Comprehensive Nutrient Management Plan - Facility Information

Facility	**Cottonwood Springs Dairy LLC**		
Owner/ Operator Information	**Phillip Troost**	**Home Phone** **Cell Phone** **Office Phone**	 **575-703-0203** **575-365-2741**
Address	**491 West Funk Road Lake Arthur, NM 88253**	**Comments:**	
County	**Eddy**	CNMP review and update	
Legal Description	**Section 6, T16S, R25E**		
Soil and Water Conservation District	**Central Valley**		
Watershed Basin	**Upper Pecos-Long Arroyo**		
Hydrologic Unit Code #	**13060007110**		
Stream Segment	**20.6.4.206**		
AU on the Facility	**6,572**		
Total Acres Available for Land Application Owned or Leased by the Facility	**380+**		

Signature of Certified Planner: _____ **Date:** 11/25/09

Reddy Ganta

Signature of Certified Specialist – Manure and Wastewater Handling and Storage:

_____ **Date:**_____

Name

Signature of Certified Specialist – Land Treatment Practices:

_____ **Date:**_____

Name

Signature of Certified Specialist – Nutrient Management:

_____ **Date:** _____

Name

Signature of Client: _____ **Date:** 11-25-09

Phillip Troost

Comprehensive Nutrient Management Plan - Facility Information

Facility	Cottonwood Springs Dairy		
Owner/ Operator Information	Phillip Troost	Home Phone Cell Phone Office Phone	 505/703-0203 505/365-2741
Address	491 West Funk Road Lake Arthur, NM 88253	Comments:	
County	Eddy		
Legal Description	Sections 6, T16S, R25E		
Soil and Water Conservation District	Central Valley		
Watershed Basin	Upper Pecos-Long Arroyo		
Hydrologic Unit Code #	13060007110		
Stream Segment	20.6.4.206		
AU on the Facility	3800 (2800 currently)		
Total Acres Available for Land Application Owned or Leased by the Facility	385		

Signature of Certified Planner: _____ Date: 9/18/2006
Name

Signature of Certified Specialist – Manure and Wastewater Handling and Storage:
_____ Date: 9/26/06
Name

Signature of Certified Specialist – Land Treatment Practices:
_____ Date: 9/26/06
Name

Signature of Certified Specialist – Nutrient Management:
_____ Date: 9/26/06
Name

Signature of Client: _____ Date: 9/13/06
Phillip Troost

B. Safety and Emergency Action Plan

- Phone numbers for fire, ambulance, law enforcement, spill recovery, spill reporting, farm personnel
- Recovery equipment - what and where
- Action Plan for fire, personal injury, spills from containment structure, spills during pumping, spills during transport

Emergency Action Plan and Safety Precautions

Emergency Action Plan

Summary Action Plan

Facility Name	**Cottonwood Springs Dairy**	
Emergency Numbers ***911* **	➢ **Ambulance, Fire, Police – 911** ➢ **City of Artesia: 575-746-5000** ➢ **Sheriff Dept. : 575-746-9888**	
Non-Emergency Numbers	**State Police** **Spill Recovery** **Spill Reporting** **Farm Personnel** ➢ **Phil Troost Junior** ➢ **Shelly Spence**	**505/748-9718** **505-827-9329** **505-827-9329** **505-365 2741** **505-365-2741**
Recovery Equipment	**Heavy equipment is located on the Farm at various staging locations within ½ mile or closer to the Dairy facility.**	**Available equipment includes trailer-mounted pump, backhoes, tractors, front end loaders, spreaders, graders, etc.**
Action Plan	**Spills from Containment Structures: In the event of such failure, containment of the spill will be addressed by properly draining the structures, with effluent allowed to evaporate or be applied to cropland fields. Structures will then be repaired or replaced according to a certified engineering design.**	
	Spills during Pumping: In the event of pump failure, a truck-mounted portable pump will be used. Effluent will be allowed to evaporate or be pumped into a transport tanker for delivery to the storage lagoon. Additionally, there will be an earthen dike constructed down gradient of the sump. Structures will then be repaired or replaced according to a certified engineering design.	
	Spills during Transport: In the event of such failure, containment of the spill will be addressed by constructing a dike around the spill, ceasing the transport of the effluent, and allowing the effluent to evaporate or be pumped into a transport tanker for delivery to the storage lagoon. Structure or equipment will then be repaired or replaced accordingly.	

Emergency action plans are required to meet current animal waste management regulations. Develop an emergency action plan for your waste handling system. This plan will be implemented in the event that wastes from your operation are leaking, overflowing, or running off the site. Cottonwood Springs Dairy will call before the problem leaves the dairy. You should NOT wait until wastes reach surface waters or leave your property to consider that you have a problem. You should make every effort to ensure that this does not happen. This plan should be available to all employees at the facility, as accidents, leaks, and breaks could happen at any time. Cottonwood Springs Dairy will: (1) stop the release of wastes; (2) assess the extent of the spill and note any obvious damages; (3) contact the appropriate agencies; and (4) implement procedures to rectify the damage and repair the waste management system.

1. **Stop the release of wastes. Depending on the situation, this may or may not be possible. Suggested responses to several problems are listed below:**

   a. *Lagoon or slurry basin overflow* - possible solutions are:

      - add soil to berm to increase elevation of dam
      - pump wastes to fields at an acceptable rate
      - stop all additional flow to the structure (waters, flushing system, etc.)
      - call a pumping contractor
      - make sure no surface water is entering storage structure

      * *Note: These activities should be started when your lagoon level has exceeded the temporary storage level.*

   b. *Runoff from waste application field* actions include:

      - immediately stop waste application
      - create a temporary diversion or berm to contain the waste in the field
      - incorporate waste to reduce further runoff
      - evaluate and eliminate the reason(s) that caused the runoff
      - evaluate the application rates for the fields where runoff occurred

   c. *Leakage from the waste distribution system:*

      - pipes and sprinklers – actions include:

        ☐ stop recycle (flushing system) pump

c. *Any damage noted, such as employee injury, fish kills, or property damage?*

d. *Did the spill leave the property?*

e. *Does the spill have the potential to reach surface waters?*

f. *Could a future rain event cause the spill to reach surface waters?*

g. *Are potable water wells in danger (either on or off the property)?*

3. **Contact appropriate agencies**

During normal business hours, call your NMED office: (505) 827-2918; after hours, call this emergency number: (505) 827-9329. Your phone call should include: your name, facility, telephone number, the details of the incident from item 2 above, the exact location of the facility, and the location or direction of movement of the spill, weather and wind conditions, what corrective measures have been undertaken, and the seriousness of the situation.

a. If spill leaves property or enters surface waters, call local EMS.

b. Instruct EMS to contact local Health Department.

c. Contact CES, local SWCD office, and local NRCS office for advice/technical assistance.

d. If none of the above works, call 911 or the Sheriff's Department and explain your problem to them. Ask them to contact the agencies as listed above.

4. **Implement procedures** as advised by NMED and technical assistance agencies to rectify the damage, repair the system, and reassess the waste management plan to keep problems with release of wastes from happening again.

The emergency action plan must include provisions for emergency spreading or transfer of waste from all waste storage structures in the system. This may include emergency pumping or spreading (to prevent overtopping of a storage structure) during periods when the soil or crop conditions are not conducive to normal spreading or application. NMED must be contacted for guidance to land apply waste in this instance. You should consider which fields are best able to handle the waste without further environmental damage. Application rates, methods, and minimum buffer distances must all be addressed. If transferring

waste to another location for application, consider the limitations that may be involved with the transfer of waste to that site and application considerations at that location.

The emergency action plan should also include phone numbers for fire, ambulance, law enforcement, spill recovery, spill reporting, farm personnel; recovery equipment – what is available and where; and an action plan for spills from containment structure, spills during pumping, and spills during transport.

The emergency action plan should be available and understood by all employees at the facility. The main points of the plan (order of action) along with the relevant phone numbers should be posted by all telephones at the site. A copy should also be available in remote locations or vehicles if the land application sites are not close by the facility office. It is the responsibility of the owner or manager of the facility that all employees understand what circumstances constitute an imminent danger to the environment or health and safety of workers and neighbors. The employees should be able to respond to such emergencies and notify the appropriate agencies of conditions at the facility.

Safety Precautions

Accidents and injuries don't just happen, they are caused. Behind every accident is a chain of events that leads up to an unsafe act, unsafe conditions, or a combination of both. Safety in the workplace should be everyone's concern. Communication between supervisors and employees generates ideas and safety awareness that leads to accident prevention. Safety programs, safety manuals, and safety meetings are essential in providing the lines of communication that lead to a safe, accident-free workplace.

Dangerous Gases

Dangerous situations can be associated with five main gases that are produced in livestock and poultry buildings and manure storage structures. These gases are listed in Table 1 along with some of their characteristics. All of these are colorless.

Table 1. Characteristics and Effects of Gases Produced in Livestock Buildings and Manure Storage Structures

Gas	Odor	Density	Health Effects
Ammonia (NH_3)	Pungent	Lighter than air	Irritation to eyes and nose. Asphyxiating at high levels.
Carbon Dioxide (CO_2)	None	Heavier than air	Drowsiness, headache. Can be asphyxiating.
Carbon Monoxide (CO)	None	Heavier than air	Headache, chest pains, potential for problems with developing fetuses. Can be asphyxiating.
Hydrogen Sulfide (H_2S)	Rotten-egg smell	Heavier than air	TOXIC: causes headache, dizziness, nausea, unconsciousness, death.
Methane (CH_4)	None	Lighter than air	Headache, asphyxiant, explosive in 5% to 15% mixture methane with air.

Ammonia

Ammonia (NH_3) is released from fresh manure and urine and during anaerobic decomposition. Ammonia levels tend to be high in buildings where manure is not regularly and thoroughly removed. Examples include buildings with litter, solid floors, or scrapers where manure is spread over the floor. Heated floors can increase ammonia release. Furthermore, when pH levels are higher than 8.0, ammonia is more susceptible to being released. Ammonia is very soluble in water, therefore liquid manure systems tend to release less ammonia. Building ventilation also affects ammonia levels in the air.

Carbon Dioxide

Death of animals in closed confinement buildings following a ventilation-equipment failure (such as a power failure) is due in part to excessive carbon dioxide. Carbon dioxide (CO_2) is released by unvented heaters, through livestock respiration and manure decomposition. In fact, most of the gas in bubbles coming from stored manure or lagoons is CO_2. Vigorous agitation of stored manure can also release a large amount of carbon dioxide in a short time period.

Carbon Monoxide

Carbon monoxide (CO) can cause workers to develop headaches and experience chest pain. Pregnant women should be aware of the potential health hazard this gas poses to a developing fetus. Carbon monoxide is rare in confinement buildings, but can accumulate in areas with poor ventilation such as swine farrowing rooms and nursery buildings. Evidence of carbon monoxide overexposure among livestock may

first appear as aborted litters and stillbirth. The main sources of CO are heaters (LP-fired, radiant brooder, or space).

Hydrogen Sulfide

Hydrogen Sulfide (H_2S) is the most toxic gas generated from the storage liquid manure storage. Exposure to 200 ppm for an hour can cause headaches and dizziness; 500 ppm for 30 minutes can cause severe headaches, nausea, excitement, or insomnia. High concentrations of 800 to 1,000 ppm can cause immediate unconsciousness and death through respiratory paralysis unless the victim is moved to fresh air and artificial respiration is immediately applied. Be aware even the characteristic rotten-egg smell of hydrogen sulfide does not give adequate warning. The sense of smell is rapidly fatigued by the gas and high concentrations do not give a proportionately higher odor intensity. Also note that dangerous concentrations can be released by agitation of stored liquid manure. Concentrations reaching 200 to 300 ppm have been reported in buildings a few minutes after starting to pump waste from a storage pit and can be as high as 800 ppm during vigorous agitation.

Methane

Methane (CH_4) is a product of manure decomposition under strict anaerobic conditions, such as those found in an anaerobic or biogas digester. It is insoluble in water, lighter than air, and thus will accumulate in stagnant air corners in the top of enclosed pits or buildings. Methane is not toxic, but at high concentrations may cause an asphyxiating environment. Methane concentrations in confinement housing is normally well below the levels that may be explosive. However, explosions attributed to methane have occurred around manure storage pits.

First Aid for Victims of Manure-Gas Asphyxiation

1. Do not attempt to rescue a victim from a hazardous gas situation unless you are protected with a supplied air-breathing apparatus.

2. Have someone telephone for an emergency medical (rescue) squad, informing them there is a "victim of toxic gas asphyxiation."

3. If the victim is free from the immediate area of danger and there is no personal threat to life, check for breathing (with the victim on his/her back). If there is no breathing, give four quick breaths and check for a pulse.
   - *If there is a pulse*, continue mouth-to-mouth breathing every 5 seconds (12 per minute).
   - *If there is no pulse*, start CPR (cardio-pulmonary resuscitation) immediately.

Training courses for rescue breathing and CPR are available through local Red Cross and Cooperative Extension Service centers. These courses provide the training and practice necessary to perform CPR.

Effect of Air Quality on Human Health

Health problems associated with poor air quality include coughing, phlegm production, wheezing, chest tightness, headaches, shortness of breath, eye irritation, sneezing, runny nose, and nasal congestion. Problems are usually greater the more time a worker spends in the presence of the contaminant and the greater the concentrations of airborne contaminants. In addition, some people are more susceptible than others.

Health problems may be chronic (lasting a long time) or acute (severe but short term). Since chronic and acute problems can be mistaken for other health problems, such as the flu or allergies, the work

environment is often overlooked as a cause of the symptoms and precautions are therefore not taken. Table 2 lists some symptoms swine facility workers in Iowa have experienced as the result of poor air quality in swine houses.

Table 2. Health Symptoms of Iowa Swine Facility Workers	
Symptom	**Prevalence (percent)**
Cough	67
Sputum or phlegm	56
Scratchy throat	54
Runny nose	45
Burning or watery eyes	39
Headaches	37
Chest tightness	36
Shortness of breath	30
Wheezing	27

Safety Precautions with Manure Storage

You should consider safety when constructing, operating and managing animal waste management systems. The following major safety points should be considered when installing and operating manure equipment, structures, or systems:

1. Do not enter a manure pit unless following procedures for entering a confined space.
2. When agitating a manure storage structure, always have at least one additional person available to seek help if trouble occurs.
3. Properly designed and operated ventilation systems can reduce the concentration of gases within the building, thereby improving animal performance.
4. When possible, construct lids for manure pits and tanks. Keep these lids in place. If an open, ground-level tank or pit is necessary, build a fence around it and post with "Keep Out" and "DangerManure Storage" signs.
5. Get help before attempting to rescue livestock that have fallen into a manure storage structure.
6. Build railings along all walkways or piers of open manure storage structures.
7. Permanent ladders on the outside of above-ground tanks should have locked entry guards or the ladder should not be able to be reached from the ground.
8. Never leave a ladder standing against an above-ground tank.
9. Construct permanent ladders on the inside wall of all pits and tanks, even if covered. Use noncorrosive material to prevent deterioration of the ladder.
10. Fence in earthen storage ponds and lagoons, and erect signs: "Danger Manure Storage." Additional precautions include a minimum of one lifesaving station equipped with a reaching pole and a ring buoy on a line.

11. All push-off platforms need a barrier strong enough to stop a slow-moving tractor.

12. If possible, remove animals from buildings before agitating manure stored in in-house pits. Otherwise:

    a. if the building is mechanically ventilated, turn fans on full capacity before starting agitation, or

    b. if the building is naturally ventilated, do not agitate unless there is a brisk breeze. Watch animals closely when beginning to agitate, and turn off the pump at the first sign of trouble.

13. If manure storage is outside the livestock building, use a water trap or other device to prevent gases from the storage structure from entering the building.

14. During agitation, if an animal becomes affected by toxic gases, do not try to rescue it. You might become a victim of toxic gases. Turn off the agitation pump, ventilate the building, and do not enter the building until gases have had a chance to escape.

15. Don't smoke, weld, or use an open flame in confined, poorly ventilated areas where methane can accumulate. Electric motors, fixtures, and wiring near manure storage structures should be kept in good condition to prevent a spark from igniting the methane.

16. Keep all guards and safety shields on all mechanical equipment such as pumps, manure spreaders, and irrigation equipment.

Vehicle Safety

Only employees with a current, valid NM driver's license should drive vehicles. In the case of specialized vehicles, only trained operators should operate the vehicles. The driver of the vehicle should inspect the vehicle prior to operating it.

1. All vehicles should be operated within the legal speed limit at all times or at a lower speed where conditions warrant.

2. Vehicles should not be used to transport unauthorized personnel.

3. The driver should be familiar with the capacity and required clearances for safe use of the vehicle.

4. Vehicle windshields and windows should be kept clear of obstructions.

5. Objects or persons being transported should be located so that they do not obstruct the driver's view.

6. Always know the proper operating procedures for each piece of equipment used.

Heavy Equipment Vehicles

1. Make sure that the air brake system (if present) has reached operating pressure before driving the vehicle.

2. Make sure everyone is clear of the vehicle before starting. Slight steering movement can occur as the engine starts causing machine movement.

3. Stay clear of the engine when it is running. Work on the engine only when it is off.

4. Do not move the steering wheel until everyone is clear of the vehicle.

Power Take-Off (PTO)

1. Refer to the safety section of owner's manual.

2. Stay clear of rear of vehicle during operation.

3. Do not wear loose fitting clothing, scarves, or jewelry that could get caught in the PTO.

4. Tie back long hair.

Hydraulic Systems

1. Do not open pressurized lines. Hydraulic fluid can cause severe burns, eye injury, or skin irritation.

2. Search for leaks in the line using a piece of cardboard or wood, not your hands.

3. If anyone is injured by hydraulic fluid, administer first aid, then contact a physician.

4. Stay clear of leaky hydraulic lines.

Electrical Safety

All employees must lock-out/tag-out any piece of equipment they are working on where the unexpected energization, startup, or release of stored energy could occur. In case of electrocution, turn off power to the electrical source or use an insulated implement, such as a piece of wood, to separate the victim from the source. Do not attempt to pull a victim away from the electrical source with your bare hands.

Responsibilities of the Site Supervisor

The following should be the responsibility of the site supervisor:

1. Establish and supervise an accident prevention program and a training program that is designed to improve the skills and competency of all employees in the field of occupational safety and health.

2. Conduct preliminary investigations to determine the cause of any accident that results in injury. The results of this investigation should be documented for reference.

3. Establish and maintain a system for maintaining records of occupational injuries and illnesses.

4. Provide new employees with a safety orientation on the special hazards and precautions of any new job.

5. Conduct job briefings with employees before starting any job to acquaint them with unfamiliar procedures.

6. Issue necessary safety equipment and manuals.

7. Conduct periodic group safety meetings with all employees.

The Safety Program should include:

- procedures for reporting injuries;
- procedures for reporting unsafe conditions or practices;
- use and care of personal protective equipment;
- proper actions to be taken in the event of emergencies;
- identification of hazardous gases, chemicals, or materials; and
- instructions on safe use of hazardous gases, chemicals, or materials and emergency procedures following exposure.

First Aid Training

There should be a person available at all times with first aid training in:

- bleeding control and bandaging
- artificial respiration, including mouth-to-mouth resuscitation
- poisons
- shock, unconsciousness, stroke
- burns
- sunstroke, heat exhaustion
- frostbite, hypothermia
- strains, sprains, hernia
- fractures, dislocations
- bites, stings
- transportation of the injured
- specific health hazards likely to be encountered by co-workers

There should be adequate, readily available first aid kits and supplies on site. Emergency telephone numbers must be posted by telephones.

Eyewash

Suitable facilities for quick drenching or flushing of the eyes and body should be provided in areas where the eyes or body of any person may be exposed to injurious chemicals and materials.

Responsibilities of the Employer (Safe Place Standards)

The following are the responsibility of the *employer*:

1. The employer should furnish to each of his employees a workplace free from recognized hazards that may cause serious injury or death.

2. The employer should furnish and use safety devices and practices that are reasonably adequate to render the employee workplace safe. The employer should do everything reasonably necessary to protect the life and safety of employees.

3. No employer should require an employee to be in any workplace that is not safe.

Responsibilities of the Employee

The following are the responsibility of the *employee*:

1. Each employee should keep themselves informed of the contents of the appropriate sections of this manual and any other safety manual provided by the employer and apply it to their work.

2. Each employee should perform their duties so as to provide safety to themselves and other employees.

3. An employee should request instruction from the site supervisor if there is a question as to the safe performance of an assigned task.

4. Each employee should wear clothing that is suitable for the job performed.

5. Each employee is responsible to report to the site supervisor any unsafe condition, acts, or hazards.

6. Each employee should wear appropriate personal protective equipment.

Personal Protective Equipment (PPE)

Employees should use the appropriate personal protective equipment, or protective devices, provided for their work. Before starting work, these items should be inspected by the employee to ensure that they are in safe operating condition. These items include, but are not limited to:

- Hard hats should be worn when appropriate.
- Hearing protection should be used, as needed, to reduce noise levels when working around generators and heavy equipment.
- Eye protection should be worn when operating shop tools, and when working around chemicals.
- Safety belts/seat belts should be worn at all times in vehicles.
- Approved welding goggles or helmets and gloves should be worn while welding, cutting, or both. Fasten clothing around the neck, wrists, and ankles.

Lifting and Carrying

Everyone should observe the following guidelines to avoid possible injury when lifting and carrying objects:

- Set your feet far enough apart to provide good balance and stability (approximately the width of your shoulders).
- Get as close to the load as practical, bending your legs at the knees, and bending at the hips to keep your back as straight as possible.
- Straighten your legs to lift the object, and at the same time bring your back to a vertical position.
- When lifting an object with another person, be sure that both individuals lift at the same time and let the load down together.
- Do not carry loads above people. Do not hoist, lower, or move any person with a crane by allowing them to stand on the hook, or by any nonapproved method.
- Do not stand under a suspended load or boom unless the nature of the work requires it.

Personal Hygiene

Wastewater contains pathogens (disease-causing organisms). Hence, good personal hygiene is very important!

1. Keep your hands away from your nose, mouth, eyes, and ears to avoid ingestion of wastewater.

2. Nonpermeable gloves should be worn when handling any equipment covered with wastewater or residuals.

3. Special care (e.g., protective, waterproof dressing) should be taken to keep any area of broken skin covered to avoid possible infection. If a worker suffers an injury which results in an open wound

or laceration, they should be given a tetanus booster.

4. Wash hands thoroughly with soap before smoking, eating, drinking, or after work.

5. Work clothing should be changed and washed daily.

6. If contact with wastewater does occur, wash the area thoroughly with water and soap. Sponge any cuts with an antiseptic solution and cover with a clean, dry gauze dressing and waterproof adhesive.

Immunization

Each facility may want to consult a physician or the local health department to determine the need for immunizations for the employees working at the site. Adult tetanus and diphtheria should be given routinely every 10 years, or at shorter intervals when injury occurs.

Working in a Confined Space

A confined space is defined as a space that has limited means of entry and exit, has an adequate size and configuration for employee entry, and is not designed for continuous worker occupancy. The tanks designed for storage, transport, and application of wastes are classified as confined spaces and fall under the jurisdiction of the New Mexico Department of Labor, which is the agency that enforces the Occupational Safety and Health Act (OSHA). Under new OSHA regulations, there are certain confined spaces that require a permit for entry. A permit-required confined space is defined as a confined space that has one or more of the following characteristics:

1. it contains or has the potential to contain a hazardous atmosphere;

2. it contains a material that has the potential for engulfing an entrant;

3. it has an integral configuration such that an entrant could be trapped or asphyxiated by inwardly-converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or

4. it contains any other recognized serious safety or health hazard.

If a facility has permit-required confined spaces, to be in compliance with the new OSHA regulations, a written confined space entry program must be developed and implemented. Enclosed facilities which are used to handle wastewater or wastewater solids, such as the tanks and/or tanker trucks, would fall under the permit-required confined space regulations. Do not enter a permit-required confined space without proper training, equipment, and support personnel. (*The confined space regulations can be found in the Code of Federal Regulations 29 CFR 1910.147.*)

When working in a space that does not require a confined space permit, the following safety actions must be taken:

1. Always assign a standby person to remain on the outside of the confined space. It is the standby person's responsibility to be in constant contact (visually, verbally, or both) with the workers inside the confined space as long as anyone is in the space.

2. Wear ear protection, as needed. Noise within a confined space can be amplified because of the design and acoustic properties of the space.

3. Use only an air-supplying respirator, such as a self-contained breathing apparatus (SCBA) or a supplied-air respirator with an auxiliary escape-only SCBA in confined spaces where there is insufficient oxygen.

Fire Prevention and Protection

It is important to be fire conscious in the outdoor environment. Employees should be knowledgeable of the fire conditions at the site and operate accordingly. Poor site maintenance, worn or defective electrical systems, and welding and cutting may contribute to dangerous situations. The following precautions should be observed:

1. Do not smoke near equipment or fuel trailers. No open flame should be allowed near wastewater storage tanks. Combustible gases can accumulate and when vented to the surrounding area, may become explosive.
2. Do not tamper with or remove fire-fighting equipment from designated locations for purposes other than fire-fighting or rescue operations. Access to fire equipment should not be hindered. If fire extinguishers are used, they should be promptly recharged. Inspect fire extinguishers monthly to be sure they are in good operating condition.

Nutrient Management Plan

New Mexico Emergency Action Plan

Cottonwood Springs Dairy
491 West Funk Road
Lake Aurthur, NM 88253

Eddy County

Prepared by:

GLORIETA GEOSCIENCE, INC.
P.O. Box 5727, Santa Fe, NM 87502
(505) 983-5446 Fax (505) 983-6482
ggi@glorietageo.com

Operation and Maintenance – Emergency Action Plan

Emergency Response Personnel

Name	Phone
Eddy County Sheriff's Department	575-748-2323 (or **911**)
Eddy County Public Health	575-746-9818
Carlsbad Soil and Water Conservation District	575-628-1532

Recovery Equipment

Equipment	**Location**
Sand bags (20-25)	On site – Cottonwood springs Dairy
Absorbent pads (10-15)	On site – Cottonwood springs Dairy
Backhoe	On site – Cottonwood springs Dairy
Front End Loader	On site – Cottonwood springs Dairy
Tractor	On site – Cottonwood springs Dairy
Trailer-Mounted Pump	On site – Cottonwood springs Dairy
Road Grader	On site – Cottonwood springs Dairy
Spreader	On site – Cottonwood springs Dairy
Heavy equipment is located on the facility at various staging locations.	

Operation and Maintenance – Emergency Action Plan

Initiate Action Plan

In case of emergencies, runoff catchment basin located southeast of the facility will be used as emergency runoff discharge abatement area. The following BMPs will be followed:

Spills From Containment Breaches or Structure Failures

1. Construct an earthen dike to contain or divert spill away from times, watercourses, ditches, roadways, and fresh water sources.
2. Relieve containment of manure sufficient to cease the unplanned release of manure.
3. Setup equipment and procedures to secure the containment from further uncontrolled releases until proper repairs are made.
4. Remove spill from diked area, pump and/or transfer to green water lagoon as necessary.

Spills During Pumping Operations

1. Shut off all pumping equipment.
2. Build a sand bag dike to contain or divert spills away from tiles, water courses, and roadways.
3. Use absorbent pads to stop leaks in dike.
4. Remove spill from dikes area with vacuum tank.
5. If larger dike is necessary, use backhoe to reinforce with soil barrier.

Spills During Transportation on Public Roadways

1. Coordinate efforts with local law enforcement and emergency personnel.
2. Contain spill or divert manure away from watercourses and roadways.
3. Wash manure from roadways and public areas into the containment or diversion structure.
4. Remove spill from diked area, pump and/or transfer to green water lagoon as necessary.

Cleanup Spill Area

1. Break down dike.
2. Dry out sandbags.
3. Discard any absorbent pads used.
4. Repair or replace failed components as soon as possible and no later than 48 hours from time of failure.
5. Level any soil disturbance and incorporate residue.
6. Replace any discarded or damaged equipment.

Take additional containment measures, corrective measures, or property restoration measures.

Operation and Maintenance – Emergency Action Plan

Spill Reporting

If there is a discharge of pollutants **to the waters of the United States**, make verbal notification within 24-hours to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6 EN-W), Dallas, Texas at **214-665-6595** and NMED at **505 827-9329**. Submit a written notification of the spill within fourteen (14) working days of the discharge of pollutants to the waters of the United States.

If the spill ***HAS ENTERED*** a water supply or public waters of the State, immediately notify the proper agency listed.

Agency Name	Phone
USEPA Region 6	214-665-6595
NMED (emergency/24hrs)	505-827-9329
Eddy County Public Health	575-746-9818
Carlsbad Soil and Water Conservation District	575-628-1532

If the spill ***DID NOT*** enter a water supply or public waters of the State, notify the management personnel listed below.

Agency Name	Phone
NMED Ground Water Quality Bureau (during business hours)	505-827-2918
NRCS District Conservationist, Garth Grizzle	575-887-3506
New Mexico State Police	575-624-6770 (Roswell) 575-885-3137 (Carlsbad)
Farm Personnel: Phillip Troost Jr., Owner	575-627-0751

Additional Notifications

Responsibility for transportation of manure on all routes offsite and public use roadways belongs to the commercial transporter. All other transfer of manure is within the property (site map available in NMP Section III.C).

The management personnel will notify all affected adjacent landowners if there is a discharge offsite.

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Written Reports Required Following Release to Waters of the United States
A written notification of the spill need to be submitted within fourteen (14) working days of the discharge of pollutants to the waters of the United States to EPA and NMED.

The written notification shall include:

1. Name of person reporting spill
2. Date and time of spill
3. Location of spill
4. Pumping volume per minute
5. Approximate amount of spill (gallons)
6. Description of spill
7. Flow path to the receiving water body
8. Estimated volume of discharge to the receiving water body
9. Duration of spill (exact dates and times and anticipated time spill may continue)
10. Steps taken or planned to reduce spill
11. Steps taken to prevent reoccurrence of the discharge
12. Recommendations to prevent future spill of this kind.

Written spill notification (within 14-days) shall be submitted to EPA and NMED at:

- EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas

- Program Manager, Surface Water Quality Bureau, New Mexico Environment Department, P.O. Box 5469, 1190 Saint Francis Dr., Santa Fe, New Mexico 87505

Monitoring Plan for All Discharges from Retention Structures
In the event of any overflow or other discharge from a manure and/or wastewater storage or retention structure following actions will be taken:

Sample Collection: At least one grab samples will be collected from the over-flow or discharges from retention structure. If conditions are safe for sampling grab samples will be collected from the initial discharge (within 30 minutes). If conditions are not safe for sampling documentation will be provided stating why samples could not be collected and analyzed. Documentation may include conditions such as local flooding, high winds, hurricane, tornadoes, electrical storms etc.

Samples will be collected once dangerous conditions have passed from the retention structure from which discharge occurred.

Required Sample Analysis: Discharge water will be sampled and analyzed for the following parameters:

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Total nitrogen, nitrate nitrogen, ammonia nitrogen, total phosphorus, *E.coli* bacteria, five-day BOD, total suspended solids, pH and temperature. The discharge will be analyzed in accordance with approved EPA methods for water analysis listed in 40 CFR Part 136

Monitoring Results Submission: Monitoring results of the spill samples will be submitted to EPA Region 6, Compliance Assurance and Enforcement Division within thirty (30) days of the discharge event at the following address:

EPA Region 6
Compliance Assurance and Enforcement Division
Water Enforcement Branch (6 EN-W)
U.S. EPA, Region 6
P.O. Box 50625
Dallas, TX 75250