APPENDIX O

OPERATING PLAN

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APPENDIX O.1

PERSONAL TRAINING PROGRAM OUTLINE

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PERSONNEL TRAINING PROGRAM OUTLINE

PERSONNEL TRAINING

Facility personnel involved in waste management activities will complete a comprehensive program of classroom and on-the-job instruction to ensure that the landfill is operated in compliance with all applicable regulations, including those enforced by the United States Environmental Protection Agency, the Illinois Environmental Protection Agency and the Occupational Safety and Health Administration. The major elements of the training program, as applicable to specific positions, include the following:

Waste Management Regulations, Policies and Procedures

- Regulatory Requirements
- Review of Site Operating Practices
- Use of Protective Equipment
- Load Checking Procedures
- Hazard Prevention and Response Plan Review
- Storm Water NPDES Permit Requirements

OSHA Hazard Communication Program

- OSHA Hazard Communication Standard
- Material Safety Data Sheets
- Emergency Phone Numbers for All Vendors of Hazardous Chemicals
- Hazardous Chemicals Safety Training

Safety and Health

- Employee Safety and Health Program
- Hazardous Energy Control Program
- Confined Space Entry
- Hearing Conservation Program
- Respiratory Protective Program
- PCB waste handling

On-The-Job Training

- Equipment Operation
- Load Inspection
- Field Inspection

Training is conducted as new employees are hired and as existing employees perform new duties. Classroom reviews of the initial training and other pertinent training issues are conducted annually.

APPENDIX O.2

HAZARD PREVENTION AND EMERGENCY RESPONSE PLAN

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HAZARD PREVENTION AND EMERGENCY RESPONSE PLAN

Clinton Landfill No. 3- Chemical Waste Unit

DeWitt County, Illinois

October 2007

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1 INTRODUCTION

This Hazard Prevention and Emergency Response Plan (Plan) provides a plan of operations to ensure that the properties and populations surrounding Clinton Landfill No. 3 will be protected from danger in the event of fires, spills, or other operational accidents at the facility.

This Plan is divided into five main sections. Section 2 provides an overview of the organization, responsibilities, training, and health and safety considerations of the facility Hazard Prevention and Emergency Response Team. Section 3 identifies and provides an evaluation of the hazards that could threaten properties and populations surrounding the facility. Section 4 describes the procedures to be followed to prevent threatening hazards from occurring. Section 5 describes response procedures in the event an emergency. Section 6 identifies organizations and facilities that are available to provide outside assistance in the event of an emergency.

This Plan is not intended to fully address all safety and health issues related to onsite personnel. These issues, which include hazardous energy control (i.e. lockout/tagout), confined space entry, hearing conservation, and respiratory protection programs, are the subjects of other Corporate health and safety policy programs.

2 HAZARD PREVENTION AND EMERGENCY RESPONSE TEAM

2.1 Team Organization

Hazard prevention and emergency response require the cooperation and teamwork of all people who are granted access to the facility. Although specific Clinton Landfill, Inc. (CLI) employees are responsible for developing and implementing this Plan, all people who are granted access to the facility, including employees, vendors, truck drivers disposing waste at the facility, and visitors are expected to follow good work practices to minimize hazards and abide by this Plan.

CLI's Hazard Prevention and Emergency Response Team is comprised of the following:

Landfill Director: The Landfill Director has the overall responsibility for hazard prevention and emergency response. The Landfill Director's responsibilities include ensuring that the facility is adequately constructed, staffed and equipped to minimize hazards. The Landfill Director is also responsible for ensuring that the proper regulatory agencies are notified in the event of a release of a reportable quantity of a toxic or hazardous material.

Corporate Health and Safety Officer: The Corporate Health and Safety Officer is responsible for reviewing, modifying, and approving this Plan and for confirming through audits that this Plan is implemented. The Corporate Health and Safety Officer periodically meets with the Landfill Director and Landfill Manager to discuss any potential hazards or safety-related issues noted during audits.

Landfill Manager: The Landfill Manager is responsible for implementing the Plan on a day-to-day basis. The Landfill Manager is also responsible for ensuring that a designated Emergency Response Coordinator is onsite at all times that the facility is accepting waste.

Emergency Response Coordinator: The Emergency Response Coordinator is responsible for coordinating CLI's response to emergencies that have the potential to present a danger to human health or the environment.

2.2 Personnel Training

All CLI employees whose responsibilities include active involvement in load checking or waste disposal activities are trained to recognize and mitigate hazardous conditions in accordance with this Plan. Training occurs at the time of employment and prior to the employee being assigned new responsibilities for which they have not been trained. Refresher training is conducted annually.

3 HAZARD IDENTIFICATION

Based on review of the proposed facility design and operating procedures, CLI concludes that the proposed facility presents very little danger to the surrounding area due to fire, spills, or other operational accidents. There are a few routine operational hazards, however, that, if left unchecked, could possibly present a danger to the properties or populations surrounding the facility. These operational hazards are described below.

3.1 Fires and Explosions

Grass and Forest Fires

A grass or forest fire is probably the most likely hazard that could endanger the surrounding properties. Considering the relative remoteness of the facility, a grass or forest fire does not substantially threaten surrounding populations.

A grass or forest fire could start as a result of careless open flames, smoking, or hot work. Vehicle and equipment fires could also cause a fire. Section 4 of this Plan describes operational procedures that will be followed to minimize these hazards.

A threatening grass or forest fire could only occur during extremely dry and/or windy conditions. Even then, the lack of potential fuel during the periods when surrounding agricultural land is fallow would limit its spread.

Waste Fires

Two types of waste fires are considered. The first type is a fire occurring in waste prior to the waste being covered. The second type is a subsurface fire occurring in the buried waste. Both types of fires are relatively rare.

A fire in uncovered waste would be confined to a relatively small area since waste is covered each day. Although such a fire could release noxious smoke, the limited amount of fuel that would be available, lack of the presence of hazardous waste, and the distance to offsite populations would limit the danger to surrounding populations.

A waste fire could start as a result of careless open flames, smoking, or hot work. Vehicle and equipment fires could also cause a fire. Section 4 of this Plan describes operational procedures that will be followed to minimize these hazards.

Subsurface landfill waste fires can occur when significant aerobic biodegradation is allowed to occur in an uncontrolled manner within the waste mass. Such a fire would be entirely self-contained and emit very little smoke. A subsurface landfill fire could theoretically damage the landfill's liner system and thus should be considered.

Methane Explosions

Explosive concentrations of methane are generated as the waste degrades anaerobically. Within the landfill itself, the risk of explosion is extremely remote because of the absence of oxygen. However, explosions can occur if methane is allowed to migrate outside the landfill boundaries and collect in enclosed areas such as utility vaults, basements, buildings, etc.

3.2 Chemical Reactions

A chemical reaction could occur when non-compatible materials contact each other. For instance, acidic wastes mixed with caustic reagents could result in a chemical reaction. Chemical reactions can result in toxic fumes, vapors, and/or a fire or explosion. The proposed landfill will not accept hazardous wastes; therefore, the risk of a hazardous chemical reaction is very low.

3.3 Toxic or Hazardous Material Spills

Toxic or hazardous materials that could potentially be spilled in significant quantities are landfill leachate (including landfill gas condensate), industrial waste, PCB liquids, fuels, and lubricants.

A surface spill of toxic or hazardous materials could endanger water quality and aquatic life if it were to escape the site. A large subsurface release of leachate/condensate could threaten groundwater.

4 HAZARD PREVENTION

CLI's priority is to prevent hazards from occurring. The following sections describe design and operational procedures that CLI will perform in order to minimize the chance that hazards will occur.

4.1 Fires and Explosions

The first defense against fires and explosions is to prevent their occurrence. The second line of defense is an effective response. This section describes procedures to be followed to prevent fires and explosions from occurring. CLI's response to fires and explosions is described in Section 5.

The primary threat of fires result from careless smoking, careless welding or other hot work, improper equipment maintenance, disposal of burning or hot waste loads, and improper landfill gas control system operations. The primary threat of explosions is migration of methane (landfill gas) into an enclosed area. The following sections describe the preventative procedures that are to be enforced to prevent fires and explosions.

Open Flames, Smoking and Hot Work

Open flames, smoking and hot work (e.g. welding, use of a cutting torch, and HDPE fusion/welding) are prohibited at the following locations:

- Within the waste boundaries where the waste is covered by less than 1 foot of cover soil unless monitoring demonstrates that the atmosphere at the work zone does not contain hazardous levels of combustible gas,
- Within 10 feet of the landfill gas collection and control system (except flames that are intended as part of the control system), leachate/condensate storage tank(s), leachate sump risers, condensate lift stations, and flammable material storage areas unless monitoring demonstrates that the atmosphere at the work zone does not contain hazardous levels of combustible gas, and
- Within 20 feet of fuel storage tanks and equipment refueling operations.

Equipment Maintenance

Equipment shall be routinely cleaned to ease identification of leaks and damaged electrical components, and to ensure that oil and other flammable materials do not accumulate on hot engine and exhaust

components. Equipment with fuel and/or excessive lubricant leaks is not to be used until repaired. All electrical components shall be properly maintained, well insulated and grounded as appropriate.

Waste Material Fires

Waste material fires are best prevented by not accepting hot or burning waste, and by properly operating the landfill gas collection and control system to prevent uncontrolled aerobic biodegradation of the waste mass.

The facility Operating Plan describes the load inspection procedures that will minimize the chance of accepting waste materials that do not conform to the facility waste acceptance criteria. In addition to load inspection, the equipment operators will be trained to identify reactive wastes that were undetected and allowed to be dumped. Response procedures are provided in Section 5 of this Plan.

A portion of the Chemical Waste Unit will be overlain with municipal solid waste (MSW) to the final elevations depicted on Drawing No. D14. An earthen separation layer, shown on Drawing No. D16 will separate the Chemical Waste Unit from the MSW. Although significant quantities of landfill gas will not be generated by the wastes that will be disposed in the Chemical Waste Unit, significant quantities of landfill gas might be generated in any overlying MSW. Therefore, landfill gas collection and controls might be required for this "piggybacked" MSW fill. The landfill gas collection and control system will be routinely monitored for methane, oxygen or nitrogen, and temperature at each active gas extraction wellhead. Elevated oxygen and/or nitrogen levels indicate air intrusion which can result in aerobic biodegradation activity and, therefore, must be properly managed. Proper management typically consists of improving the seals around the gas extraction wells or other cover penetrations, placing additional cover soils, or reducing gas extraction rates within the areas exhibiting high oxygen and/or nitrogen levels. Additional gas extraction wells might be required to provide adequate landfill gas control in areas where individual well extraction rates are lowered to reduce oxygen and/or nitrogen levels.

Methane Explosions

Methane shall be monitored in the subsurface, ambient air, and in onsite buildings as required by the Facility's permits issued by the Illinois Environmental Protection Agency Bureaus of Land and Air. The landfill gas collection and control system shall be expanded as necessary to properly eliminate excessive emissions and subsurface migration. Onsite buildings exhibiting excessive methane shall be properly ventilated to reduce methane levels. Buildings with methane concentrations approaching its lower explosive limit shall immediately be evacuated. Natural gas or propane to such buildings shall be

turned off. Electrical power shall also be turned off only if the point at which power is to be switched off if free of explosive gas and vapors.

4.2 Chemical Reactions

As detailed in the facility Operating Plan, the facility conducts waste analysis and a pilot waste/reagent compatibility test prior to solidifying new liquid waste streams with a reagent. This testing minimizes the potential for chemical reactions.

4.3 Toxic or Hazardous Material Spills

Leachate

Leachate (including landfill gas condensate) spills will be prevented by the following design and/or operational procedures:

- The leachate storage tank(s) shall be resistant to corrosion and be properly engineered to withstand internal pressures due to the weight of the leachate and external pressures due to wind and snow loads.

- The leachate storage tank(s) shall include secondary containment designed to contain the full volume of the tank(s) in the event of a primary tank rupture.

- Below ground leachate/condensate transmission pipes and lift stations shall be constructed of non-corrosive materials (e.g. high density polyethylene), be double-walled, and incorporate leak detection.

- The tank, piping and lift stations leak detection systems shall be routinely monitored for evidence of leakage. Identified leaks shall be immediately repaired.

- All leachate transfers from the leachate storage tank(s) into tank trucks shall occur within a concrete spill containment pad. Personnel conducting leachate transfers shall continuously monitor the transfer process and be capable of quickly stopping the transfer in the case of a spill or overfill condition.

- Landfill slopes shall be routinely inspected for evidence of leachate seeps. Seeps shall immediately be repaired. Impacted soils shall be excavated and disposed in the landfill. Leachate recirculation in areas with chronic seeps shall be reduced as necessary to prevent additional seeps.

PCB Liquids and Industrial Wastes

PCB liquids and industrial wastes are contained within the waste-hauling vehicles and, therefore, are not likely to be released to the environment unless a waste-hauling vehicle overturns. In order to minimize the risk of this occurring, CLI will properly construct access roads with sufficient width, supporting capacity and grade to provide safe onsite travel. The roads will also be properly maintained to ensure adequate vehicular traction. Furthermore, CLI will establish and enforce an appropriate speed limit.

Fuels and Lubricants

The person performing the refueling shall attend all refueling operations. All maintenance, and most repairs will be conducted within the maintenance building. Lubricants and fuels that must be drained in the field shall be captured and properly disposed.

5 RESPONSE TO EMERGENCY CONDITIONS

The Emergency Response Coordinator shall be immediately notified in the event of a threatened, or actual emergency condition. The Emergency Response Coordinator shall assess the magnitude of the incident, evaluate the threat to human health and the environment within and outside the facility, and coordinate the response. In coordinating the response, the Emergency Response Coordinator shall identify and summon the appropriate response team. If the response team includes Clinton Landfill, Inc. employees, the Emergency Response Coordinator shall ensure that the employees are properly trained and equipped (e.g. personal protective equipment) to respond to the emergency. In some cases, the only safe response is to evacuate the area.

5.1 Fires and Explosions

Response Equipment and Materials

Type A-B-C fire extinguishers shall be located in each onsite building, each piece of heavy equipment, and the Landfill Manager's vehicle. The fire extinguishers shall be properly inspected and maintained.

Communications equipment, such as telephones and/or two-way radios shall be provided in each building that is continuously occupied. Portable communications equipment, such as a cellular telephone and/or two-way radio shall also be provided to the Emergency Response Coordinator, Landfill Manager, and the employee supervising the active face.

As described in the following section, the Clinton Fire Department is to be notified when onsite personnel cannot readily extinguish a fire. The Clinton Fire Department is equipped to transport and store (using portable reservoirs) adequate volumes of water to the site for fire fighting purposes. Their nearest "filling station" is a fire hydrant located at U. S. Route 51 and Kleeman Drive, approximately 1.7 miles north of the facility entrance. The Clinton Fire Department Fire Commissioner has informed CLI that this supply of water is sufficient to fight any reasonably anticipated fires at the facility.

Response to Fires and Explosions

Employees who are properly trained may fight incipient-stage fires using appropriate fire extinguishers, soil, fire blankets, and, when appropriate, water. CLI employees may also build firebreaks, containment berms to prevent spreading of flammable liquids, etc. as safe conditions allow. In no case shall employees risk injury or life fighting a fire.

Careful consideration shall be given to fires involving waste materials. If possible, burning wastes shall be isolated from other wastes, then smothered using soil. Water should be used only as a last resort.

The Emergency Response Coordinator shall request fire-fighting assistance from the Clinton Fire Department under the following conditions:

- A fire that cannot be easily and thoroughly extinguished by onsite personnel within a few minutes of discovery,
- A fire that extends, or threatens to extend, offsite,
- A fire affecting the structural components of a building,
- An explosion that causes structural damage,
- A fire or explosion that could possibly reoccur,
- A fire or explosion of unknown origin,
- A fire that may expose people to toxic vapors, smoke, fumes, etc., and
- A fire involving buried waste that cannot be readily exhumed and extinguished.

5.2 Chemical Reactions

The first step in controlling a chemical reaction is to segregate the incompatible materials, if this can be done safely. The second step is to cover and/or mix the incompatible materials with soil. Water should not be used by onsite personnel to control chemical reactions.

The Emergency Response Coordinator shall contact the Clinton Fire Department if a chemical reaction occurs that cannot be readily controlled by facility employees, or if fumes, vapor, smoke, etc. from a chemical reaction threatens to migrate beyond the facility boundary.

5.3 Toxic or Hazardous Material Spills

Spills of toxic or hazardous materials (including leachate, landfill gas condensate, PCB liquids, industrial waste, fuels, and lubricants) occurring outside the waste boundary shall be responded to as follows:

- Don appropriate personal protective equipment (PPE),
- Stop the source of the release (e.g. turn off pumps),
- Contain the spread of materials using earthen berms, booms, etc.
- Remove and place the material into containers and properly dispose the leachate,
- Remove and properly dispose soil that is grossly contaminated (i.e. saturated) with the spilled toxic or hazardous material, and
- Identify the material that was spilled and estimate the volume that was spilled. Immediately report the spill to the Landfill Director if industrial waste of any quantity was spilled, or if more than 25 gallons of leachate, landfill gas condensate, fuel, or lubricants were spilled. The Landfill Director will notify the proper regulatory agencies within 24 hours of the incident, as required.

In the event of a leak being detected within the leachate storage tank(s), leachate/condensate transmission piping system, or condensate lift station, CLI shall immediately investigate the source of the leak and make the necessary repairs. Leachate released to the environment shall be addressed as indicated above. The Landfill Director is to be immediately notified if leachate or condensate is released to the environment.

The Landfill Director shall assess the spill area and coordinate further remediation as required.

6 OUTSIDE ASSISTANCE

The following agencies and facilities are available to assist in emergency response.

CLINTON FIRE DEPARTMENT

118 West Washington

Clinton, Illinois

Emergency Telephone No.: 911

Non-Emergency Telephone No.: 935-3159

DEWITT COUNTY SHERIFF

101 West Washington

Clinton, Illinois

Emergency Telephone No.: 911

Non-Emergency Telephone No.: 935-3196

JOHN WARNER HOSPITAL (including ambulance service)

422 West White Street

Clinton, Illinois

Emergency Telephone No.: 911

Non-Emergency Telephone No.: 935-9571

APPENDIX O.3

INSPECTION AND MAINTENANCE PLAN

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FACILITY INSPECTION AND MAINTENANCE PLAN

Clinton Landfill No. 3 – Chemical Waste Unit

FEATURE	INSPECTION FREQUENCY	ACTIONS
Access Roads		
Entrance gate security	Each operating day	Repair gate as necessary to maintain security
Dust control	Continuously each operating day	Add water or dust suppressant as necessary
		Sweep / clean paved entrance road
Mud tracking at the entrance	Each operating day	Clean tracked mud and accumulated dust
		Identify source and remedy as appropriate
Storm Water Management System		
Perimeter ditches and diversion berms	Quarterly and after 2-inch rains	Repair erosion and vegetation
		Remove accumulated silt
Letdown pipes and culverts	Quarterly and after 2-inch rains	Clear entrance of obstructions
		Check energy dissipaters
Evidence of leachate contamination	Continuously each operating day	Manage as leachate, remedy source
Sedimentation basin berms	Quarterly and after 2-inch rains	Repair erosion and vegetation
		Eliminate burrowing animals
Sedimentation basin siltation	Quarterly	Remove silt as necessary to maintain adequate storm water run-off storage
Landfill Cover		
Erosion, rills and gullies	Monthly and after 2-inch rains	Repair erosion extending 4-inches deep
Leachate seeps	Each operating day	Repair as required
Vegetation (final cover)	Monthly and after 2-inch rains	Repair in accordance with Post-Closure Care Plan

FACILITY INSPECTION AND MAINTENANCE PLAN

Clinton Landfill No. 3 – Chemical Waste Unit

FEATURE	INSPECTION FREQUENCY	ACTIONS
Liner Protective Cover		
Minimum 18 inches on sidewall liner prior to waste placement	Prior to waste placement	Add protective soil as required
Proper freeze protection: 3 feet cover/waste on floor 18 inches cover on sidewalls	Each operating day during freezing weather	Add protective cover as required
Leachate/Condensate Management Systems		
Leachate transmission lines	Each use	Inspect for leaks
Leachate tank, and leachate force main leak detection	Weekly	Inspect for leaks
Leachate level in tank	Each operating day	Empty as required
Leachate spills on truck loading containment pad	After each use	Clean pad of spills and drain to tank
Leachate extraction system	Weekly	Volume of leachate extracted
Leachate collection piping system	Once each 5-year permit term	Clean using high-pressure water jets unless video inspection demonstrates cleaning is unnecessary.
Leachate extraction pumps	Quarterly	Check proper operation, repair and/or replace as needed to achieve desired performance
Automatic leak detection systems	Annually	Check for proper operation
Groundwater Monitoring Wells		
Check security	Quarterly	Repair as required
Check surface seal	Quarterly	Repair as required

FACILITY INSPECTION AND MAINTENANCE PLAN

Clinton Landfill No. 3 – Chemical Waste Unit

FEATURE	INSPECTION FREQUENCY	ACTIONS
Waste Solidification Area		
Damaged / leaking containers	Each operating day	Repair or replace as necessary
Spilled waste	Each operating day	Remove and dispose in active face
Run-off control berms	Each operating day	Repair as required
Survey Monuments		
Check integrity	Annually	Replace as necessary
Resurvey by Licensed Surveyor	Every 5 years	
Chemical Waste Unit Perimeter Fence		
Check integrity	Weekly	Repair as necessary