NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET
(Pursuant to NAC 445A.236)

Permittee Name: Olam West Coast, Inc.
Post Office Box 769
Fernley, Nevada 89408

Permit Number: NEV80024

Location: Olam Spices and Vegetables, Inc.
Exit 65 (Nightingale Interchange), Interstate 80 East
Churchill County, Nevada 89408

Latitude: 39° 47' 28" N
Longitude: 119° 01' 15" W

General Description of Facility and Discharge: Olam West Coast, Inc. became the owner of this facility in July of 2010; at that time permit NEV80024 was updated to show the change in ownership. The previous owner, ConAgra Foods, Inc. dba Gilroy Foods, began operating at this location in 1978.

Olam Spices and Vegetables, Inc. (Olam) uses geothermal water to wash-down processing equipment, and to clean and dehydrate onions during their processing season which generally runs from May to December each year. During the non-processing period, the facility uses a reduced flow of the geothermal water to heat the facility in order to keep the building and their processing equipment from freezing. Surrounding areas are generally undeveloped property, with the exception of Ormat Technologies' Brady Power Plant. The Brady Power Plant, through contractual agreement, supplies Olam with geothermal water via a dedicated pipeline.

Upon delivery to the facility, the geothermal water is first used to operate two dehydration units. The water enters the units at a temperature near 300° F and exits the units at a temperature around 160° F. After the non-contact process water exits the dehydrators the flow stream is split. A portion of the water (approximately 20% of inflow) is cooled to no more than 110° F, and then stored for use as onion and equipment wash water. After use, the wash water is filtered through a 0.054-inch Hydro-sieve screen to remove vegetable matter, the water is collected in a detention sump, and intermittently discharged (**Outfall 001**) to any of 18 onsite infiltration basins. Vegetable matter collected in the "hydro-sieve" screen is dewatered and landfilled.

The remaining non-contact process water (approximately 80% of inflow) is diverted into a pond to cool prior to release into an unnamed ditch (**Outfall 002**) that discharges to an alkali flat.

Flow: Olam has requested a 30-day average flow rate of 2.128 MGD, and a daily maximum flow rate of 2.160 MGD. These flow rates are for both outfalls combined.

Receiving Water Characteristics: Outfall 001 and 002 are considered evaporation/percolation discharges to groundwater.

Site Groundwater: Olam is located on a known geothermal resource area associated with Brady's Hot Springs. Groundwater quality is brackish and of non-potable quality. Analyses conducted in September and October of 2010 reveal high levels of arsenic (0.094 mg/L), chloride (1300 mg/L), fluoride (6 mg/L), and TDS (3000 mg/L). Depth to the unconfined groundwater aquifer varies from approximately 20 feet to 160 feet below ground surface. Regional groundwater flow is reported to be to the southwest.

Discharge Effluent

Outfall 001 – Geothermal water discharged to the infiltration basins has been used to wash onions and associated processing equipment. Previous monitoring results have shown BOD_5 concentrations as high as 2200 mg/L and pH readings as low as 3.79 Standard Units. The elevated BOD_5 levels are due to small amounts of vegetable particulate and other organic matter that remain in the wash water after screening. The low pH is likely due to prolonged comingling of the wash water with onion residues which contain sulfides.

Outfall 002 – Geothermal water discharged to the alkali flat is non-contact process water reflecting the unaltered chemical characteristics of the geothermal resource.

Well Head and Drinking Water Supply Protection: The facility is not located within a 6000 foot Drinking Water Protection Area (DWPA) around any public water supply well. The facility is not located within a Well Head Protection Area (WPA).

Corrective Action Sites: There are no Bureau of Corrective Actions remediation sites within a 1-mile radius of this facility.

Project Specific Conditions:

1. Mortality and morbidity surveys must be conducted every two (2) weeks to identify and quantify wildlife that may sustain mortal and non-mortal injury as a result of high temperature water discharge to the un-named ditch. The number and species of impacted wildlife must be reported quarterly.

2. All locations where discharged water exceeds 49° C (120° F) shall be fenced and posted. All infiltration basins shall be posted as non-potable.

3. A Best Management Practices (BMP) plan is required to ensure good housekeeping practices for general operation, and to ensure that appropriate erosion control measures are identified and implemented to minimize erosion in the infiltration basins, discharge ditch, and alkali flat.

Proposed Effluent Limitations: Effluent samples taken in compliance with the monitoring requirements specified below shall be collected at the following locations:

i. **Outfall 001:** After the Hydro-sieve screen, but prior to discharge to the infiltration basins; and

ii. **Outfall 002:** At the discharge point from the cooling pond to the un-named ditch.

Discharges shall be limited and monitored by the Permittee as specified in the table below:

Parameter	Discharge Limitations		Sampling Location	Monitoring Requirements	
	30-day Average	Daily Maximum		Frequency	Sample Type
Flow (MGD)	M&R	M&R	001	Continuous	Flow Meter
	M&R	M&R	002		
	2.128	2.160	Σ (001, 002)		
BOD_5 (mg/L)	---	M&R	001	Monthly	Discrete
TSS (mg/L)	---	M&R	001	Monthly	Discrete
			002		
pH (S.U.)	---	M&R[1]	001	Monthly	Discrete
			002		
Temperature (°C)	---	M&R[1]	002	Monthly	Discrete
TPH (mg/L)	---	1.0[2]	002	Quarterly	Discrete
Mortality/ Morbidity Survey	---	M&R[3]	Un-named Ditch	Bi-weekly	Calculation

MGD: Million Gallons per Day
BOD_5: 5-Day Biochemical Oxygen Demand
TSS: Total Suspended Solids
TPH: Total Petroleum Hydrocarbons
M&R: Monitor and Report
mg/L: Milligrams per Liter
S.U.: Standard Units

[1]: Initial results of pH and temperature measurements should be recorded at the time of sampling.
[2]: Sample and report purgeable and extractible TPH quarterly. Report the full range of hydrocarbons, C6 – C40.
3: See permit Part I.A.4.

Rationale for Permit Requirements

Flow: The flow rate is limited by the plant capacity.

5-Day Biochemical Oxygen Demand (BOD_5): Due to the remote facility location, odors associated with the surrounding geothermal fumaroles (vents), and the poor quality of area groundwater, no limitation for BOD_5 has been included in this permit. Sampling is required to allow the Division to monitor the amount of BOD_5 discharged to the infiltration basins.

Total Suspended Solids (TSS): A limitation for TSS has not been included in this permit. TSS concentrations due to organic matter (vegetable particulate, soils, etc…) introduced into the wash water during food processing activities are not expected to adversely impact the geothermal area. Sampling is required to allow the Division to compare the amount of TSS discharged to the infiltration basins (Outfall 001), to the background level of TSS discharged to the un-named ditch (Outfall 002).

pH: pH values reported during the previous five years (permit term) have ranged from 3.79 to 8.83 Standard Units. Due to the erratic results reported, and the poor quality of area groundwater, no limitation for pH has been included in this permit. Sampling is required to allow the Division to monitor the pH of water discharged to the infiltration basins (Outfall 001), and to confirm that the pH level of the geothermal resource is unaffected.

Temperature: Water discharged from the cooling pond to the un-named ditch requires monitoring to determine the amount of cooling achieved during containment, and to ensure that no water above 49° C (120° F) extends beyond the fenced portion of the un-named ditch.

Total Petroleum Hydrocarbons (TPH): No additives are used by Olam for dehydration or washing purposes, however, water supplied by Brady may contain traces of lubricants used for their well pumping equipment. A limit of 1.0 mg/L has been determined by the Division to be reasonably obtainable using best management practices.

Mortality/Morbidity Survey: The length of the discharge path, from the cooling pond to the alkali flat, shall be surveyed bi-weekly to ensure that discharged water is not negatively impacting wildlife.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.

b. By **MMM DD,2011** (45 days) the Permittee shall submit to the Division, for review and approval, an updated Operation and Maintenance (O&M) Manual, compiled in accordance with appropriate sections of guidance document WTS-2 "*Minimum Information Required for an Operations and Maintenance Manual*", and signed by an engineer registered in the State of Nevada.

All schedule of compliance submittals and evidence of compliance documents shall be submitted to the Bureau of Water Pollution Control Compliance Coordinator at the following address:

Division of Environmental Protection
Bureau of Water Pollution Control
901 S. Stewart Street, Suite 4001
Carson City, NV 89701
ATTN: Compliance Coordinator

Proposed Determination: The Division has made the tentative determination to renew the permit, subject to the permit limitations and conditions, for a period of five (5) years.

Procedures for Public Comment: The Notice of the Divisions intent to issue a permit authorizing Olam Spices and Vegetables, Inc. to discharge to groundwater of the State of Nevada, subject to the conditions contained within the permit, is being sent to the **Reno Gazette-Journal** and to the **Lahontan Valley News** for publication. The Notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time stamped faxes, e-mails, or hand delivered items) to the Division is **July 22, 2011 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reason why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Arthur Marr, P.E.
Date: June, 2011