

# Grading of Fill Surfaces

# GRADING OF FILL SURFACES

## Objectives

- Learn how to observe, quantify, evaluate and document grading of fill surfaces conditions for compliance with T27 regulations.
- Develop a basic understanding of BMPs to address compliance issues.

# Evaluation, Discussion and Report Writing

## – About my observations

- What do I see?
- To what extent or degree?
- Where is it?
- Is it a new, continuing, or recurring problem?

## – How do my observations compare to T27 requirements?

# T27 §20650 Grading of Fill Surfaces

- **Compliance:** Covered surfaces of disposal area are graded to promote lateral runoff of precipitation and to prevent ponding.
- **Evaluating for Compliance or Non-compliance:**
  - Is grading smooth and of sufficient slope to promote lateral runoff?
  - Is ponding or evidence of ponding present?
  - Have slopes, top deck been re-graded after settlement?

# Field Observations, Evaluation and Personal Notes: Example One

- This is a V or an AC because...
  - Grading is not smooth and of sufficient slope to promote lateral runoff.
  - Other?



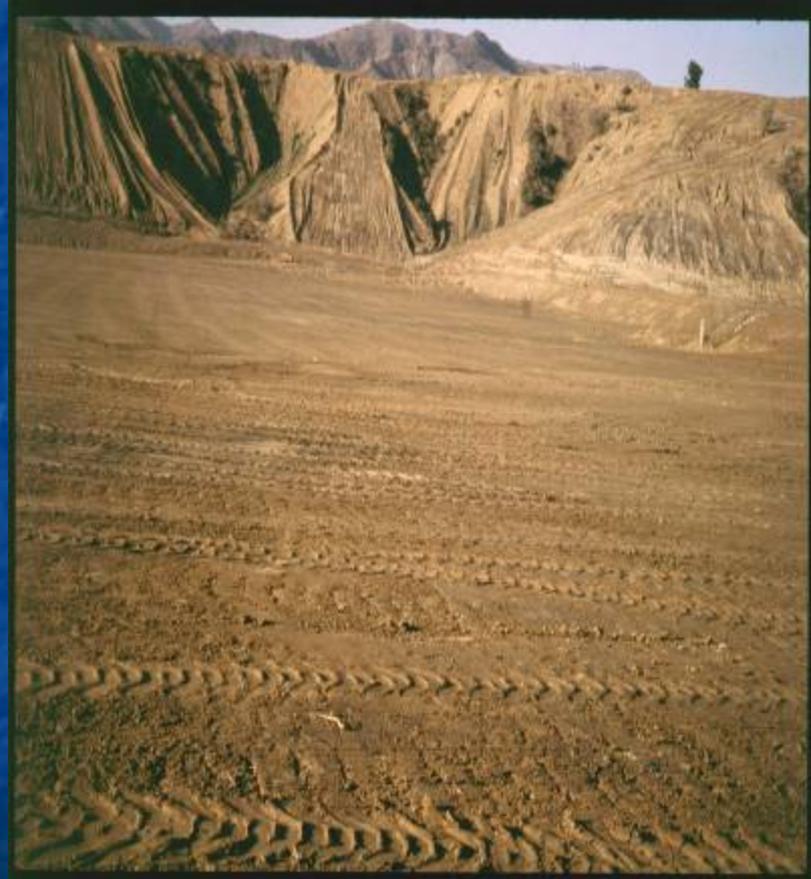
## Example Two

- This is a V because...
  - Ponding or evidence of ponding is present.
  - Other?



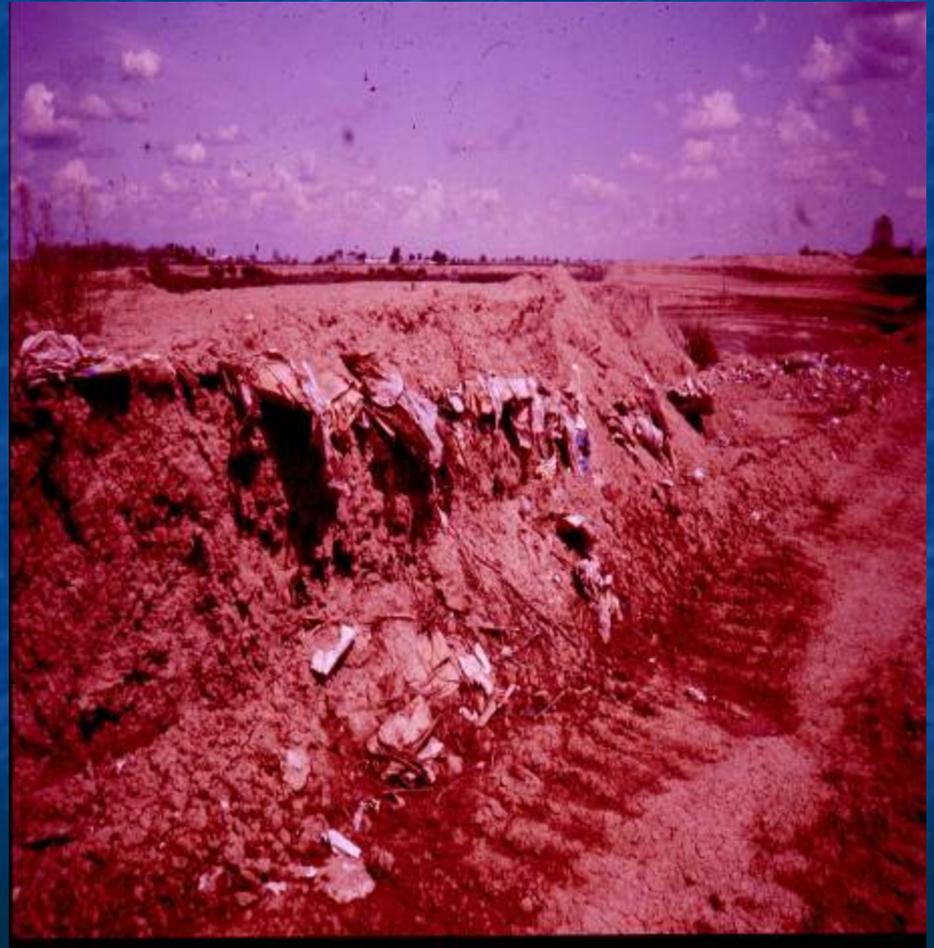
## Example Three

- **This is a C because...**
  - Covered surfaces of the disposal area are graded to promote lateral runoff.
  - Other?



# Example Four

- This is a V or an AC because...
  - Top deck has not been re-graded after settlement.
  - Other?



# Inadequate/Poor Documentation on Inspection Form CIWMB 52

- I observed proper grading control.
- There is a lot of poor grading along the western portion of the site.
- Other?

# Documentation on Inspection Form CIWMB

## 52 Using this Module's Criteria

- I observed poor grading within the western portion of Module A (formerly known as green waste storage area)
- The amount of settlement is rather extensive, and interferes with existing with public access road
- The site will remain in violation for grading of fill surfaces until the operator takes the steps to bring it into compliance. (See attached photos and site sketch)

# Best Management Practices

- Is there a BMP that could be used to grade the top deck properly?
- How could the active face be graded to promote runoff?
- How or when could existing conditions be corrected?
- What could be done to provide for continued compliance? etc.

# **DRAINAGE AND EROSION CONTROL**

# DRAINAGE AND EROSION CONTROL

## Objectives

- Learn how to observe, evaluate and document drainage and erosion conditions with regard to T27 regulations.
- Develop a basic understanding of BMPs to address compliance issues.

# Evaluation, Discussion and Report Writing

- About my observations
  - What was observed?
  - To what extent or degree?
  - Where was it?
  - Is it a new, continuing or recurring problem?
- How do my observations compare to SMS requirements?

# T27 §20820

## Drainage and Erosion Control

- Compliance: Drainage system designed and maintained to ensure integrity of roads, structures, and gas monitoring and control systems; prevent safety hazards; prevent exposure of waste.
- Evaluating for Compliance or Non-compliance:
  - Are erosion rills/channels occurring after rain events?
  - Exposure of wastes?
  - Damage to structures?
  - Damage to gas monitoring/control systems?
  - Do I see trucks stuck in the mud?

# Field Observations, Evaluation and Personal Notes: Example Five

- This is a V or an AC because...
  - Erosion rills are deeper than 12 inches.
  - Where are these tills located?



# Example Six

- This is a V because of...
  - Exposure of wastes.
  - Is it a large amount of wastes?
  - Where is the affected area located?



# Example Seven

- This is an AC because of...
  - Potential damages to roads/exposure of wastes.
  - To what degree?
  - Where is it?
  - Is it a new issue?



# Example Eight

- This is a C because...
  - Drainage system is designed/maintained to prevent exposure of wastes.
  - Could this BMP be shared with others?



# How do I transfer my observations/evaluation/Notes to Form CIWMB 52?

- Do these drainage and erosion write-ups meet the criteria outlined on Slide 3?
  - Why or Why Not?
  - I observed improper drainage controls.
  - There is a lot of erosion next to C&D stockpiles.
  - Other?

# Best Management Practices

- Use an earthen berm to divert run-off away from intermediate slopes?
- Add a 1-foot layer of low permeability soils to those intermediate slopes that are exposed to the most run-off?
- Is the soil placed on top of intermediate slopes adequately compacted?
- Could some cuts and non-waste areas be vegetated with native plants?
- Is an ADC option available?
- Other?