TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF SOLID WASTE MANAGEMENT
SOLID WASTE DISPOSAL FACILITY EVALUATION

NAME OF SITE	REGISTRATION NUMBER	DATE
TVA Kingston Fossil Plant Landfill	IDL 73-0094	11/25/03

LOCATION (physical)	PURPOSE
Swan Pond Rd Kingston, TN	(X) Complete ( ) Follow-up ( ) Complaint ( ) Other

OWNER/OPERATOR	TYPE OF FACILITY
TVA / Linda Cambel	( ) CLASS I (X) CLASS II ( ) CLASS III ( ) CLASS IV

		V1	V2
Inadequate vector control	8010		
Access not limited to operating hours	8020		
Inadequate artificial or natural barrier	8030		
Inadequate information signs	8040		
Unsatisfactory access road(s)/parking area(s)	8050		
Certified personnel not present during operating hours	8060		
Unapproved salvaging of waste	8070		
Evidence of open burning	8080		
Inadequate fire protection	8090		
Unsatisfactory litter control	8110		
Inadequate employee facilities	8120		
No communication devices	8130		
Inadequate operating equipment	8140		
Unavailability of backup equipment	8150		
Unavailability of cover material	8160		
Inadequate maintenance of runon/runoff system(s)	8170		
Inadequate erosion control	8180		
Inadequate dust control	8190		
Unauthorized waste accepted	8210		
Unapproved special waste accepted	8220		
Tires improperly handled	8230		
Medical waste improperly handled	8240		
Dead animals improperly handled	8250		
Washout of solid waste	8270		
No permanent benchmark	8280		
Inadequate random inspection program	8290		
Mishandling of special waste	8300		
Buffer zone standard violated	8310		
Inadequate maintenance of leachate management system	8320		
Leachate improperly managed	8330		
Inadequate leachate collection system	8340		
Leachate observed at the site	8350		
Leachate entering runoff	8360		
Leachate entering a water course	8370		
Inadequate gas migration control system	8380		
Inadequate maintenance of gas migration control system	8390		
Potential for explosions or uncontrolled fires	8420		
Waste not confined to a manageable area	8430		
Improper spreading of waste	8440		
Improper compacting of waste	8450		
Unsatisfactory initial cover	8460		
Unsatisfactory intermediate cover	8470		
Unsatisfactory final cover	8480		
Excessive pooling of water	8490		
Unsatisfactory stabilization of cover	8510		
Dumping of waste into water	8520		
Unsatisfactory records or reports	8530		
Groundwater monitoring system improperly maintained	8540		
Operation does not correspond with engineering plans	8570		
Operation does not correspond with permit condition(s)	8580		
Permit, plans, operating manual not available	8590		
No operating scales	8610		

COMMENTS: Observed "Pop" - Fixed + hay bales/check dams down grade in place. TVA reviewing options. Any changes to be put in print to Division.

Watch erosion/plant plans over winter.

PERSON INTERVIEWED (Signature)	INSPECTED BY (Signature)
Linda Cambel	Paul Plant
TITLE PA(E)	TITLE EPS 3

TIME OF DAY	WEATHER CONDITIONS	COMPLIANCE DATE
11:10 am	50's Sunny	N/A

Distribution: Facility - White Field Office - Canary Central Office - XC

CN-0761 (Rev. 7-98) RDAs 2202 and 2499

TVA-00027058

1. What materials are used to build dikes? % of each material?

The two lower lifts of the dredge cell dikes where the leak occurred were constructed of approximately 70% Fly Ash and 30% Bottom Ash.

2. What caused the leak?

While the root cause of the leak cannot be determined with absolute certainty, the likely cause is the hydraulic head from the dredge cells combined with a series of interconnected zones of high permeability, resulting in tunneling. This type of a leak is not predictable.

3. Could this condition occur at other points on the dike? If so, explain.

TVA has drained the dredge cells and stopped dredging to reduce the hydraulic loading on the lower dikes. With this operating scenario, it is unlikely that this condition will occur at other points in the dike. TVA is investigating measures to insure that situations of this type will not reoccur when dredging is resumed.

4. Photos of barriers to keep ash from going to the river.

5. Photos of repairs as they progress.

6. Explain the short term fix.

TVA has drained the dredge cells and stopped dredging to reduce the hydraulic loading on the lower dikes. In addition, TVA has placed combinations of filter fabric, rip rap and crushed stone on the affected area.

As an interim operation, TVA is directly removing ash from the pond and stacking the material on the eastern side of dredge cell 2. Development of a temporary dredge cell within the active ash pond is under consideration.

minor mod text giving options for dry movement.

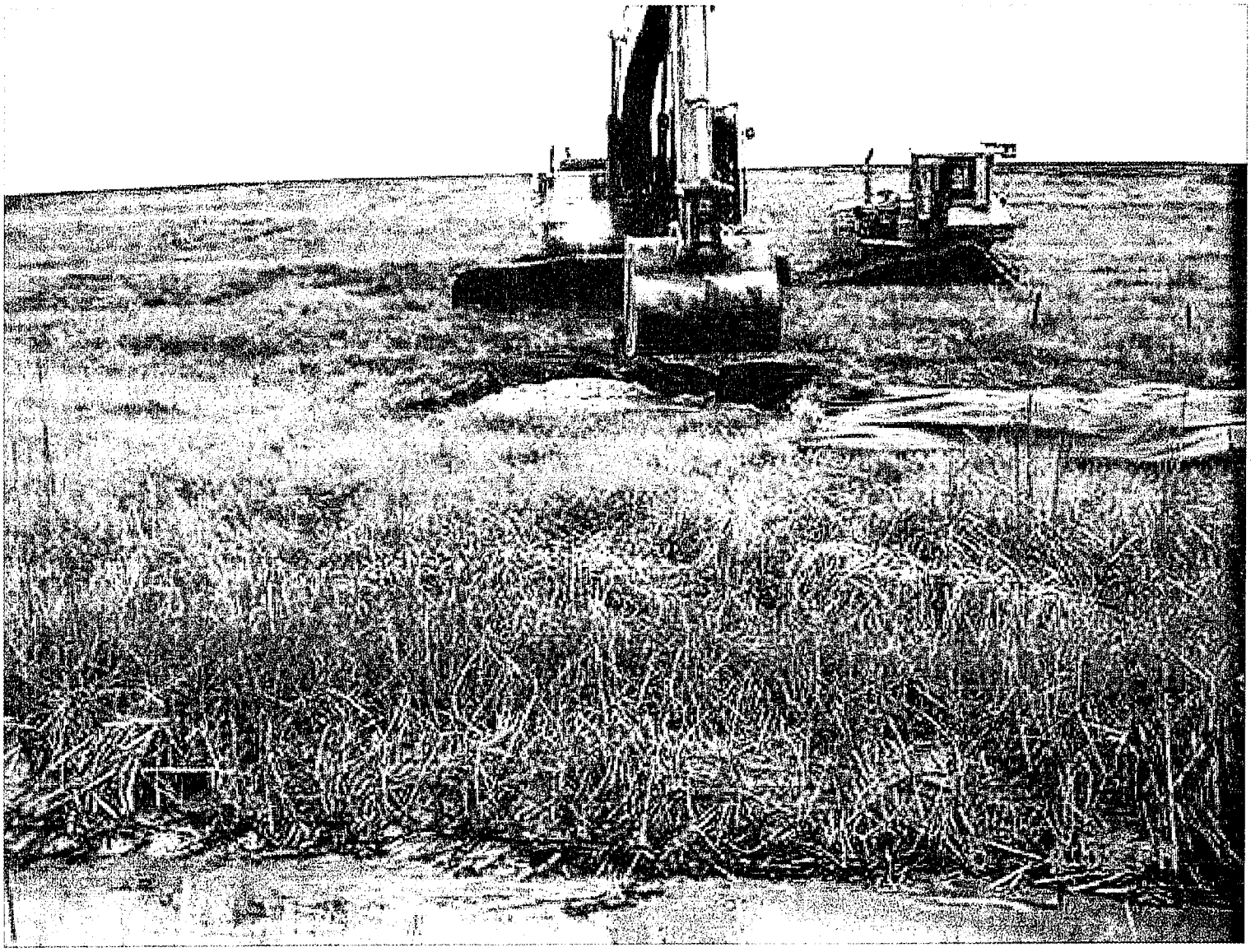
7. Explain the long term fix.

Various alternatives are currently being considered. These include:

1) Constructing a rock drainage blanket on the face of the lower dikes to collect seepage and prevent the tunneling of fines from within the dike.
2) Lining the interior of the dredge cells with an impermeable barrier.
3) Conversion of Kingston Fossil Plant to dry ash collection and dry stacking the material.

Other alternatives may also be considered as engineering studies progress. TVA will coordinate the final alternative selection with TDEC.

8) Dust suppression underway with Binder - called RSB already



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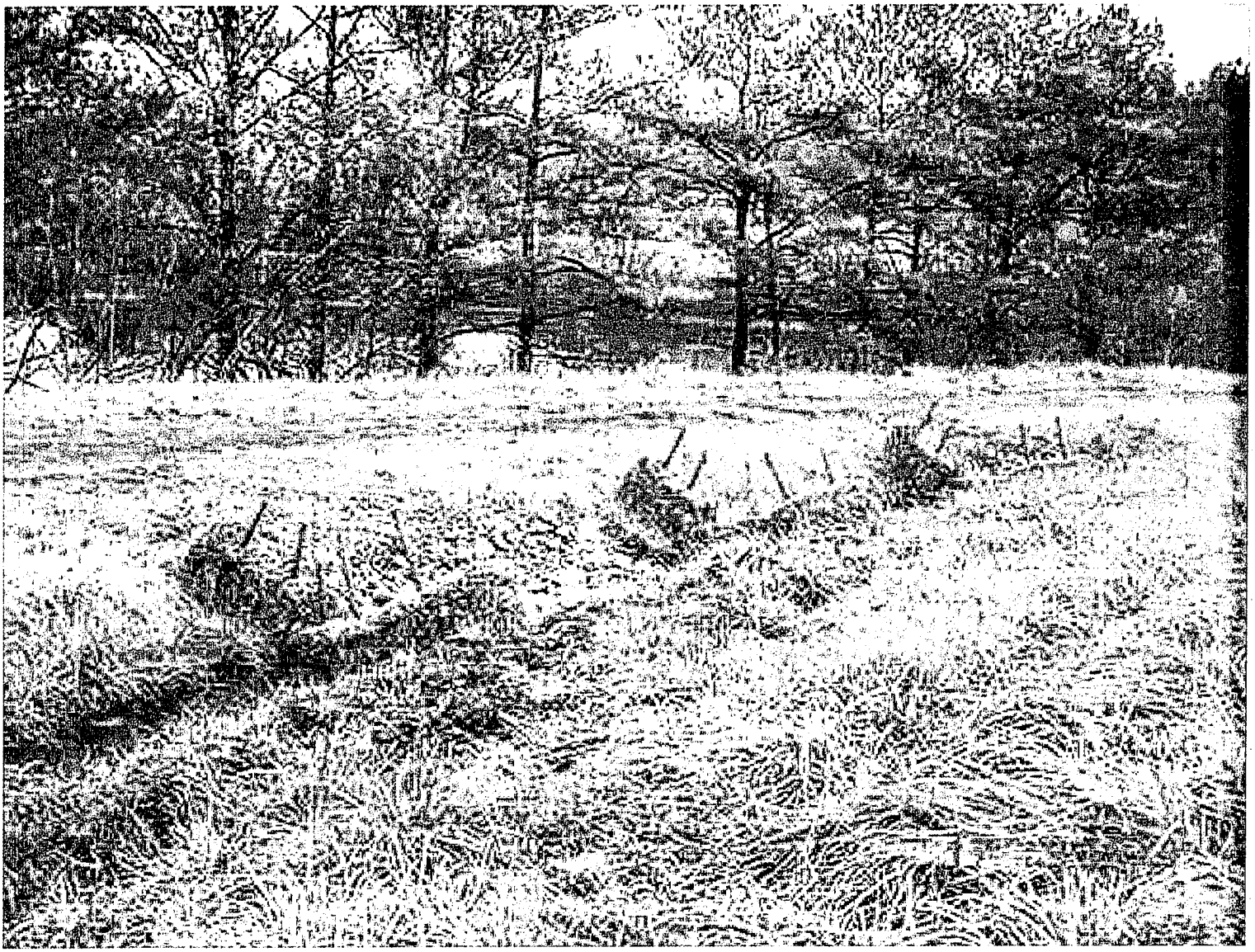

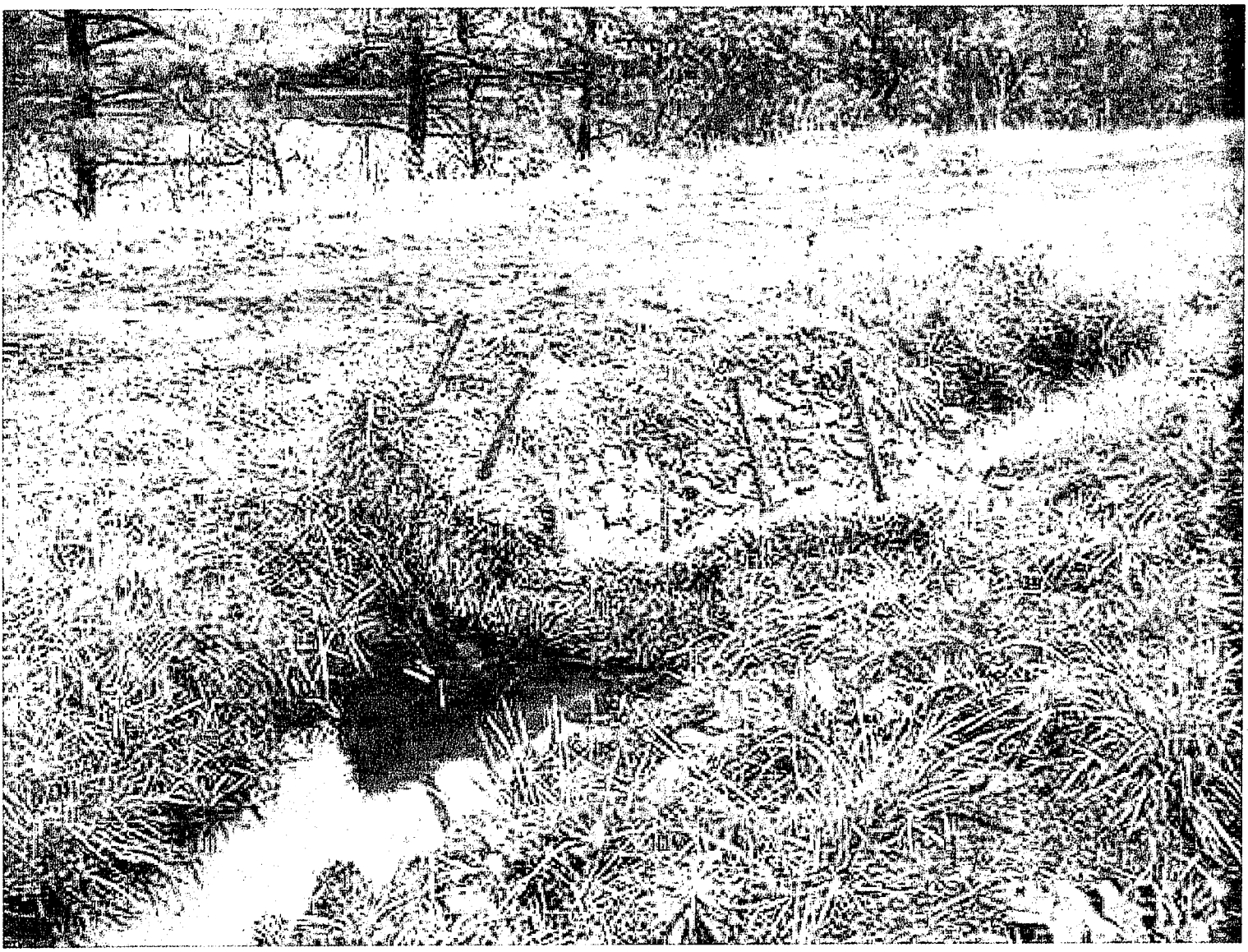

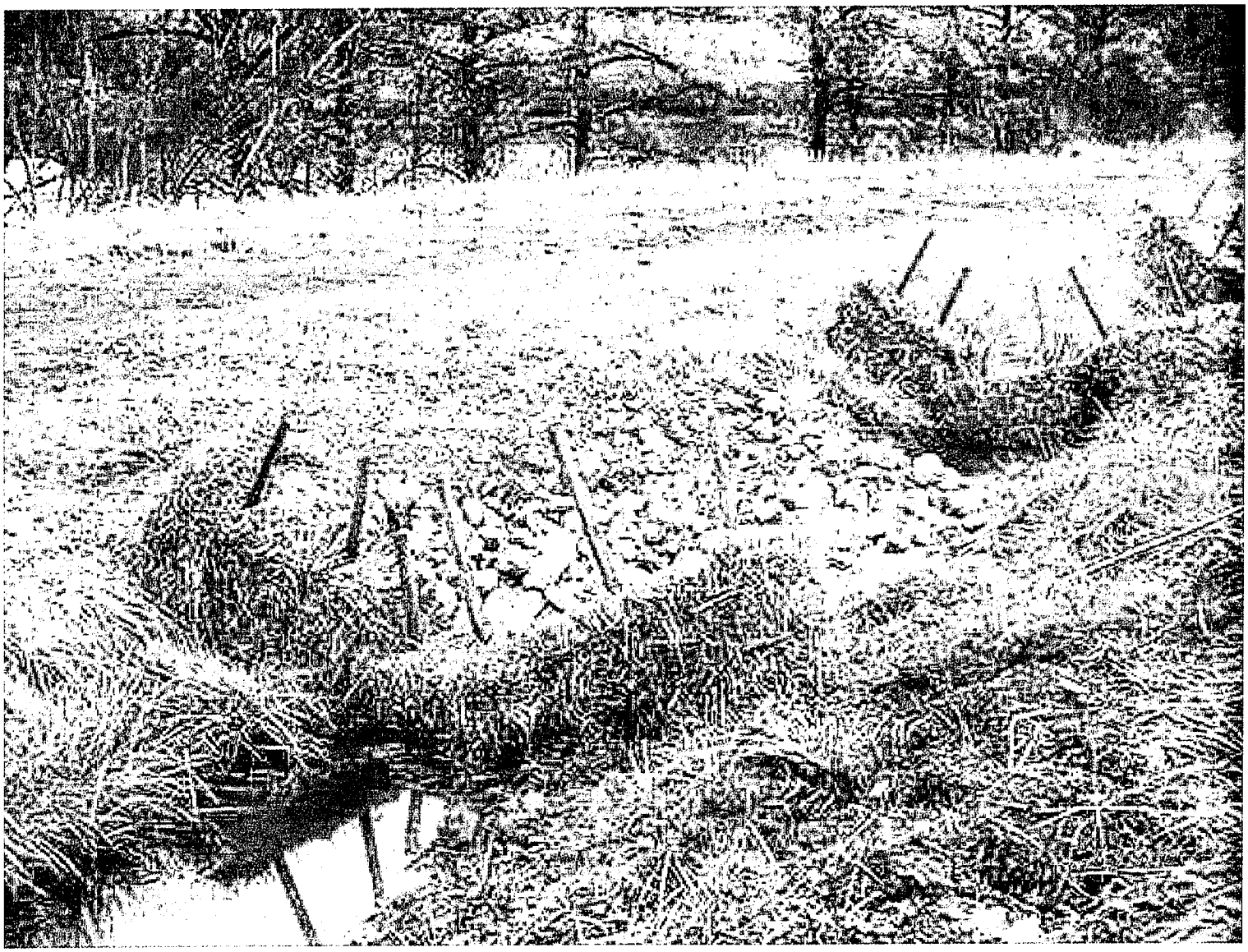

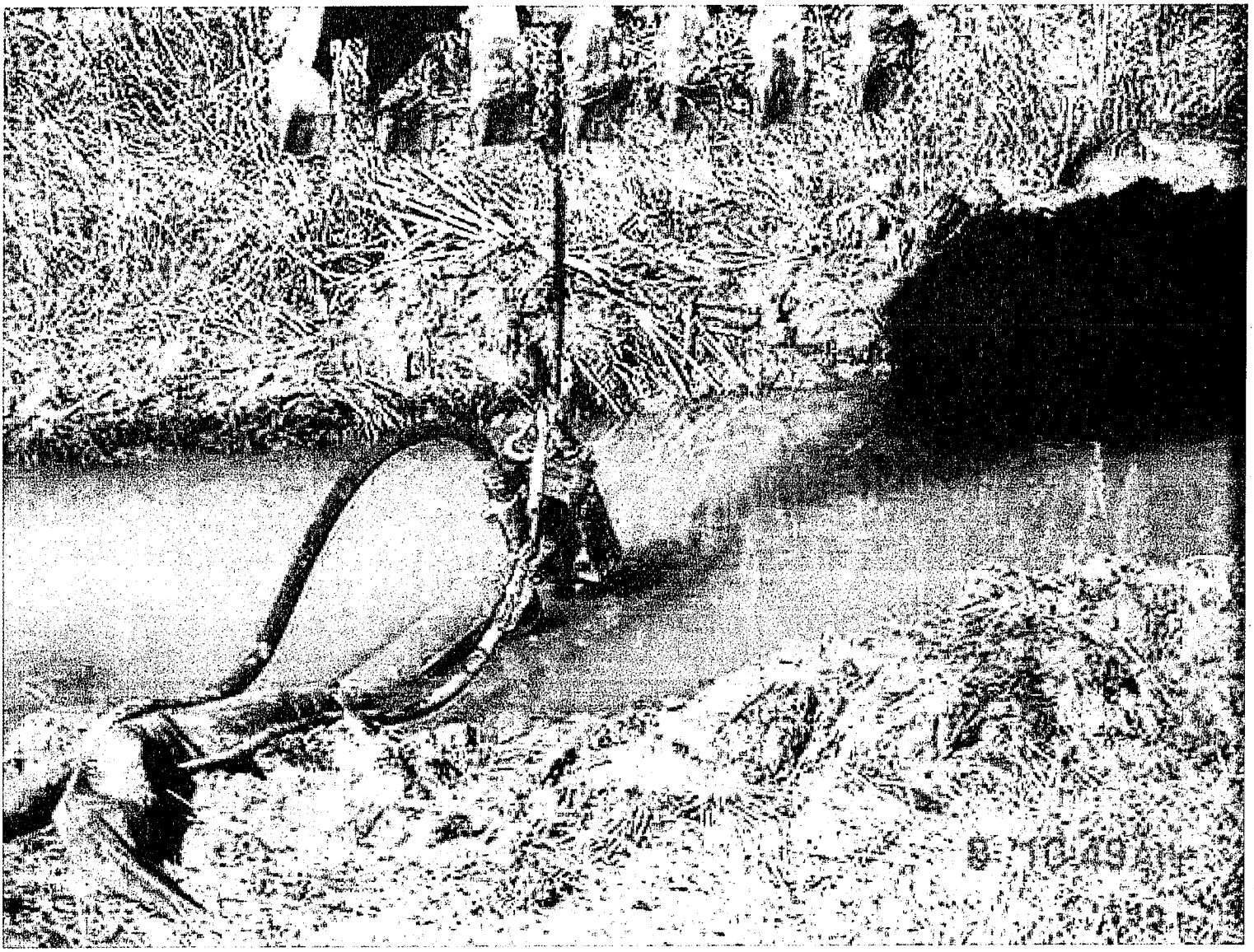

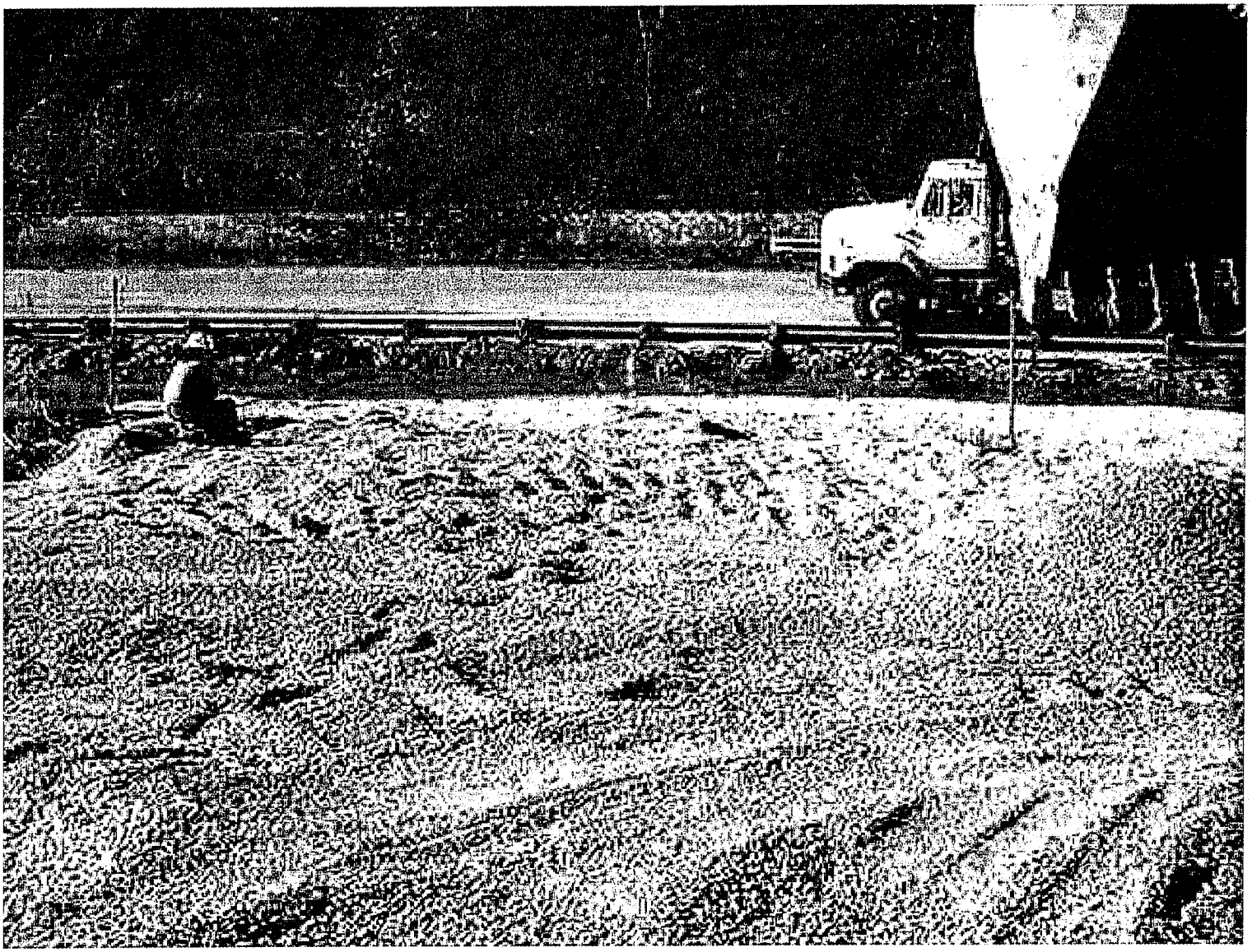

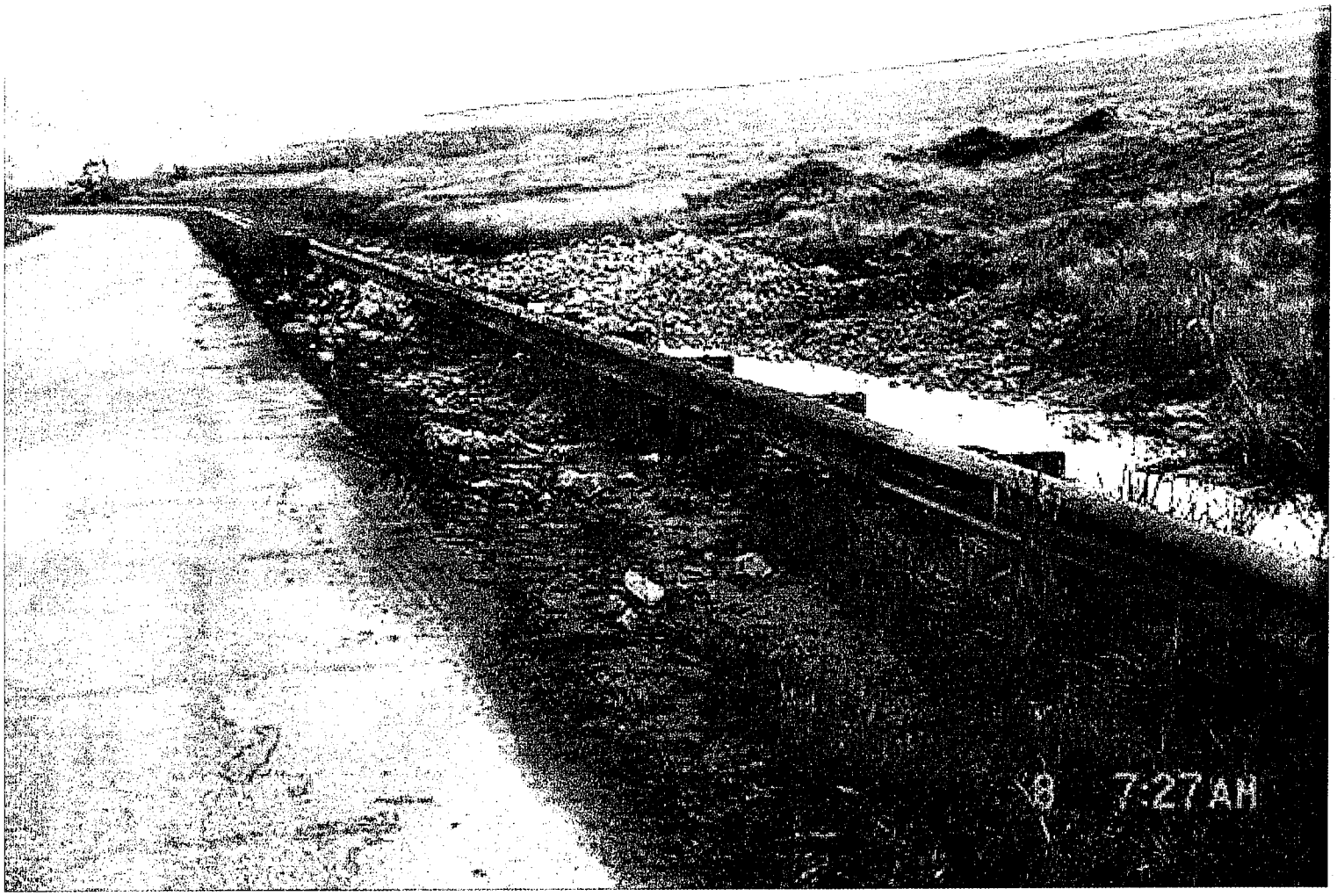
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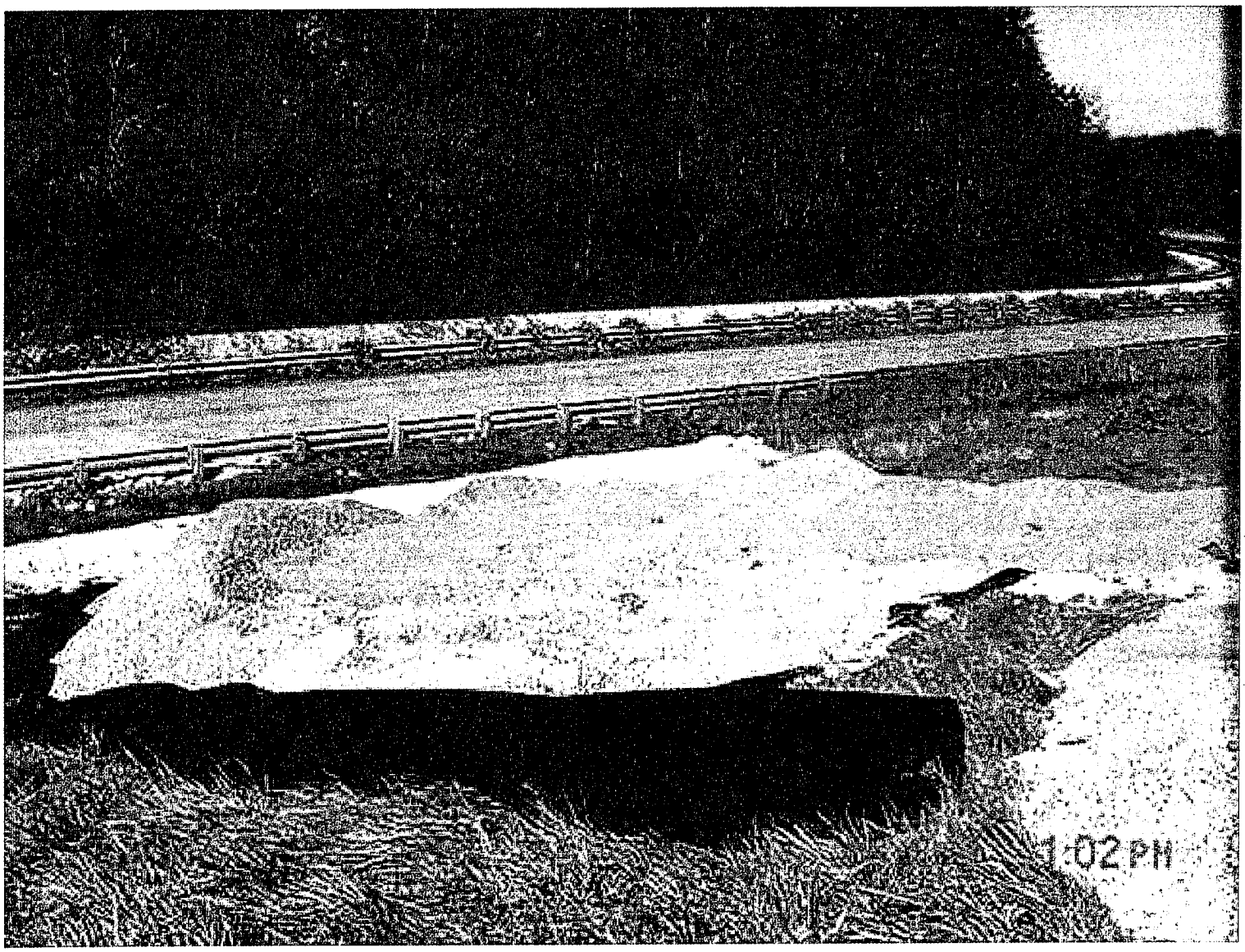
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