



Positive Determination Approval Sheet

Reference: IEE: 2006-MAC-006
Country: Macedonia
Project Name: Macedonia Agribusiness Activity (AgBiz)

Type of document(s):

- Scoping Statement (SS) for Positive Determination (PD)
- X Environmental Due Diligence (EDD)
- X Pollution Prevention Assessment (PPA)
- PERSUAP (Pesticide Evaluation Report and Safe Use Action Plan)
- Environmental Assessment (EA)
- Programmatic or Project Environmental Assessment (PEA)

Document Prepared by: Dr. Jim Gallup, U.S. Consultant, Enviro-L

Document Preparation Date: May - July 2008, reviewed March 2009

Type of Structure/Services:

- Commercial/Residential Building
- Pipeline
- Water/Wastewater
- Road/Bridge
- Pesticides
- X Industrial Facility/Enterprise
- Other _____

Brief Description:

Environmental Due Diligence documents were developed under the AgBiz Program that is supported by the USAID Macedonia/ Economic Growth Office and implemented by ARD Inc. AgBiz supports economic growth in Macedonia through programs that strengthen and improve the competitiveness of Macedonian agribusinesses, improve the business environment and encourage local economic development. The potential accession of Macedonia to the European Union creates the need to help Macedonian agribusinesses to become more competitive in local, regional and global markets. AgBiz increases economic growth through expanded, environmentally sustainable production and sales of value-added agricultural products in five value chains: fresh vegetables, processed vegetables, wild gathered food products, bottle wine and fresh fruits. The proposal submitted with this letter has mitigations on pesticides, wastewater treatment, supplemental pollution prevention assessment, monitoring, permits and public participation. The AgBiz Environmental Services Specialist and the relevant Value Chain Coordinator will track the progress of each company that receives an AgBiz grant to comply with the required mitigations. The grantee will report on their progress on compliance with mitigations measures in their Quarterly Progress Reports. The VCC assigned to a Project will visit each facility as required and will verify the implementation of each mitigation measure.

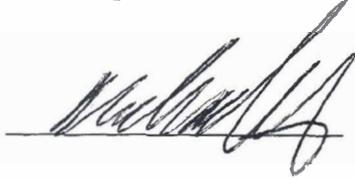
The proposal included in this PD is:

- Agrolozar/Dalvina, Bottled Wine Value Chain. AgBiz will assist Agrolozar/Dalvina by supporting technical assistance, engaging wine agent in Germany, participation at the Wine and Spirits Trade Fair in London, UK, design and posting of a Dalvina web portal and design and printing of a promotional catalogue. AgBiz will be contributing US\$20,000 toward this

proposed project that has a total value of US\$361,000. The goal of the project is to improve the visibility and competitiveness of Dalvina's wine in export markets. Six Mitigation and Monitoring Recommendations were provided in the EDD and PPA Summary for Agrozar/Dalvina, and each will be addressed in the AgBiz grant agreement, assuming the proposal is passed into implementation.

Clearance:

Mission Director:



Date:

6 March 09

Mission CTO:

Date:

Mission Environmental Officer:

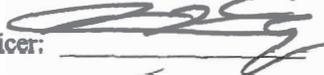


Date:

6 March 09

Concurrence:

Bureau Environmental Officer:



Date:

6 March 9

Approved:

Disapproved:

⊗ Recommend ARD to provide additional photographs of the plant layout (outside), particularly where the proposed wastewater treatment plant will be constructed

EDD and PPA Summary for Agrolozar/Dalvina

Company Name: Agrolozar, Common Stock Company
 Company Location: v. Hamzali, Strumica

AgBiz Background: AgBiz supports economic growth in Macedonia through programs that strengthen and improve the competitiveness of Macedonian agribusinesses, improve the business environment and encourage local economic development. The potential accession of Macedonia to the European Union in 2011 creates the need to help Macedonian agribusinesses to become more competitive in local, regional and global markets. AgBiz increases economic growth by supporting expanded, environmentally sustainable production and sales of value-added agricultural products in five value chains: fresh vegetables; processed vegetables; gathered wild food products; bottle wine; and fresh fruits.

Description of Plant: Agrolozar produces grapes and other agricultural products on 840 ha. of land. The company was purchased by the current dominant investor in 2003. During the first few years after the takeover, wine grapes were processed at other wineries and the wine was sold in bulk, mainly to Serbia and Ukraine.

Since then extensive investments have been made in new facilities. Recently 250 hectares of vineyards were planted and an additional 50 hectares are planned. Concurrently, Agrolozar invested in substantial new equipment and began using modern technology to do soil testing and utilizing an appropriate crop protection program.

The vineyards that were acquired by the new owners were old and neglected. In the last four years substantial investments were made in the vineyards and new varieties of grapes were planted. The vineyards now include 80 ha. of Vranec, 40 ha. Cabernet Sauvignon, 40 ha. Merlot, 10 ha. Cabernet Frank, 10 ha. Carmenere, 30 ha. of Sirah, 20 ha. Muskat Hamburg, 20 ha. Zuplanka, and 40-50 ha. of old mixed varieties, as well as 30 ha. of Victoria and Ribier table grapes. The company also invested in new varieties of peaches, pears and watermelons.

During 2007, Agrolozar started an extensive forward integration program for adding value to their products by building a modern winery and establishing the company Dalvina to operate as a producer and marketer of wine. The new winery was built on a 4,000 m² site according to all required standards for food safety and quality, and premium quality wine production. State of the art, Italian origin equipment was purchased that makes wine according to the gravitational method, "De Fancescshi", considered as the world's leading premium wine production system. The winery currently has capacity for producing 2.25 million litres of wine per year. Wine grapes will be transported to the plant in trucks/tractors, where they will be sorted by quality and carefully squeezed. The grape juice will then be processed and fermented, and the resulting wine bottled and packaged. 75% of total production will be red, and 25% white wine.

Table grapes will be produced in smaller quantities than wine grapes, and will be sorted and packed in carton boxes of 5 kilos, then sold to markets in Serbia, Croatia, and Germany.

Affected Environment: Agrolozar/Dalvina presses grapes, mostly in September. The process includes: 1) Unloading grapes in a separate unloading area; 2) Crushing grapes in a mechanical crusher to remove the grapes from the stems and skins; 3) Grape pressing to separate juice or wine from grapes and grape skins; 4) Fermentation over about one week to convert sugar contained in the grapes to alcohol using yeast under anaerobic conditions; and 5) Malolactic (or secondary) fermentation, which takes three to six months. The wine is kept under an airlock to protect it from oxidation. Proteins from the grape are broken down and the remaining yeast cells and other fine particles from the grapes are allowed to settle. 6) The wine is then stabilized and clarified (filtering) to achieve microbial stabilization of the wine. 7) Wine bottling - bottles are first washed, and then filled bottles are sealed with a cork and foil crown.

Wastewater is generated from cleaning the grape crusher and press. Other wastewater is generated during cleanup of the fermenters and stabilization tanks after they are emptied. The amount of wastewater is limited, and it will be discharged into a new wastewater treatment system.

EDD Liability and Environmental Concerns: Agrolozar/Dalvina uses pesticides on their own grape vineyards as well as for pears, peaches and watermelon. They must provide annual pesticide training. Pesticide training must cover proper handling and use of pesticides, pesticide mixing and application rates, disposal of unused pesticide and package disposal. In addition, a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP) has been conducted by AgBiz and the results should be used by Agrolozar/Dalvina to develop a comprehensive pesticide use plan.

PPA Environmental Concerns: Water from wells is used in the process for cleaning and sanitation. Water used for irrigation is from the public irrigation system. Wastewater generated from cleaning the crushers and presses, as well as from cleaning of the floor and sanitary use of the employees will be collected, transferred and treated in a wastewater treatment unit that will be built on the south eastern corner of the site. During the harvest season the quantity of water used for washing will increase along with the organic loading. It is expected that the waste water treatment plant will treat this wastewater adequately before discharge into a drainage channel.

Organic waste from the production process is collected in containers and then spread on the company's own land, or given to local farmers free of charge. Solid waste created by employees will be collected by a municipal communal company and disposed in the municipal landfill. Damaged containers used for raw materials must be recycled (sold or given to the local collectors of plastic).

Mitigation and Monitoring Recommendations Mitigations are recommended for pesticides, wastewater treatment, monitoring, permits and public participation. A supplemental PPA/CPA is also recommended for the winery during the grape processing season. Recommended mitigations include:

- Pesticides. Since pesticides are used on Agrolozar/Dalvina's vineyards and pear, peach and watermelon growing areas, they must provide annual pesticide training. This training must cover proper handling and use of pesticides, pesticide mixing and application rates, disposal of unused pesticide and package disposal. In addition, a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP) was conducted by AgBiz and the results should be used by Agrolozar/Dalvina to develop a comprehensive pesticide use plan.
- Wastewater Treatment. Agrolozar/Dalvina will be constructing a new wastewater treatment plant. They should provide a description of the treatment plant and treatment performance data for BOD5, COD and suspended solids during the grape processing season. The wastewater treatment report should be provided at the end of the grant period.
- Supplemental Pollution Prevention Assessment: AgBiz will provide a supplemental PPA at the winery during the grape crushing season to identify no cost and low cost opportunities to reduce waste and water usage. Agrolozar/Dalvina must participate in the assessment and provide a report at the end of the grant period identifying cleaner production measures implemented at their winery.
- Monitoring. Agrolozar/Dalvina must collect at least one representative wastewater sample during the grape crushing season and provide analytical results with concentrations of BOD5, suspended solids and pH before and after wastewater treatment.
- Permits. Agrolozar/Dalvina must receive all needed construction and IPPC/environmental permits required by Macedonian authorities.
- Public Participation. Agrolozar/Dalvina must conduct a public participation meeting with neighbors and others potentially affected from operations at their winery.

EDD AND PPA Checklist for AgBiz

Company Name: Agrolozar, Common Stock Company
 Owner's Name: Risto Gligorov, President of management board
 Phone Number: tell: 070 204 896 fax: 02 32 97 842
 E-mail Address: agrohem@mol.com.mk
 Location: Hamsali Village, Strumica
 Assessor: Enviro-L Consulting
 Ljubomir Petkovski
 Date: 30.05.2008
 General

What has this plant requested from AgBiz?

The major part of entire production concept of Agrolozar is the erection of the winery and production and sales of bottled wine for the European market. The new wine cellar is build on 4,000 m² yard and it is accordion the all required standards for food safety and quality and premium quality production. The state of the art, Italian origin equipment is purchased, that makes wine according to the gravitational method, "De Fancescshi", considered as World number one, and capable to produce 4 million liters of wine per a year. The vine grape will be bring to the plant in tracks/tractors, where will be selected, sorted by the quality, processed, fermented, bottled and packaged. 75% of the total production will be red wine, and 25% white. The table grape will be produces in smaller quantities than the wine grape, it will be sorted and packed in carton boxes of 5 kilos and will be sold at the traditional markets of Serbia, Croatia, and Germany.

Agrolozar will continue growing fruits, with main export article, the bambolino watermelon. With this product, the Company will enter the German market and plans to rise, gradually and steadily the sales, as well as to enter new markets in Europe. Besides the melons, the company will grow peaches and pears, mainly sold at the local but also at the export markets.

Will PESTICIDES be purchased or used as part of this AgBiz proposal? (Yes/No): No

General description of plant and site:

Agrolozar is a company for production of agricultural products and grape. Company has 550 ha of lend. The company was purchased by the dominant investor in 2003. Since then an extensive investment was undertaken in new plants. Recently new 250 ha were planted and additional 50 are planned. Moreover, additional 840 ha are taken on concession from the Government.

The grape plantation nurseries before company undertaken were old and neglected. In last 4 years' new plantation, nurseries were invested and new types of grape were planted. Company also invested in new sorts of peaches, pears and watermelons. The Company same time invested into new equipment and application of know how in determination of the chemical composition of the earth, and application of appropriate protection.

Out of the total of 840 ha, 600 are under vineyards, and the rests are orchards of peaches, pears, melons and watermelons.

The unit agriculture, the biggest part of the orchards is under peers (60 ha) and new sort of watermelon - Bambolino, and the rest belongs to melons and peers.

The vineyards unit was subject of intensive investment with now areas commercial sorts of grape. The 50 ha are under Vranec, 40 ha cabernet Suvinion, 40 ha merlot, 10 ha frank, 10 ha Carbernet, 30 ha Sirah, 30 ha table grape Victoria and 150 ha old mixed sorts.

During the first few years after the takeover, the grape was processed at other wineries and sold in bulk, mainly in Serbia and Ukraine. In 2003, the entire production was sold raw. In 2004 and 2005, Agrolozar processed the grape in Lozovo and Djumajlija winery and sold it in tanks to Serbia. In 2006 the all grape was processed in Povardarie, Negotino and sold in bulk in Serbia and Ukraine. Having in mind that the strategy of Agrolozar is production of own wine sorts and selling as bottled in expert markets during 2007 the company invests in new processing and bottling plant.

During 2007, the Company started a modern winery, expected to be finished during the 2008. The equipment is Italian and state of the art and the Company will be able to make premium quality wine. The management team meanwhile made decision to engage an experienced enology engineer. He is expected to work closely with the young local engineers and transfer to them the secrets of making the high quality bottled wine.

Source of water used in plant?

Ground wells;

Is wastewater discharged? (Yes/No):

Yes;

Is there a facility environmental program currently in place? (Y/N): No, currently ongoing process, construction of waste water treatment plant;

Is there specific person assigned to oversee environmental issues? No;

NAME:

Is there any environmental enforcement action pending? (Y/N): Yes, IPPC and HACCP;

Are there any environmental-related legal proceedings filed by neighbors? No;

Has the facility previously reviewed their environmental performance? Yes;

Have they hired an outside person/firm to conduct an environmental assessment? No;

Are employees encouraged or given incentives to suggest production or environmental improvements? (Y/N): Yes;

Are Utility costs (water, energy) and waste treatment and disposal costs allocated to operations that generate the waste?

Yes;

Environmental Due Diligence (EDD) Questions

Provide information regarding the geographic position of the property; a map and a detailed lay-out of the property and its neighbors (typically covering an area of 1 km radius). Attach separate page if needed.

Site is close (4km) to the village of Hamzali with total area of 840 hectares of which 4000 m² is vine cellar. Village of Hamzali is located close to the South-East of R. Macedonia, only 10 km from Strumica, around 20km from the border of R. Bulgaria.

Please see annexes detailed lay out of vinery;

Provide a history of the present property and description of any building materials in place. Provide site history before the planned improvement if relevant.

Previous part of ZIK Strumicko Pole, company has separated and started its own production of grapes, peach, watermelon etc. Previously property was used for grape production. Building materials used in construction of the new building which will be used as vinery are granite (floor), bricks and plasticized tin sheets as roof.

Are any Environmental Authorizations/Permits legally required for the functioning of the facility? If required, provide permit specifications. Are any new permits required to implement the AgBiz project? If so what are they and have they been applied for and or issued?

IPPC permit for adjustment with operational plan.

Implementation of HACCP standard latest by 01.01.2009.

Provide Geological and Hydro-geological information:

New geological and hydro-geological surveys are not conducted, based on a fact that site was used for same activities it can be concluded that geology and hydro – geology were assessed as acceptable. In frames of constriction activities construction project was developed in which geology and survey on impacts in soils and ground water must be examined and approved prior to construction permit.

Provide existing Inspection Report/Bulletin of Analyses regarding the quality of any environmental media (air, water, soil) in the area. (Provide Environmental Inspectorate or similarly report).

Strumica region is famous by his highest environmental state and except for closest neighborhood of city of Strumica, other area (municipalities of Vasilevo, Bosilovo and Novo Selo) are known as environmentally safe for production of all the types of agricultural products.

Provide exciting Baseline Environmental Data (Provide representative data):

Please find attached Environmental Statistical Data, and Report of Quality of Environment for year 2006 (latest)

BASED ON LIABILITY AND ENVIRONMENTAL CONCERNS IN THIS **EDD**, SHOULD AgBiz PROCEED WITH THIS PROPOSAL? (Y/N): **Yes**
(If YES, go to PPA, next page. If NO, STOP here).

Pollution Prevention Assessment (PPA) Questions

Storage Areas

Are there designated material storage areas?

Yes, there is a storage area designated;

Are storage areas clean and organized?

Yes, it will be according to regulations and standards requirements;

Are containers stored in such a way as to allow for visual inspection for corrosion and/or leaks?

Installation is not operational yet but according to the plan visual inspection to all of the stored goods will be possible.

Is one person responsible for maintaining storage areas?

Yes;

Does the layout of the facility result in minimizing traffic through material storage areas?

Yes, the project has clear process flow;

Are stored items protected from damage, contamination, and exposure to weather?

Yes, they will be stored in separate areas in the building protected from damage, contamination, and exposure to weather;

Are all storage tanks routinely monitored for leak?

Yes;

Is containment, such as a curb or dike, installed in storage areas to contain leakage and to minimize the area contaminated by a spill?

Yes, there is channel for acceptance of waste water from cleaning process;

Are leak detection systems installed for underground storage tanks?

No underground storage tanks;

Materials Inventory

Is there an inventory control system designed to prevent materials from deteriorating in storage (first in, first out to prevent expiration)?

Yes;

Is obsolete raw material returned to the supplier?

Transport of raw materials is carried out by plans and programmes so there are no obsolete materials;

Does the facility try to order smaller containers of infrequently used materials to avoid disposing of large quantities of unused obsolete materials?

Just in time delivery by suppliers;

Has the facility tried to order larger containers infrequently used materials to reduce the number of small containers that must be cleaned and disposed of?

Case by case, according to planned work activities raw materials are ordered and delivered;

Are all in-plant containers of hazardous chemicals labeled, tagged, or marked with:
There are no hazardous chemicals in use;

- Identity of the hazardous chemical(s)
- Appropriate hazard warnings?

Has the facility reexamined its need for each material?

Yes;

Does the facility have a way to use off-spec material, where possible?

No;

Materials Handling

Are raw materials tested for quality before being accepted from suppliers?

Yes, there is specific area at the site where raw materials (grape) are accepted, classified and separated according to the quality;

Does the facility follow proper procedures when transferring materials?

Yes, all performed activities are enclosed without any outside intrusion;

Are expired material tested for effectiveness before being disposed of?

Yes;

Are drums, packages, and containers inspected for damage before being accepted?

Yes, raw material in production process is inspected;

Are containers properly resealed after use?

Raw material (grape) is packed in returnable plastic containers (boxes) and it is returned to the supplier;

Are containers emptied thoroughly before cleaning or disposal?

Yes;

Does the facility segregate its wastes as much as possible:

- Solid wastes from aqueous wastes? Yes;
- Nonhazardous from hazardous? There is no hazardous wastes;
- Segregated according to type of contaminant? No;
- Different types of solid waste improve recycling/reuse? Yes. Broken plastic packaging bags are recycled, and organic waste is used (spread) by suppliers of the grapes;
- Different types of solvents, cleaner wastes, and lubricants (e.g., organic solvents from mineral oils)? All of the solvents and lubricants used are specially selected for use in drink production process.

Process Operations

Are water conservation measures, recycling, and reuse techniques, practiced in processes that use water or generate wastewater (e.g., cleaning and rinsing operations)?

Because process is closed, there will be small quantity of wastewater generated;

Has material substitution been tried for any hazardous materials used in process?

There are no hazardous materials in use;

Have any techniques been used to increase the life of any process baths?

Regular technical surveys on all equipment will be carried out. By the supplier of the equipment;

Are any wastes being recycled, reused, or recovered in some manner?

Organic waste is given to the farmers, broken plastic packaging is recycled.

Have any equipment or process modifications been made to increase material efficiency and thus reduce material waste generation?

All of the process activities are planned and prepared by leading equipment producers in the world

Do processes employ any detectors to alert personnel or malfunctions that could produce/generate excessive wastes?

Yes.

Spills and Leaks

When a spill occurs:

- What cleanup methods are employed?
Regular cleanup per shifts will be conducted with water under pressure;
- Would different cleaning methods allow for direct reuse or recycling of the water?
After construction of WWTP, water used in cleaning process could be able to be reused in cleaning process. Installation for this process is not planned.

Are there preventive maintenance procedures designed to reduce incidents of equipment breakdowns, inefficiency, spills, or leaks?

Regular maintenance will be conducted by producers of the equipment;

Material Substitution

Could the facility modify or completely change a given process to use water-based coolants and fluids instead of oil-based fluids?

According to the owner all of the equipment will be according the standards and currently they don't think that different processes should be introduced;

Solvent Use

Can solvent cleaning be replaced with less toxic cleaning, such as:

- A dry process (e.g., bead or sand blasting or other abrasives)?
- Steam cleaning?
- Cryogenic?
- Caustic cleaning?

All of cleaning techniques according to the owner are in line with HACCP requirements which will be introduced.

Are non-chlorinated solvents substituted for chlorinated solvents?

All the solvents used are according to food and drink production standards requirements.

Are parts wiped to remove oil and dirt prior to solvent cleaning?

Equipment producer is responsible for all of maintenance.

Is the loss of cleaning ability of the solvent monitored before the solvent replaced?

Yes.

Are solvents reused or recycled?

No.

Is an onsite distillation unit for solvent recovery and reuse installed?

No.

Is solvent use standardized?

Yes according to HACCP requirements.

Rinse Waters

Have excessive rinses been evaluated and eliminated?

No, but company has plans to eliminate all unnecessary rinse costs.

Is rinse water reclaimed, pretreated, and reused?
Yes rinse water will be treated in winery wastewater treatment plant.

Are water softeners used only where necessary?
According to the manager there will be no softeners used.

Training

Are there formal personnel training programs on raw material handling, spill prevention, proper storage techniques, and waste handling procedures?

Yes;

Are employees trained in pollution prevention techniques?

Yes;

How often is training given and by whom?

Two German consultants will be present in first work year of the winery, they are process experts who will give training to the employees.

Good Operating Practices

Are plant material balances performed routinely?

Yes;

Are they performed separately for each material of concern?

Yes

Are records kept for each waste, documenting sources of origin and eventual disposal?

Yes;

Are operators provided with detailed operating manuals or instructions sets?

Yes;

Are all operator job functions well defined?

Yes, except for workers who will have wide range of job functions (according to the present conditions and demands);

Are regularly scheduled training programs offered to operators?

Yes;

Has the facility integrated pollution prevention into supervision and management by:

- Closer supervision to improve production efficiency and reduce inadvertent waste generation (increased opportunity for early detection of mistakes?) Facility will be under close supervision of German consultants in first year and it will follow the equipment manuals given by producer of the equipment;

- Management By Objectives (MBO) with defined and achievable goals for waste minimization (better coordination among the various parts of an overall operation)? Company has strict plan of production for first year with exact quantity of grape supplied and wine produced.

Has the facility improved production scheduling and planning include:

- Maximizing batch sizes Yes;
- Dedicating equipment to a single product Yes;
- Alerting batch sequencing to minimize cleaning frequency Yes;
- Scheduling production to minimize cleaning frequency? Yes;

Is corrective maintenance practiced, such as resetting control valves or adjusting process temperatures, to increase efficiency and prevent raw material loss through waste streams?

Vinery will strictly work by recommended process by equipment producer at least in first years of operation;

Does the facility forbid operators to bypass interlocks and alarms, or to significantly alter set points without authorization?

Yes;

Are overflow or malfunctions alarms installed on tanks and equipment?

Yes.

Housekeeping Practices

Good housekeeping is the maintenance of a clean, orderly work environment. Does the facility:

- Maintain neat and orderly storage of chemicals? Yes;
- Promptly remove spillage? Occasionally;
- Maintain dry and clean floors by use of brooms and/or vacuum cleaners? Yes;
- Provide proper walkways with no containers protruding into walkways? Yes;
- Minimize the accumulation of liquid and solid chemicals on the ground or floor? Yes;
- Stimulate employee interest in good housekeeping? Yes;

<p>SUMMARY OF INDUSTRIAL WASTE MANAGEMENT AND OUTSIDE MANUFACTURING BMPs</p>
<ul style="list-style-type: none"> • Conduct a waste reduction assessment. • Institute industrial waste source reduction and recycling BMPs. • Prevent runoff and runoff from contacting the waste management area. • Minimize runoff from land application sites.

OUTSIDE STORAGE OF RAW MATERIALS, BY-PRODUCTS, OR FINISHED PRODUCTS

1: Are materials protected from rainfall, runoff, and runoff? Yes, completely;

SUMMARY OF BMPs FOR OUTSIDE STORAGE OF RAW MATERIALS, BY-PRODUCTS, OR FINISHED PRODUCTS
<ul style="list-style-type: none"> • Cover or enclose materials.

SALT STORAGE

1: Are salt piles protected from rain? N/A

2: Is storm water run-on prevented from contacting storage piles and loading and unloading areas? N/A

SUMMARY OF SALT STORAGE FACILITIES BMPs
<ul style="list-style-type: none"> • Put salt under roof. • Use temporary covers. • Enclose or berm transfer areas.

LOADING AND UNLOADING MATERIALS

1: Are tank trucks and material delivery vehicles located where spills or leaks can be contained? Yes;

2: Is loading/unloading equipment checked regularly for leaks? Yes;

3: Are loading/unloading docks or areas covered to prevent exposure to rainfall? Yes;

4: Are loading/unloading area designed to prevent storm water run-on? Yes;

5: Is piping system routinely checked for leaks? Yes;

SUMMARY OF LOADING/UNLOADING OPERATIONS BMPs
<ul style="list-style-type: none"> • Contain leaks during transfer. • Check equipment regularly for leaks. • Limit exposure of material to rainfall. • Prevent storm water runoff.

LIQUID STORAGE IN ABOVE-GROUND TANKS

1: Do storage tanks contain liquids hazardous materials, hazardous wastes, or oil? No;

2: Are operators trained in correct operating procedures and safety activities? Yes;

3: Does the facility have safeguards against accidental discharge? Yes;

4: Are tank systems inspected, and is tank integrity tested regularly? Yes;

5: Are tanks bermed or surrounded by secondary containment system? Yes;

SUMMARY OF BMPs FOR LIQUID STORAGE IN ABOVE-GROUND TANKS
<ul style="list-style-type: none"> • Comply with applicable State and Federal laws. • Properly train employees.

- Install safeguards against accident release.
- Routinely inspect tanks and equipment.
- Consider installing secondary containment.

INDUSTRIAL WASTE MANAGEMENT AND OUTSIDE MANUFACTURING

- 1: Has the facility looked for ways to reduce waste at the facility? Yes;
- 2: Has the facility considered waste reduction BMPs? Partially yes;
- 3: Are industrial waste management and outside manufacturing areas checked often for spills and leaks? Yes;
- 4: Are industrial waste management areas or manufacturing activities covered, enclosed or bermed? Partially yes;
- 5: Are vehicles used to transport wastes to the land disposal or treatment site equipped with anti-spill equipment? No;
- 6: Does the facility use loading systems that minimize spills and fugitive losses such as dust or mists? Yes;
- 7: Are sediments or wastes prevented from being tracked offsite? Yes;
- 8: Is storm water runoff minimized from the land disposal site? No;

FACILITY SITE REVIEW CHECKLIST

A. OPERATON AND MAINTENANCE EVALUATION

Yes	No	N/A	1. Treatment units are properly operated and maintained.
Yes	No	N/A	2. Standby power or other equivalent provision is provided.
Yes	No	N/A	3. Adequate alarm system for power or equipment failures is available.
Yes	No	N/A	4. Sludge disposals procedures are appropriate:
Yes	No	N/A	a. Disposal of sludge according to regulations
Yes	No	N/A	b. State approval for sludge disposal received
Yes	No	N/A	5. All treatment units, other than backup units, are in service.
Yes	No	N/A	6. Procedures for facility operation and maintenance are followed.
Yes	No	N/A	7. Sufficient sludge is disposed of to maintain treatment process equilibrium
Yes	No	N/A	8. Organizational Plan (chart) for operation and maintenance is provided.
Yes	No	N/A	9. Operating schedules are established.
Yes	No	N/A	10. Emergency plan for treatment control established.
Yes	No	N/A	11. Maintenance record system exists and includes:
Yes	No	N/A	a. As-built drawings
Yes	No	N/A	b. Shop drawings
Yes	No	N/A	c. Construction specification
Yes	No	N/A	d. Maintenance history
Yes	No	N/A	e. Maintenance costs
Yes	No	N/A	f. Repair history
Yes	No	N/A	g. Records of equipment repair and timely return to service.
Yes	No	N/A	12. Adequate number of qualified operators on-hand.
Yes	No	N/A	13. Established procedures are available for training new operators.
Yes	No	N/A	14. Adequate spare parts and supplies inventory are maintained.
Yes	No	N/A	15. Instruction files are kept for operation and maintenance of each item of major equipment.
Yes	No	N/A	16. Operation and maintenance manual is available.
Yes	No	N/A	17. Regulatory agency is notified of any bypassing. (Dates _____)
Yes	No	N/A	18. a. Hydraulic overflows and/or organic overloads are experienced.
Yes	No	N/A	b. Untreated bypass discharge occurs during power failure.
Yes	No	N/A	c. Untreated overflows occurred since last inspection.
Yes	No	N/A	d. Flows were observed in overflow or bypass channels.
Yes	No	N/A	e. Checking for overflows is performed routinely
Yes	No	N/A	f. Overflows are reported to EPA or to the appropriate State agency as specified in the permit. (With IPPC permit installation will automatically obtain permit for discharge of waste waters)

FACILITY SITE REVIEW CHECKLIST		
(Continued)		

Yes	No	N/A	
Yes	No	N/A	1. Undiked oil/chemical storage tanks are used at facility.
Yes	No	N/A	2. Up-to-date equipment repair records ARE maintained.
Yes	No	N/A	3. Dated tags show out-of-service equipment.
Yes	No	N/A	4. Routine and preventive maintenance is scheduled / performed on time.
Yes	No	N/A	5. Personal protective clothing is provided (safety helmets, ear protectors, goggles, gloves, rubber boots with steel toes, eyewashes in labs).
Yes	No	N/A	6. Safety devices are readily available: According to the owner all safety devices will be installed on the new site.
Yes	No	N/A	a. Fire extinguishers
Yes	No	N/A	b. Oxygen deficiency/explosive gas indicator
Yes	No	N/A	c. Self-contained breathing apparatus near entrance to chlorine room
Yes	No	N/A	d. Safety harness
Yes	No	N/A	e. First aid kits
Yes	No	N/A	f. Ladders to enter manholes or wet wells (fiberglass or wooden for electrical work)
Yes	No	N/A	g. Traffic control cones
Yes	No	N/A	h. Safety buoy at activated sludge plants
Yes	No	N/A	i. Life preservers for lagoons
Yes	No	N/A	j. Fiberglass or wooden ladder for electrical work
Yes	No	N/A	k. Portable crane/hoist
Yes	No	N/A	7. Plant has general safety structures such as rails around or covers over tanks, pits, or wells.
Yes	No	N/A	8. Emergency phone numbers are listed, including EPA and State.
Yes	No	N/A	9. Plant is generally cleaned, free from open trash areas. Currently in phase of construction
Yes	No	N/A	10. Portable hoists, for equipment removal, are available.
Yes	No	N/A	11. All plant personnel are immunized for typhoid and tetanus.
Yes	No	N/A	12. No cross connections exist between a potable water supply and nonpotable source.
Yes	No	N/A	13. Gas/explosion controls such as pressure-vacuum relief valves, no smoking signs, explosimeters, and drip traps are present near anaerobic digesters, enclosed screening or degritting chambers, and sludge-piping or gas-piping structures. (They will be installed)
Yes	No	N/A	14. All electrical circuitry: enclosed and identified
Yes	No	N/A	15. Personnel are trained in electrical work to be performed as well as safety procedures.

EDD and PPA Summary and Recommendations (Page 1 of 2)

Is any baseline environmental data available? (Yea or No) Yes

Is any environmental pollution control equipment used? (Describe if yes): Planned to construct waste water treatment plant for removal of organic residues in wastewater;

Describe discharge points for liquid, solid, gaseous emissions? Waste water from cleaning only will be discharged after treatment to near by channel, solid waste is produced by employees only and collected by municipal communal company, organic waste from process of crushing the grapes, its collected in containers directly without any possibility for spill and later disposed on local arable land.

Describe neighbouring properties: Agriculture land currently in use mostly for grapes, vegetables and fruit growing, plant is at least 4km from village of Hamzali;

Is map and property lay-out provided? (Y/N) Yes, partially

Are there any potential EDD liabilities? No

PRODUCTION/PROCESS OPERATIONS: See Annex

Are there any wet process operations?

Washing of the equipment is the only wet process;

Describe equipment clean-up methods? Simple water washing, all of the equipment is connected in closed circuit and in first five years there is no need of clean up of the tanks and pipes;

Is Process Flow Diagram (PFD) prepared? (Y/N) Yes;

Does PFD identify areas for source reduction minimization? (Y/N) No, close operation process with minimal possibility of reductions as well as loss of raw material or final product;

Does PDF identify areas for environment/economic performance improvement? Yes;

Are wet processes seasonal? Through whole year with around 30% of capacity and August and September with full capacity;

Volume wastewater discharge per day: Small quantities of water used in process of cleaning of equipment and floors, around 20m³.

Where is domestic sewage discharged? In to septic tank on site, in future in waste water treatment plant;

Is there contaminated storm water runoff? No;

Is Groundwater contaminated? (Describe if yes): No;

Are there air pollution emissions? (Pollutants): No;

Any solid waste disposal: Some of the packaging containers are returnable and later recycled. Organic waste will be given to the local farmers for free. All of the other solid waste is collected by Public Communal Enterprise

Disposal Site: Municipal Landfill
containers are recycled

Any Recycling? Packaging

Large energy needs: No

Boiler: Yes

Fuel: Electricity and solar panels

EDD and PPA Summary and Recommendations (Page 2 of 2)

PRINCIPAL QUESTIONS/UNKNOWNNS THAT STILL NEED TO BE ADDRESSED?

Level of energy (electricity) used.

ADDITIONAL EDD/PPA ACTIVITIES THAT STILL NEEDED TO BE DONE?

IPPC permit for adjustment with operational plan is requirement according to Macedonian Law on Environment.

DESCRIBE ENVIRONMENTAL IMPACTS ON SURFACE WATERS?

There will be no impact on surface waters of recipient when waste water treatment plant is constructed and in full operation;

DESCRIBE OTHER PHYSICAL, BIOLOGICAL, SOCIAL IMPACTS? (If agricultural site, cover usage of fertilizers, pesticides, irrigation, etc.)

Generally installation will have positive social impact due to employment of local residents.

ARE EXISTING MITIGATION MEASURES BEING IMPLEMENTED? (Summarize problem/mitigation/schedule)

Treatment of waste water from the process by construction small waste water treatment plant.

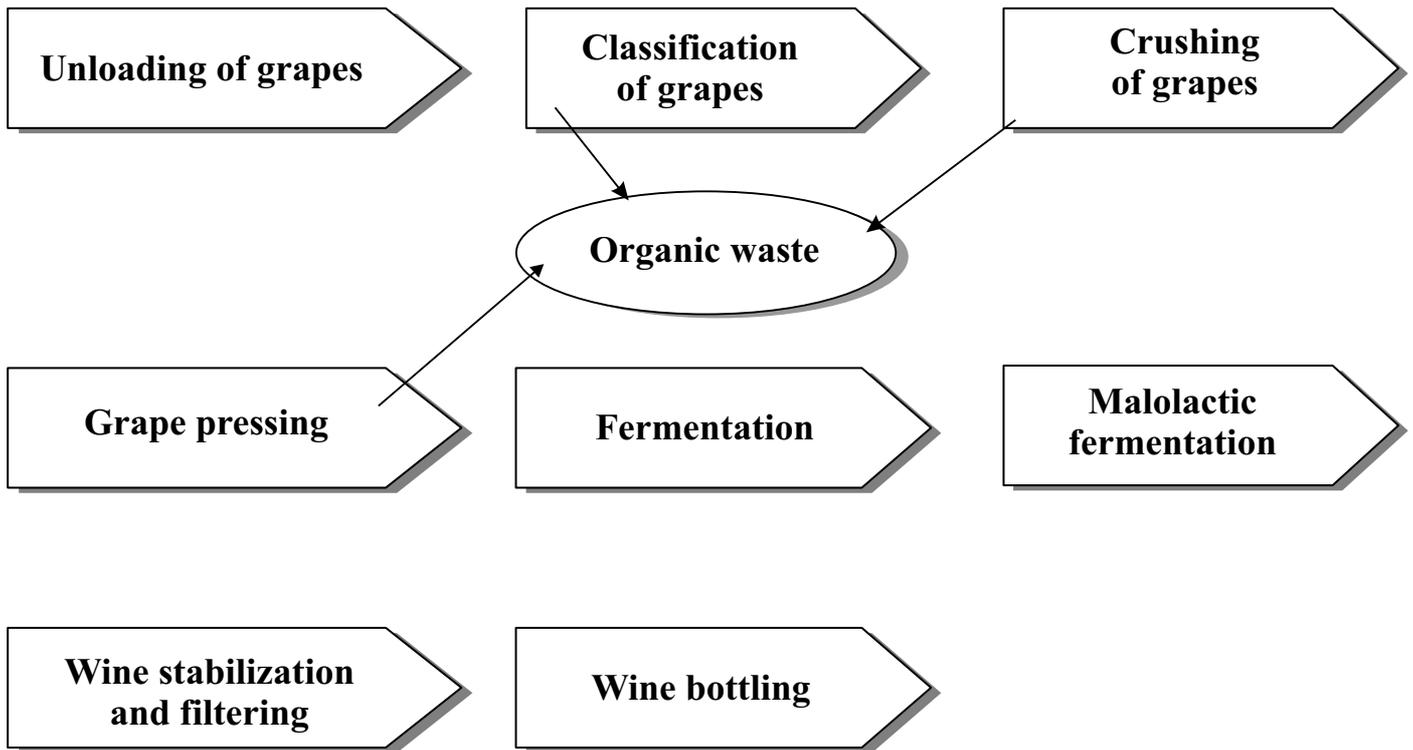
ARE ADDITIONAL MITIGATIONS RECOMMENDED TO REDUCE IMPACTS?

Treatment of organic waste produced (composting), there is possibility organic waste to be sold to the producers of rakija (brandy).

IS MONITORING RECOMMENDED? (Describe if yes): Monitoring is recommended of quality of treated waste water discharged in to nearby channel when construction of waste water treatment plant is finished and fully operational;

ARE SIGNIFICANT INCREASES IN EFFLUENTS (or extractions of natural resources) ASSOCIATED WITH THIS AgBiz PROPOSAL? (Y/N): No.

Agrolozar Production process Wine



STOPANSKI KOMPLEKS
AD AGROLOZAR - S. HAMZA
OPŠTINA BOSILOVO
GRAĐEŠNA PARCELA BR.
POVRŠINA ZA GRADBA 11-1-1

VINARSKA VIZBA

1. GLAVEN VLEZ VO KOMPLEKS
2. GLAVEN IZLEZ VO KOMPLEKS
3. PARKING PROSTOR
4. VNATREŠNI SPODBRAJANICI
5. EKONOMSKI VLEZ - IZLEZ
6. USIPEN KOT
7. PROIZVODSTVO NA VINO
8. POLJUNILICA
9. PRIDRUŽENI SODRŽINI



NOVOPROJEKTIRANA
SITUACIJA

M=1:500

TOHEM DOCEL - SKOPJE

