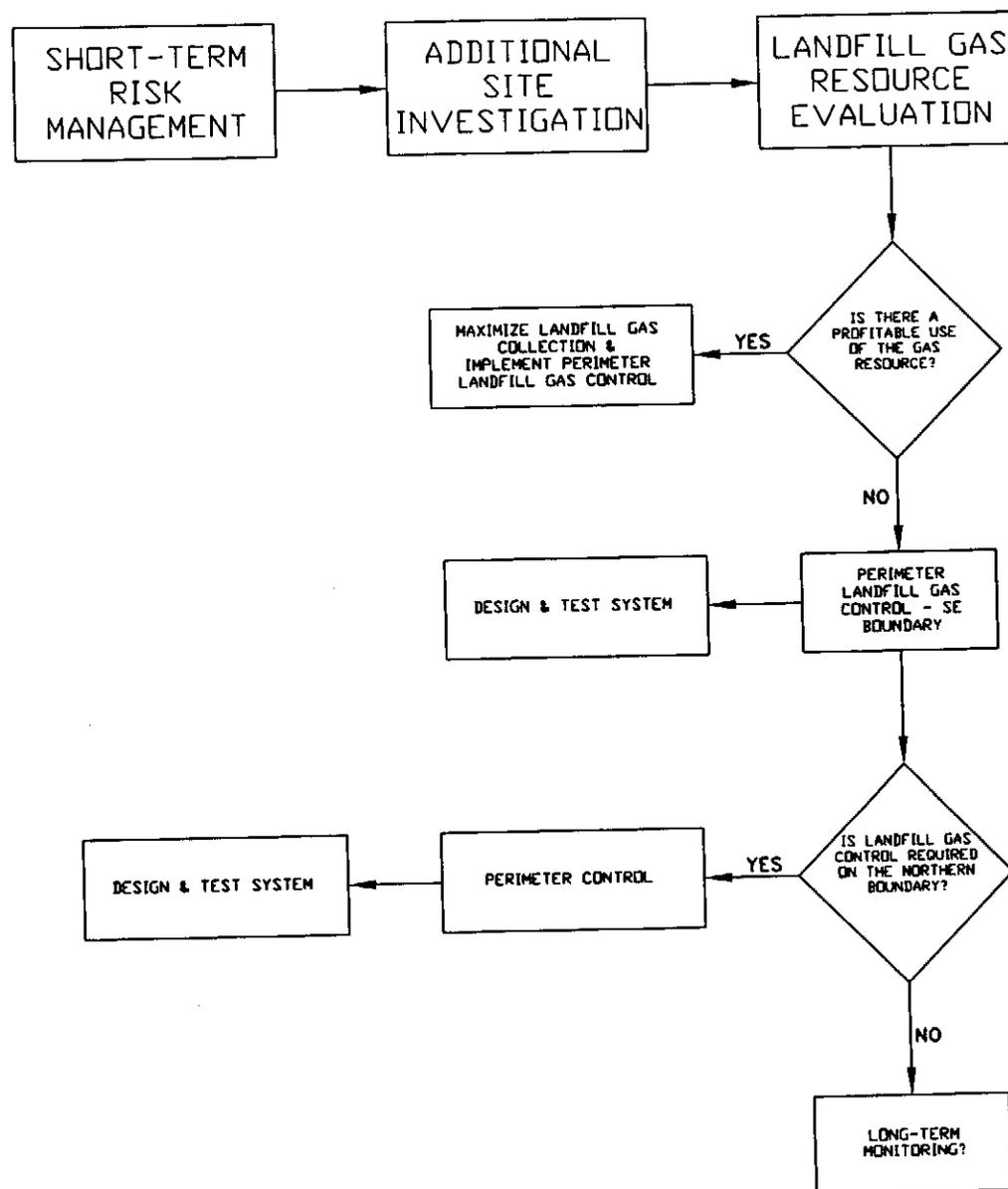


RECORD OF COMMUNICATION	<input type="checkbox"/> Phone Call <input type="checkbox"/> Discussion <input type="checkbox"/> Field Trip <input type="checkbox"/> Conference	
	<input type="checkbox"/> Other (Specify) _____ (Record of item checked above)	
To:	From:	Date 1-29-03
		Time
Subject		
Jackson Co - CH ₄ situation		
Summary of Communication		
<p>Per Jim McElduff - Altamont Environmental:</p> <ul style="list-style-type: none"> - Additional monitoring probes installed to increase assessment coverage. - Only one one area (Willkie Property) where the CH₄ situation is unknown. Can't get access to the property. - Report with results & recommendations in the County Manager's office. To be reviewed & returned w/ comments this week. to Jim. - Propose a risk-based approach dealing w/ problem <ul style="list-style-type: none"> - There is 0 risk (w/ the exception of Willkie property) - Will not propose active remedial action (ie vents, trenches) - Hope to eventually have a capture & use system similar to the one @ Yonery/Mitchell's LF. - Actively pursuing this concept. 		
Conclusions, Action Taken or Required		
<ul style="list-style-type: none"> - Will send a copy of the report as soon as possible. 		
INFORMATION COPIES		
TO:		



Altamont
Environmental, Inc.
 ENGINEERING & HYDROGEOLOGY

78½ PATTON AVENUE
 ASHEVILLE, NORTH CAROLINA
 PHONE 828-281-3350

DECISION DIAGRAM:
 STRATEGY FOR LANDFILL GAS RISK MANAGEMENT
 & MIGRATION CONTROL
 JACKSON COUNTY MSW LANDFILL
 DILLSBORO, NORTH CAROLINA

DRAWN BY: JMC
 PROJECT MANAGER: JM
 CLIENT: JACKSON COUNTY DATE: 05-02-02
 FILE: /PROJECTS/JACKSON COUNTY/05/LFG DECISION CHART

DRAFT COPY FOR REVIEW

ALTAMONT ENVIRONMENTAL, INC.

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STRATEGY FOR LANDFILL GAS RISK MANAGEMENT AND MIGRATION CONTROL

May 6, 2002

1. **Short-Term Risk Management**
 - a. Meet with county and regulators to discuss risk-based approach
 - i. Identify Health & Safety risks
 - ii. Propose agreement for risk-based approach (i.e., installation of rigorous monitoring system to offset enforcement at property boundary)
 - b. Identify Health & Safety risks to humans and real property
 - i. County Maintenance Building
 1. Evaluate building methane monitoring system
 - a. Determine necessary number of detectors
 - b. Identify locations for detectors
 - c. Establish action level for alarm activation
 - d. Develop high-level alarm response plan
 2. Conduct quarterly screening with Photo Ionization Detector (PID) around building (e.g., at base of walls, cracks in slab, conduit openings, etc.)
 - ii. Nearby residences and Commercial Buildings
 1. Re-evaluate adequacy of landfill boundary monitoring system
 - a. Plot structures on area map (completed in LFG Pilot Study Report)
 - b. Develop cross-sections using existing information
 - c. Identify gaps in monitoring system
 - d. Install multi-depth probes between landfill and structures, as necessary
2. **Additional Site Investigation (Based on agreement with DENR that future investigation and mitigation is to be risk-based)**
 - a. Identify information needs for remedial system design (as appropriate on basis of discussions with DENR)
 - i. Evaluate adequacy of current monitoring network (e.g., in southeast area)
 - ii. Install additional probes as needed
 - iii. Use pre-disposal topography and boring logs to develop geologic cross-sections
 - iv. Evaluate nature of leachate pool identified during Pilot Study (i.e., is it perched, is it recharging groundwater, how extensive is it, how does its presence affect gas collection)
 - v. Assess low-flow conditions in extraction wells installed as part of the Phase 2 Pilot Study
 1. Visual inspection
 2. Excavate and evaluate

- vi. Estimate leachate generation using Hydrologic Evaluation of Landfill Performance (HELP) model

3. Landfill Gas Resource Evaluation

- a. Base first evaluation on the assumption that energy recovery revenue must offset development costs
- b. Base second evaluation on potential for grants and other benefits (e.g., value of "good" public works)
- c. Evaluate usage at asphalt plant
 - i. Determine BTU usage on monthly basis
 - ii. Identify current energy rates and historic fluctuations in cost
 - iii. Determine potential revenues and balance against probable developmental costs
- d. Evaluate electric generation for nearby use by commercial or county-owned facilities
 - i. Internal combustion engine
 - ii. Small microturbine
 - iii. Determine potential revenues and balance against probable developmental costs

**Order of Magnitude Costs for
Implementing Landfill Gas Strategy**
(Refer to Attached Flow Chart)

May 6, 2002

1. Short-term Risk Management	\$16,000
2. Additional Site Investigation	\$13,000
3. Landfill Gas Resource Evaluation	\$10,000
4. Southeastern Boundary LFG Control	\$300,000
5. Northern Boundary LFG Control	\$360,000

Note: Current budget for FY 2002-2003 is based on assumption that costs for item Nos. 4 and 5 will be lessened by either negotiated changes in scope with DENR or cost-spreading into FY 2003-2004.