph shall be implemented.

B. LAND APPLICATION AREA MONITORING

Each entity permitted by Stanislaus County shall maintain a daily log and record in the log, at a minimum, the following information:

- (a) date and time of each delivery of the by-product,
- (b) name of the hauler,
- (c) amount (by weight) delivered,
- (d) source (generator) of the by-product,
- (e) type or category of by-product, and
- (f) whether the by-product came directly from the generator or was first taken to a transfer station.

For each field receiving by-product, the following information shall be monitored and recorded:

- (a) starting and ending dates of irrigation and hydraulic loading (in/month),
- (b) number of acres where the by-product was applied,
- (c) dry and wet tons of by-product applied,
- (d) nitrogen loading derived from byproduct applications (lbs/acre/month),
- (e) nitrogen loading derived from fertilizer (lbs/acre/month),
- (f) yearly cumulative nitrogen loading (lbs/acre/month) from by-products and commercial fertilizers (starting in January),
- (g) yearly cumulative TDS loading (lbs/acre/month),

- (h) type(s) of crops grown, dates of planting and harvest, tons of crop removed per acre, and
- (i) tons of nitrogen removed by crop in tons/acre/year (based on standard nitrogen uptake as provided in a recognized reference).

C. SOIL MONITORING

Soil collection method and soil sampling depths shall be in accordance with the County's Program. Each permitted Land Application operation shall establish representative background soil sample locations to characterize the quality of soil that has not been, and will not be, utilized for land application of solid food processing by-product. In addition, the soil in each field receiving by-products shall be sampled pre- and post-application.

Background soil samples, pre-application soil samples, and post-application soil samples shall be analyzed annually for the following: cation exchange capacity, buffer pH, salinity, plant nutrients, and total organic carbon. Plant nutrients must include total nitrogen, nitrate-nitrogen, ammonium-nitrogen, available phosphorus (Olsen), potassium, magnesium, and calcium. Saturation paste samples shall be analyzed for pH, soluble salts (electrical conductivity), calcium, magnesium, chloride, sodium, and sodium adsorption ratio.

REPORTING

The data shall be arranged in tabular form so that the date, sample type (e.g., soil), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate spatial or temporal trends, as applicable.

A. ANNUAL REPORT

By 1 April of each year, the County shall submit a comprehensive annual report, which shall include:

1. A tabulation of the information listed in the "Direct Animal Feed Operations" section.
2. A tabulation and discussion of the results of the By-product Constituent Monitoring, Land Application Area Monitoring, and Soils Monitoring.
3. A list of sites, owner, and operator contact information for all animal feed and land application sites authorized to operate under the Program the previous calendar year, or a list of deletions and additions keyed to a previously submitted list. The County shall provide a brief explanation for each deletion.
4. A summary of the inspection and/or sampling activities conducted by the County to evaluate compliance of each permittee with the County Program. The summary shall identify enforcement actions (e.g., citation, warning letter, permit rescission, etc.) issued to each permittee as a result of noncompliance or threatened noncompliance and their effect.

5. A copy of each permittee's annual report submitted to the County for the previous calendar year.
6. A discussion of any data gaps or potential deficiencies/redundancies in the monitoring system or reporting program.
7. A description of any proposed significant changes in operating the County's Program. Significant changes include, but are not limited to, changes concerning: the Program's administrative structure, local discharge limitations or conditions, monitoring program or monitoring frequencies, legal authority or enforcement policy, funding mechanisms, resource requirements, or staffing levels.

A letter transmitting the self-monitoring reports shall accompany each report. The transmittal letter shall contain a statement by the Director of the Department of Environmental Resources, Stanislaus County, or the Director's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete. The Director shall sign the annual report with the following certification, whether written or implied:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Alternatively, Stanislaus County may require that each permitted entity submit their annual report with the above certification. In that case, the Director of the Department of Environmental Resources shall not be required to provide the certification.

The County shall implement this agreement as of **1 July 2006**.

Stanislaus County

Food Processing By-Products Use Program

Land Application
Direct Feed
Dehydration
Composting

Prepared by
Department of
Environmental Resources

May 2006

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Welcome to Stanislaus County, we appreciate your contacting the Department of Environmental

Resources (DER or Department) to explore your interest in the land application, direct feed, composting and/or dehydration of food processing by-products. The DER has prepared this comprehensive guide to our program so you will understand what is expected of our applicants. Should you have questions that are not answered here, please contact our office at 525-6700 and ask for the solid By-Product unit.

A permit from the DER is required for any operator wanting to apply food-processing by-products to land, direct feed, composting and/or drying. A Plan of Operation, a performance bond, proof of required insurance coverage, and annual regular inspections by DER staff are also required.

The planned use of the by-products may trigger the CEQA environmental review process. The DER, as lead agency, will prepare an initial study based on information provided by the Applicant. The DER will determine whether the project may cause significant environmental impacts, and adopt the appropriate level of mitigation, if any.

Definitions:

Food processor: A processor of fruit, nut or vegetable raw products which may include but are not limited to tomato, peaches, almonds, walnuts, pears, grapes, raw olives, grain products or other raw plant material, i.e., canneries, nut processors, vegetable processors, frozen food processing, etc.

By-product: Food processing by-products are solid or semisolid substances derived from agricultural plant material delivered to a food processor for processing that are not utilized in the final product. Food processing by-products include but are not limited to culls, peelings, seeds, under or over ripe food, skins, cores, pomace, puree, hulls, shells, pits, stems, leaves and any substance including soil washed from plant produce.

Permit:

The permit application is the first step in being authorized to apply food processing by-products to land, direct feed, composting or dehydration in Stanislaus County. You are required to identify the proposed site and all the persons involved in the operation. The initial application fee, annually thereafter, is based on a weighted labor rate for staff time associated with the processing of your application, administering the program and enforcing the program will be billed to you by the Accounting unit.

- Permit approval process: The Department may grant a permit for food processing by-products use, upon application therefore whenever in the opinion of the Department the granting of such permit is in the public interest and welfare and in compliance with all applicable local, State and Federal regulations including any CEQA or other environmental reviews required by law.

- Permit appeal process: Should DER deny the permit application, an Applicant may appeal to the Board of Supervisors. Such appeal must be in writing and must be received by the clerk of the Board not more than fifteen days after denial of the permit. Appeals filed shall be accompanied with a fee in an amount set by resolution of the Board. The hearing on such appeals shall be after notice of the time thereof has been mailed to appellant at least seven days before the hearing. Any appeal not accompanied by the required fee within the fifteen-day period described above shall be deemed untimely. (Stanislaus County Refuse Ordinance 9.12.080)
- Permit renewal process: Permits may be renewed upon expiration thereof provided the department finds that the permit holder is capable of continuing operation in conformity with the provisions of the Stanislaus County Refuse Ordinance and the rules and regulations of DER.

Fees:

The permit holder shall reimburse the Department for all costs incurred by it in administering this permit, including, but not limited to, processing the permit application, enforcing the permit terms, and monitoring permitted activity at the permit location. The Department shall issue an invoice itemizing all costs incurred by the Department and the permit holder shall remit payment as shown in invoice within 30 days of the invoice date. All costs will be based on the current weighted labor rates of the appropriate Department Staff member. A late payment charge equal to 1.5 percent of the unpaid invoice amount shall accrue and shall be added to the total amount each month that an invoice payment is past due.

Sampling/Testing:

The following references (and all updated versions thereafter) may be used for methods analyses made pursuant to this: Soil, Plant and Water Reference Methods for the Western Region, 2003, 2nd Edition, 2003 and Test Methods for the Examination of Composting and Compost. 2002.

The Laboratory performing the analysis shall be certified by the California Department of Health Services in its Environmental Laboratory Accreditation Program and participate in the North American Proficiency Testing Program.

Agronomic rates shall be established by a Certified Professional Soil Scientist certified by the SSSA Certification Board (formerly known as ARCPACS), a Certified Professional Agronomist (CPAg) certified by the American Society of Agronomy (ASA) Certification Board, (formerly known as ARCPACS) or a Certified Crop Advisor certified by the California Certified Crop Advisor Board.

Performance Bond:

To further ensure compliance with program requirements, the permit holder shall submit a cash bond, certificate of deposit, irrevocable letter of credit, or a faithful performance bond in favor of the DER, in an amount equal to 125 percent of the estimated cost (as determined by the DER) for clean-up and remediation at the permit location. This shall occur at or before the time the permit is issued. If submitting a faithful performance bond, the applicant will be required to complete a performance bond form. For more information regarding this requirement, please contact the DER.

Insurance:

Provide a certificate of current insurance on all hauling vehicles: \$1,000,000 GL, & \$100,000 PD, minimum coverage extending through the permit period. Vehicle license numbers shall be indicated on the forms.

Site Inspections:

The DER will inspect the site(s) prior to issuing a permit to assure that requirements listed below are met. During the period when applications occur and for 24 days following the end of a season or termination of the program the DER will inspect the site(s) to assure that the permittee is adhering to conditions of the permit and Plan of Operation. Inspections will occur weekly or at other frequencies determined by the DER.

Vehicle Inspections & Hauler Requirements:

The DER must perform an annual inspection of vehicles collecting and/or transporting food processing by-products, and an identification sticker will be issued and shall be displayed on each vehicle. Prior to the beginning of the season, please contact the DER for inspection appointments. The following are checked during each inspection: leakproof beds/bodies, load covering, current vehicle registration, broom and shovel, fire extinguisher, operable brake lights and turn signals. At the time of inspection applicant must provide proof of certification/documentation that the hauler complies with the California Department of Business, Transportation and Housing B.I.T. Program, and that all drivers have a Class A License with prior endorsements from the Department of Motor Vehicles and the California Department of Transportation.

ALL APPLICANTS SHALL SUBMIT A “PLAN OF OPERATION”

In order for your Application and Plan of Operation to be considered COMPLETE, please answer all applicable questions on the following pages and provide all applicable information.

It may be necessary for you to provide additional information and/or meet with DER staff to discuss the application. Pre-application meetings are not required, but are highly recommended. An incomplete application will be placed on hold until all necessary information is provided to the satisfaction of the DER. An application will not be accepted or approved without all of the information identified being provided.

1. List the owner of the site. If different from the permit applicant, list the property owner's name, mailing address and phone number. If the parcel is under a different ownership, the project applicant must provide a notarized letter from the owner that states that applicant has the owner's consent to conduct the proposed project on that parcel and that the owner has approved the proposed plan of operation.
2. List the address and the assessor's parcel number(s) of the site.
3. List the general plan and zoning designation of the site.
4. List the current use of the site.
5. List the soil types of the project site. List their approximate absorption/water holding capacities.
6. List the approximate depth to groundwater at the site. State how the depth was determined, and the month and year the depth was determined.
7. Provide a vicinity map showing the location of the site and all proposed delivery routes.
8. Provide a plot plan drawn to a legible scale which clearly shows the intended project. The map must contain the following physical data:
 - Sufficient description to define the location, date, north arrow, scale and boundaries; (full width of all public and private road ways bordering the property must be shown);
 - Name and address of recorded owner(s);
 - Name and address of person(s) preparing the map;
 - Acreage to the nearest acre;
 - Location and size of all waterways, drainage courses, pipelines, existing irrigation and drainage facilities, irrigation and drainage patterns, existing or proposed water wells, septic tanks and drainage (leach) fields, sewage lines and structures used in connecting therewith, slope of the land; and
 - Outline of existing buildings and other structures to remain in place within the project area, showing the distance to existing or proposed public and private road ways.

9. Provide an 8½" x 11" reproducible, to scale, legible area map showing specific land uses (crops, houses, buildings, parcel lines and parcel sizes, etc.) for the adjacent two parcels in each direction from the subject property.
10. Provide a list of names, addresses and assessment numbers of all properties located within ¼ mile (1320 feet) and/or two parcels in each direction of applicant's project. Said information must be taken from the latest assessment roll of the subject county. A written notice of the permit application to operate a Food Processing By-Product Use Site will be sent by the applicant to those property owners located within ¼ mile (1320 feet) and/or two parcels in each direction of the subject site. The notice will include a description of your project approved by DER staff. Documentation of the notice must then be submitted to DER staff.
11. Name the site manager, provide a mailing address and list a 24-hour contact phone number.
12. List the types of by-product you plan to accept at the site, and describe how by-product will be ultimately utilized.
13. List the names, addresses, phone numbers and contact persons for the food processing plant(s) that will provide the by-product.
14. List the names, addresses, phone numbers and contact persons of the hauler(s) who will haul the by-product to your site.
15. State how many tons per day of by-product will be delivered to your site. List the total tons for the season.
16. If more than one type of by-product will be delivered, estimate the tons per day of each type of by-product that will be delivered to the site.
17. State how many truckloads per day will be delivered to your site.
18. Give the date that by-product deliveries will start and the date they will stop each season or indicate if you will accept the by-product year-round. Estimate how many days per year the site will accept by-product.
19. List the days of the week, and the approximate times that by-product will be delivered to your site.
20. Explain in a detailed, step-by-step manner, how you will use or process the by-products.
21. Explain in detail, the methodology to be used for tracking, receiving, storing, and depositing by-products. This tracking procedure must include records of when by-

product is received, where it is received, and the location of the by-product when it is used at the site.

22. List the types of the equipment you will use to manage the by-products. Indicate if that equipment is under your ownership. List stand-by equipment available in case of equipment breakdown.
23. Explain in detail how you will prevent the following conditions from occurring, and provide contingency plans in the event these conditions occur:
 - Excessive liquid accumulation and excess moisture.
 - Excessive dust.
 - Excessive noise.
 - Excessive objectionable odors.
 - Excessive fly, mosquito and/or vector nuisance.
 - Inclement weather.
24. Describe how the by-products will be contained on the site and not allowed to flow or otherwise be deposited on other surrounding properties or waterways.
25. Applicant shall provide DER staff with written verification from the food processing by-product processor, that all by-products deposited on permitted sites in Stanislaus County will not pose a risk to land, air, water, to human and animal health or the environment and that utilization of the by-product as direct feed or as a soil amendment is an acceptable use of said by-product.
26. Where applicable, the site operator shall demonstrate compliance with the Central Valley Regional Water Quality Control Board's Irrigated Lands Conditional Waiver Program (Resolution No. R5-2003-0105)

GENERAL PERMIT TERMS AND CONDITIONS

All operations (land application, direct feed, composting and/or dehydration) shall comply with the following terms and conditions:

1. Only the types and amounts of food processing by-product listed in the permit application and plan of operations may be received and used at the permit location.

2. The permit holder is prohibited from receiving milk, whey, cheese by-products, meat and animal by-products, including dead animals, as well as fruit and vegetable by products that, because of processing, contain high concentrations of agriculturally and environmentally deleterious salts or constituents that have no agronomic benefit.
3. The total amount of by-product delivered to the permit location shall not exceed the amounts stated in the approved plan of operation.
4. The permit holder shall maintain a daily log approved by the DER which shall contain the following information: (a) date and time of each delivery of material, (b) name of the hauler of the material, (c) amount (by weight) delivered, (d) source of material, and (e) type of material. All daily logs shall be submitted annually to the DER and shall be made available to the DER for review and inspection upon reasonable request of the DER.
5. Written procedures acceptable to DER shall be developed whereby food processing by-product trucks are directed to the correct discharge lanes/areas during all delivery times. These procedures shall be implemented whenever the site receives food processing by-products.
6. The site shall be operated and managed at all times so that no excessive objectionable food processing by-product odors migrate off-site, and no excessive insect, rodent or other nuisances or public health hazards are created.
7. Approved spray equipment, insecticides and pesticides shall be readily available for use at all times to control flies, mosquito's, gnats and other pests. All insecticides and pesticides used shall be stored and used according to the label directions and in compliance with applicable local, state and federal rules, regulations and laws.
8. Mechanical equipment shall be readily available and be adequate to perform the necessary by-product operations. Standby equipment must be readily available, in the event of mechanical failure. If no equipment is available or if equipment becomes inoperable, no by-product materials shall be accepted at the site until operable processing equipment is available and existing stockpile is processed.
9. To prevent surface water quality degradation, ensure that all site personnel are familiar with the proper use and function of any on-site water control structures, which allow discharge. Maintain all valves that allow runoff and repair immediately as needed.
10. The permit holder grants to the DER the right of access to the permit location for all reasons and purposes reasonably related to the administration of this permit by the DER, including, but not limited to the right to enter upon the permit location to remediate any problem related to the permitted activity.

11. The permit application and Plan of Operations and supplements or amendments thereto submitted by the permit holder to obtain this permit are incorporated herein by reference. The permitted activity shall be operated in conformance with the above documents, these permit conditions and all applicable state and local laws, ordinances, regulations and codes. In the event of any conflict between the permit application or the plan of operations and the permit conditions, the permit conditions shall take precedence. All supplements, amendments or changes to the Plan of Operation must be submitted in writing to the DER for review and approval prior to initiating said changes in the permitted activity. The issuance of this permit does not release the permit holder from responsibility to comply with the permitted activity.
12. The DER may modify the conditions of this permit for cause, after prior notification to the permit holder, to eliminate, reduce or ameliorate any condition or nuisance that adversely affects the public health, safety or welfare, or threatens to unreasonably degrade the quality of surface water or groundwater.
13. The provisions of this permit are intended to be severable and if any individual condition or provision hereof is held to be invalid by the order of the Board of Supervisors, by order of any court of competent jurisdiction or for any other reason, the remaining terms of this permit shall not be affected thereby; provided, however, the DER, in its sole discretion, may terminate this permit if it determines that the permit, as modified by the severance, no longer achieves the objectives of the DER or adequately protects the public health, safety and welfare.
14. This permit may be suspended or revoked by the DER for cause. This permit is granted on the condition that the person(s) named in the permit will comply strictly with the laws, ordinances, regulations, and any specific conditions that are now or may hereafter be in forced by the State of California, Stanislaus County and the DER in the incorporated or unincorporated areas of Stanislaus County pertaining to the above mentioned business.

Notice: Conditions may be added, deleted, or modified at the sole discretion the DER. The specific conditions of your permit are valid only for the permit period, and are subject to change.

**LAND APPLICATION OPERATIONS SHALL ALSO COMPLY WITH THE
FOLLOWING TERMS AND CONDITIONS**

1. Prior to accepting food processing by-products at the site, the soil shall be prepared to receive by-products. Clods of soil shall be broken by a Schmeizer or equivalent. The soil surface shall be leveled to reduce pocket holes and furrows. Soil shall be sufficiently dry to retain moisture applied with food processing by-product in the surface 12 inches.

2. Food processing by-product shall be discharged from the trucks as thinly and evenly as practical. Overlapping onto previously spread food processing by-product shall be minimal. Check runs shall be no longer and slopes shall be no greater than that which permits uniform infiltration, evaporation and maximum practical efficiency. The frequency of by-products application to any given area within the permit location shall not exceed the agronomic rate, but may be done in two or three lifts to allow for even drying.
3. Within twenty-four hours of deposition at the site, the food processing by-product shall be spread and crushed with a tandem drag or equivalent. The by-product shall dry for a minimum of 48 hours after which it shall be disced or harrowed. The soil should be worked to an appropriate depth. Alternate discing or harrowing and drying until final drying and incorporation into the soil are complete. In the event of inclement weather, the site operator may invoke the contingency plan outlined in the plan of operation upon approval by the DER.

4. The applicant shall maintain the following minimum setbacks for all by-product areas:

By-Product Application Setback Definition	Setback (feet)
Edge of by-product area to public property (e.g., street)	300'
Edge of by-product area to other non-owned agricultural property	100'
Edge of by-product area to occupied residences (on-site)	150'
Edge of by-product area to occupied residences (off-site)	300'

5. All cans, metal, wood, plastic, paper, cardboard, and other refuse in the food processing by-product at the site shall be removed and placed in approved containers and disposed of at an approved refuse disposal site. This refuse shall be removed and properly disposed of as needed.
6. Crops shall be grown on the land application areas. Crops shall be selected based on nutrient uptake capacity, tolerance of anticipated soil moisture and salinity conditions, water needs and evapotranspiration rates. All crops shall be grazed or they shall be harvested and removed from the by-product areas at least once per year.
7. By-product shall be tested for the following parameters and constituents: moisture, total nitrogen, organic carbon, sodium, potassium, calcium, magnesium, and phosphorus.
8. Application rates would be based on agronomic rates. An agronomic rate is that amount of by-products which meets a crop requirement without application of any by-product constituent in excess of crop requirements or as defined by the University of California Cooperative Extension. "Crop requirement," s used herein, refers to the amount of nutrients or constituents necessary for the selected crop and agronomic rate

must consider the amount already available in the soil profile from ground surface to rooting depth prior to by-product application. Mass loading rates for nutrients and degradable organic compounds shall be based on the character of the by-product, crop, soil, climate and other nutrient sources.

9. Soil samples from fields to which by-products are applied shall be analyzed for cation exchange capacity, plant nutrients, total organic carbon, salinity, and sodicity. Plant nutrients must include total nitrogen, nitrate and ammonium nitrogen, available phosphorous (Olsen), potassium, magnesium, calcium and sodium. Saturation paste samples shall be analyzed for soluble salts (electrical conductivity), pH, and buffer pH (lime requirement).

Samples shall be drawn from 1-foot intervals to the rooting depth. Alternative sampling intervals may be employed with technical justification, Each field scheduled to receive by-products in any given year should be sampled in late spring or early summer prior to the by-products application. Obtaining representative samples is critical to getting valid and interpretable analytical results. One method to ensure representative samples are collected is to conduct the soil sampling as follows. Collect soil samples from the depth intervals of 0-12", 12-24", and 24-36" at 10 to 20 sites per field based on geostatistical-based standards of practice. Mix samples taken from the same depth intervals to form a single composite sample for that depth interval. This composite sample should have a minimum weight of 1 lb. Submit each composite sample to a certified laboratory for analysis, for a total of three composite samples per field representing the three depths.

10. Land application of by-product to any sub-area or irrigation check not having a fully functional tail water/runoff control system is prohibited.
11. Applicant shall avoid excessive use of food processing by-product or practices which may create objectionable odors, soil conditions that are harmful to crops and degradation of underlying groundwater by overloading the shallow soil profile and causing by-product constituents (organic carbon, nitrate, other salts and metals) to percolate below the evaporative root zone.
12. Within sixty (60) days of the cessation of deliveries of food processing by-product to the site or at the end of the site season, the operator shall report to the DER the total amount of by-product delivered to the site (tons); the amount of by-product delivered daily (tons); a record of fields where by-products are applied, rate of application and total application/year/field; and by-product and soil sampling and testing data, and,

**DIRECT FEED OPERATIONS SHALL ALSO COMPLY WITH THE
FOLLOWING TERMS AND CONDITIONS**

Direct Feed operations shall also contain the following information:

Indicate what type of livestock or poultry will be fed. List the percentage (by dry weight) of the feed ration at which this by-product will be used. List the number of lactating and non-lactating animals. List the number of livestock or poultry that will consume the by-product, or a list of purchasers and their intended use.

Direct Feed operations shall also comply with the following terms and conditions:

1. The by-product receiving pad shall be constructed of cement or asphalt; it must have adequate drainage facilities and prevent leaching. The pad shall be kept clean of accumulated by-product and maintained to prevent fly and mosquito production and objectionable odors.
2. By-product shall be fed on cement, asphalt or other approved manger and not applied to open ground.
3. Food processing by-product must be processed or fed within twenty-four (24) hours of delivery to the site. If the by-product is not processed or consumed within twenty-four (24) hours after delivery, no additional by-product shall be delivered to the site until such time as all by-products at the site has been consumed or properly processed per the procedures in the current site plan of operation.
4. No liquid or runoff from food processing by-product use areas shall be discharged from or allowed to drain off-site or onto adjacent property. The site shall be operated in conformance with the "Minimum Guidelines for Protection of Water from Animal Wastes," issued by the Regional Water Quality Control Board.
5. Food processing by-product used as an animal feed shall conform to the applicable sections of the "Commercial Feed Law and Regulations", as issued by the California Department of Food and Agriculture. The permit holder shall provide confirmation satisfactory to the Department that the feed meets the applicable requirements of the California Food & Agriculture Code, including but not limited to compliance with labeling, testing, and receiving sections of the Code.
6. By-product shall be tested for the following attributes: moisture, total nitrogen, organic carbon, sodium, potassium, calcium, magnesium, and phosphorus.
7. Within sixty (60) days of the cessation of deliveries of food processing by-product to the site or at the end of the site season, the operator shall report to the DER the amount of by-product delivered daily (tons); the total amount of by-product delivered to the site (tons); and by-product and soil sampling and testing data.

**DEHYDRATION OPERATIONS SHALL ALSO COMPLY WITH THE FOLLOWING
TERMS AND CONDITIONS**

1. The by-product receiving pad shall be constructed of cement, asphalt or compacted surface area, it must have adequate drainage facilities, and prevents leaching. The pad shall be kept clean of accumulated by-products and maintained to prevent fly and mosquito production and objectionable odors.
2. By-product shall remain on the receiving pad no longer than 24 hours before processing commences.
3. By-product shall be tested for the following attributes: moisture, total nitrogen, organic carbon, sodium, potassium, calcium, magnesium and phosphorus.
4. Within sixty (60) days of the cessation of deliveries of food processing by-product to the site or at the end of the site season, the operator shall report to the DER the amount of by-product delivered daily (tons); the total amount of by-product delivered to the site (tons); and by-product and soil sampling and testing data.
5. Site shall comply with appropriate Regional Water Quality Control Board requirements which may include individual or general WDRs

**COMPOSTING OPERATIONS SHALL ALSO COMPLY WITH THE FOLLOWING
TERMS AND CONDITIONS**

1. The by-product receiving pad shall be constructed of cement, asphalt or compacted surface area, it must have adequate drainage facilities, and prevent leaching. The pad shall be kept clean of accumulated by-products and maintained to prevent fly and mosquito production and objectionable odors.
2. By-product shall remain on the receiving pad no longer than 24 hours before processing commences.

3. By-product shall be tested for the following attributes: moisture, total nitrogen, density, organic carbon, sodium, potassium, calcium, magnesium. Where composting is over packed soil samples shall be taken from the surface three feet in one-foot increments. Analytes shall include at a minimum pH, nitrate nitrogen, Olsen phosphorus, ammonium acetate extractable potassium, electrical conductivity of the saturation extract and sodium absorption ratio. The top foot of access holes shall be backfilled with bentonite clay to minimize leaching and to prevent re-sampling back fill material.
4. Within sixty (60) days of the cessation of deliveries of food processing by-product to the site or at the end of the site season, the operator shall report to the DER the amount of by-product delivered daily (tons); the total amount of by-product delivered to the site (tons); and by-product and soil sampling and testing data.
5. Site shall comply with appropriate Regional Water Quality Control Board requirements which may include individual or general WDRs

F:/Data/Solid Waste/Regional Water Board/FoodProcByProdUseGuidelinesMay2006.doc

**SITE ACTIVITY LOG
TONNAGE REPORT**

Site Name:

Address:

Site Operator:

DATE	TYPE OF RESIDUE	HOW MUCH RESIDUE (BY TON)	HAULER	SOURCE OF RESIDUE	SOURCE IN STANISLAUS COUNTY (Yes or No)

F:/DATA/Swaste/FoodResiduePermits/TonnageReportBySite---Template

**FOOD PROCESSING RESIDUE USE SURVEY
YEAR _____**

Business Name : _____
Business Address : _____
City _____ State _____ Zip Code _____
Mailing Address : _____

City _____ State _____ Zip Code _____
 Person Completing Form : _____
 Phone No. : _____

TYPE OF RESIDUE ¹	HAULER(S)	USE SITE & LOCATION	WEIGHT OF RESIDUE ² (in tons)

¹PLEASE itemize each type of residue.

²PLEASE express the weight of the residue in tons.

Return the completed survey form to:
DEPARTMENT OF ENVIRONMENTAL RESOURCES
3800 Cornucopia Way, Suite C
Modesto, California 95358-9494

F:/Data/Swaste/FoodResiduePermits/FoodProcessingResidueUseSurveyForm