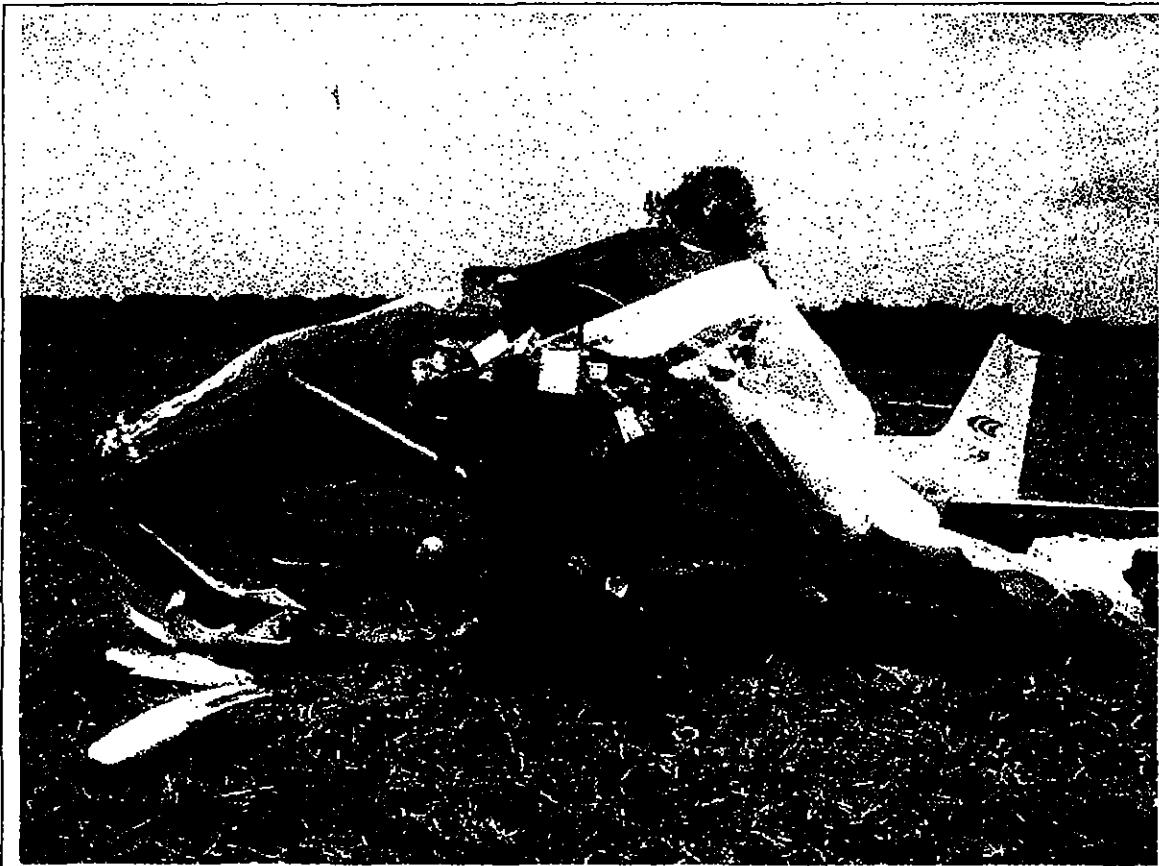


Preface



The pilot of this Cessna 172 made a Mayday call to nearby Air Traffic Control Tower in Texas after hitting a bird (likely a vulture) with the left wing at 800 feet AGL on 8 July 2003. The pilot attempted to make an emergency landing in a field but lost control and crashed, killing himself and his passenger. Worldwide, over 157 people have been killed by wildlife strikes since 1990. (Photo by FAA)

The civil and military aviation communities widely recognize that the threat to human health and safety from aircraft collisions with wildlife (wildlife strikes) is increasing (Dolbeer 2000, MacKinnon et al. 2001). Globally, wildlife strikes have killed more than 157 people and destroyed over 140 aircraft since 1990 (Richardson and West 2000; Thorpe 2003; Dolbeer, unpublished data). Several factors contribute to this increasing threat.

Commercial air carriers are replacing their older three- or four-engine aircraft fleets with more efficient and quieter, two-engine aircraft. In 1969, 75 percent of the 2,100 USA passenger aircraft had three or four engines. In 1998, the USA passenger fleet had grown to about 5,400 aircraft, and only 30 percent had three or four engines. It is estimated that by 2008 the fleet will contain about 7,000 aircraft, and only 10 percent of which will have three or four engines (Cleary and Dolbeer 1999). This reduction in

Jay Carpenter presents arguments to the Austin City Council concerning
Bird Hazard Activity At ABIA
Thursday November 18, 2004

First: show what happens when birds strike an aircraft. Power Point presentation.

Second: It is claimed that Type IV landfills, because they contain only construction debris such as sheetrock, bricks and brush, do not attract birds.

Cue Video: October 2004, four consecutive Sundays at the Travis County Landfill just south of ABIA.

The History of Concern

October 26, 1974

Dept of Transportation FAA

William V. Vitale, Acting Director

Airports Service

Garbage dumps, sanitary landfills or whatever title is used for this type of operation attract rodents and birds, (and therefore) erodes the airport environment.

The increasing number of bird strikes reported on aircraft has become a matter of concern to the FAA and to airport management. Various studies and observations have resulted in the conclusion that **sanitary landfills are artificial attractant to birds**. Accordingly, landfills located in the vicinity of an airport may be incompatible with safe flight operations. Those conditions that are not compatible **must be eliminated**, to the extent practicable.

Sanitary landfills will be considered as an incompatible use if located within areas established for the airport through the application of the following criteria:

- a. Landfills located within 10,000 feet of any runway used or planned to be used by turbojet aircraft.

Texas Aeronautics Commission

Mr Wiley W. Osborne December 18, 1986

Texas Department of Health

Austin, Texas

From:

Clay Wilkins

Texas Aeronautics Commission

The Air Force objects to the proposed landfill because all landfills, **no matter how well they are maintained and covered, attract birds.** Birds will present a potential aircraft birdstrike hazard, endangering aircraft and aircrews landing on Runway 35 and Bergstrom.

December 21, 1995

From:

William E. Mitchell

Airport Certification Safety Inspector

Federal Aviation Administration

To:

John Almond

Project Director

City of Austin Dept. of Aviation

Austin, Texas

Our information places the closest points of the landfill approximately 4,000 feet from the thresholds of ABIA's Runways 35L and 35R.

We require the following action be taken:

That the bird repellent band control program continues **as long as necessary** after the Type IV facility is opened.

Wilbur Smith Evaluation

The Texas Department of Transportation, Aviation Division, hired Wilbur Smith and Associates, to conduct a study for the establishment of the proposed Central Texas Airport, approved by the Texas legislature and signed into law by Governor Rick Perry. According to WSA, there are projected to be an increase of 200,000 to 500,000 additional flight operations in the Austin area per year by 2014.

This increase in air traffic in conjunction with the expected increase in bird activity in the ABIA vicinity should landfills continue near the air facility, makes for increased chances of birdstrike incidences.

Summary:

Any landfill, whether Type I or Type IV, attracts birds. Birds are a hazard to aviation safety. It takes only one fatal incident to shadow any potential financial benefit of maintaining a landfill of any type in the vicinity of ABIA.

MAY 14, 2002

AUSTIN-BERGSTROM INTERNATIONAL AIRPORT

BURLESON ROAD

TRAVIS COUNTY
MOYA PARK

U.S. GOVERNMENT

CITY OF AUSTIN LANDFILL

IESI LANDFILL

IESI OWNED LAND
(NOT PERMITTED)

FM 812

FM 973

ABRUTTEA &
AUSTIN, TEXAS



U.S. Department
of Transportation
**Federal Aviation
Administration**

Southwest Region
Arkansas, Louisiana,
New Mexico, Oklahoma,
Texas

Ft. Worth, Texas 76193-0000

December 21, 1995

Mr. John M. Almond, P.E.
Project Director
New Airport Project Team
City of Austin Department of Aviation
2716 Terminal Drive
Austin, TX 78719

Dear Mr. Almond:

We have completed our evaluation of the proposal to utilize the remaining 120 acres of the city of Austin's Type I landfill as a Type IV facility. Our information places the closest points of the landfill approximately 4,000 feet from the thresholds of Austin Bergstrom International Airport, Runways 15L and 35R.

Type IV solid waste landfills are not considered to be in conflict with our criteria concerning landfills near airports. We do not object to the site location for the proposed city of Austin's type IV landfill facility, however, because of its proximity to the runways, we require the following actions be taken:

- a. The Type I facility be closed for 60 days before opening the Type IV facility.
- b. An active bird repellent and control program be in place at the site during the 60 days the facility is closed.
- c. That the bird repellent and control program continue as long as necessary after the Type IV facility is opened.
- d. That no putrescible waste of any kind be accepted or permitted at the facility.

e. That the facility will not permit the burning of debris at the site, and that in case of a accidental fire the facility will take immediate corrective actions to extinguish the fire and prevent its recurrence.

If there are any future request concerning this determination, please refer to file No. 95-024-TX.

Sincerely,

ORIGINAL SIGNED BY:
WILLIAM E. MITCHELL

William E. Mitchell
Airport Certification Safety Inspector

cc:

Ms. Mary E. Adrian, P.E., Manager
Permits Section
Municipal Solid Waste Division
P.O. Box 13087
Austin, TX 78721-3087

RECEIVED
DEC 20 95
FEDERAL RECORDS

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



Permit No. MSW- 1341 (Transferred)

Coordinates: N 30° 10.00' W 97° 40.65'

PERMIT FOR A MUNICIPAL SOLID WASTE FACILITY

issued under provisions of the Texas Solid Waste Disposal Act, Chapter 361, Health and Safety Code and 30 Texas Administrative Code (TAC) Chapter 330

Permittee

IE31 TX Landfill L.P.
6125 Airport Freeway, Suite 202
Haltom City, Texas 76117

Site Owner

(Same as Permittee)

Legal Description of Site: The legal description, attached hereto, is hereby made a part of this permit.

Size and Location of Site: This site consists of 112.93 acres of land and is located southeast of Austin, south of Austin Bergstrom International Airport, 0.7 mile east of U.S. Highway 183 on F.M. 812, adjacent to and on the west side of the City of Austin Landfill, 1200 feet north of FM Road 812, in Travis County.

Operational Classification of Site: Type IV (Brush, construction/demolition waste and rubbish only.)

Waste Disposal Methods Used at Site: Area method of disposal with compaction of solid waste and cover with a minimum of six (6) inches of compacted earth not less often than once each week.

Description of Waste Materials Processed at Site: Solid waste under the regulatory jurisdiction of the Texas Natural Resource Conservation Commission, when disposed of or processed in accordance with 30 TAC Chapter 330.

Findings of Fact and Conclusions of Law: Attached hereto for reference.

Standard Protection: Acceptance of this permit constitutes an acknowledgment that the permittee will comply with all of the terms, provisions, conditions, limitations and other restrictions embodied in this permit; with 30 TAC Chapter 330; and with the pertinent laws of the State of Texas.

Special Provisions: See Attachment - "Special Provisions for Municipal Solid Waste Permit No. MSW-1341"

This permit will be valid until canceled or revoked by the Texas Natural Resource Conservation Commission or until the site is completely filled and rendered unusable, whichever occurs first.

APPROVED, ISSUED, AND EFFECTIVE in accordance with 30 Texas Administrative Code Chapter 330.

ISSUED DATE:

DEC 18 2000

A handwritten signature in black ink, appearing to read "Jeffrey A. Duce".

For the Commission

MODIFICATION TO
MUNICIPAL SOLID WASTE PERMIT N^o MSW-1841
Travis County Landfill, Travis County

Municipal Solid Waste Permit No. MSW-1841 is hereby modified as follows:

Description of Change:

Change the currently permitted hours of operation from 7:00 a.m. to 7:00 p.m., Monday through Saturday, at the above referenced facility to 6:00 a.m. to 7:00 p.m., Monday through Saturday. Along with this, per the permitted Site Operating Plan, the gate will normally be closed to the public at 6:00 p.m. in order that landfill personnel may apply cover material, clean up after the day's activities, repair roads, etc.

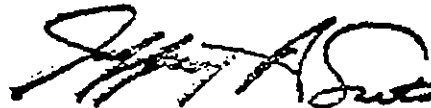
Permit Sections Revised:
Site Operating Plan

This modification is a part of Permit No. MSW-1841 and should be attached thereto.

APPROVED, ISSUED, AND EFFECTIVE in accordance with 30 Texas Administrative Code Section 305.70(i).

ISSUED DATE:

AUG 28 2000



For the Commission

PART IV
SITE OPERATING PLAN
§330.57 AND §330.114

TRAVIS COUNTY LANDFILL
TNRCC PERMIT NO. MSW-1841

operated by:

IESI TX Corporation



prepared by:

JFK GROUP, INC.

JUNE 14, 2000

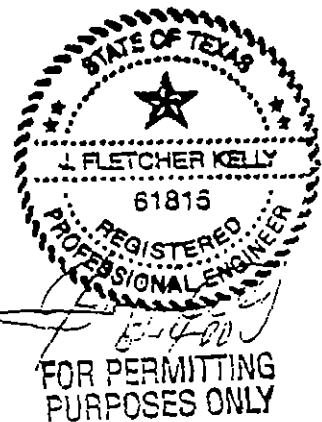
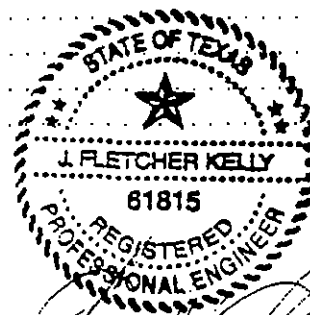


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FOR PERMITTING PURPOSES ONLY

SITE OPERATING PLAN TRAVIS COUNTY LANDFILL

Introduction

This Site Operating Plan (Plan) has been prepared to fulfill the requirements of 30 TAC §330.57 and §330.114, and to provide guidance for the Travis County Landfill management and operating personnel in day-to-day operations of the site. This Plan is consistent with the engineer's design for this site. The site is designed as a Type IV Municipal Solid Waste Landfill.

Personnel

The staff recommended initially for this landfill consists of four (4) full-time employees:

- 1 - Site Supervisor
- 1 - Equipment Operator
- 1 - Gate Attendant
- 1 - Laborer

The site supervisor will have experience both in landfill operations and operation/maintenance of heavy equipment. The site supervisor will hold a Class A Letter of Competency or a Provisional Class A Letter of Competency or will be required to demonstrate that he/she has had substantial employment and educational training emphasizing landfill management and operations.

The equipment operator will be an experienced heavy equipment operator knowledgeable in landfill operations. Duties will include working face monitor, compacting waste, applying cover as needed, maintaining site roads, grade control, equipment operation, equipment maintenance and trench excavation. Trench excavation may also be contracted to an outside contractor.

The gate attendant's duties include general traffic direction, control of unauthorized vehicles entering the landfill, levying of charges or tickets to all vehicles, inspection of loads for unauthorized materials and collection of transporter trip tickets, as required.

The laborer will work under the direct supervision of the equipment operator and/or the site supervisor. Duties will be assigned as required to maintain the site's compliance with TNRCC regulations and permit conditions.

A foreman will be appointed to oversee operations in the landfill and act as assistant supervisor in the supervisor's absence. Either the site supervisor or the foreman will be on-site at least 75% of the time.

Equipment

Initial on-site equipment will consist of the following:

- | | |
|---|--------------------------------|
| 1 - Track-type Dozer or equivalent | 1 - Water Truck |
| 1 - Solid Waste Compactor or equivalent | 1 - Motorized Pan Soil Scraper |
| 1 - Motor-grader or equivalent | or equivalent |

The following safety rules are recommended:

All landfill personnel will wear safety shoes and leather gloves.

All landfill personnel will be furnished with hard hats, dust protectors, hearing protectors, and safety glasses if they wish to wear them.

In the interest of safety, children under the age of twelve (12) must remain in a vehicle while it is being unloaded.

Maintain at least six feet between unloading vehicles at the working face.

Hours of Operation

The hours of operation for this landfill will be from 7:00 a.m. to 7:00 p.m. Monday thru Saturday. The gate will normally be closed to the public at 6:00 p.m., in order that landfill personnel may apply cover material, clean up after the day's activities, repair roads, etc.

Sequence of Site Development

Prior to opening of the site for the deposition of solid waste the following construction will occur:

- (1) Construct paved site entrance road;
- (2) Construct ticket station;
- (3) Construct all-weather road to Trench 1;
- (4) Excavate a portion of Trench 1 (Trench 1A) and provide sidewall liners along the south and west walls to comply with SLQCP requirements;
- (5) Install site signs;
- (6) Construct site fencing as needed;
- (7) Install site grid markers in vicinity of disposal areas; and
- (8) Install monitor wells and obtain background samples.

After the site construction is sufficiently complete to allow disposal operations to proceed, the site personnel will be given pre-opening training as needed and a pre-opening inspection by the TNRCC will be requested.

After the site opens, trenches will be excavated in numerical order. Prior to excavation of Trench 7, the Bergstrom access road and the Capitol Company water line will be relocated. Prior to beginning fill operations in the eastern portion of Trench 8, the Channel 8 stormwater diversion will be installed. Special effort will be taken to minimize ponding of water in Trench 8 and later in Trench 9 by maximizing use of uphill diversions during the filling operation. After Trench 9 is filled, revegetation and drainage facilities should be completed in that portion of the landfill.

Prior to excavation of Trench 17, the Channel A stormwater diversion will be installed. In the central and south portion of the landfill, it will be necessary to relocate all-weather haul roads as fill progresses.

Interior sidewall liners will be installed along the south and west walls for Trench 1. All or portions of the interior sidewall liners in Trench 1 may be removed during the excavation of Trench 21. The operator should exercise care not to disturb the certified insitu and/or recompacted clay bottom liner in Trench 1 when removing the sidewall liner.

Fill Operations

The site will be operated using the area fill method with excavation proceeding ahead of the fill in a continuous trench fashion. Trenches will be filled in numerical order.

Below ground filling will be accomplished in one lift (twenty foot maximum height) wherever possible. Successive trench heights should have a lift height of 5 to 10 feet with consistent heights being used throughout each portion of the landfill. Intermediate top slopes should have approximately 4% slope to minimize infiltration of rainfall into the waste trenches.

Trucks will generally drive over the previously filled trench and discharge their loads at the top of the working face. The compactor will then push the waste down the working face, compacting previously placed waste as it goes. This will result in the maximum compaction possible and will allow further compaction by the trucks as initial settlement occurs. The working face will be maintained at approximately a 4:1 slope. The site operator will periodically verify that adequate passes are being made over the waste to obtain maximum compaction of the waste.

The unloading pad will be delineated to produce the smallest practical working face. Safety will be an important consideration in the amount of area allocated for unloading. A minimum spacing of 14 feet per truck should be used in the unloading area. Adequate maneuvering room (approximately 100 feet) will be provided in the unloading area.

Fire Prevention and Control

Soil will be used to smother fires when possible. An earthen stockpile will be maintained within 2,500 feet of the working face for fire fighting. The earthen stockpile will be sized to cover the entire working face or active disposal area. In addition, a water truck is available for fire fighting purposes. All landfill equipment will be equipped with fire extinguishers in the cab.

The site will be served by the Pilot Knob Volunteer Fire Department. The City of Austin Fire Department and other local county fire departments are available, should assistance be required in fighting fires on the site. Should a fire occur, contact the fire department and then attempt to control or extinguish the fire. All fires should be reported to the site supervisor or foreman.

Control of Special Wastes

All vehicles entering the site will be inspected to insure that no special waste or prohibited items are unloaded at this facility. The landfill will accept only Type 'V' waste, consisting of construction waste, demolition debris, brush, and rubbish that are free from unauthorized waste.

The following waste will not be accepted at the site:

- Putrescible waste (garbage)
- Radioactive waste
- Class I Industrial nonhazardous waste
- Class II Industrial nonhazardous waste
- Regulated hazardous waste
- PCB waste
- Vacuum truck waste

Infectious or pathological wastes,
Septic tank waste
Friable asbestos
Dead animals or slaughterhouse waste

The gate attendant, equipment operator and laborer will be familiar with the "Waste Stream Quality Control Plan" and the TNRCC regulations regarding unauthorized wastes. The equipment operator and/or laborer will be on duty at all times when waste is unloaded to see that no unacceptable material is incorporated into the working face.

Control of Windblown Material

Temporary portable fences may be erected around active fill areas as needed to control windblown material. These fences will be cleaned at least weekly or as needed to prevent the escape of windblown material.

Immediate placement and compaction of waste after it is unloaded will help to minimize the volume of windblown material. During windy periods, the site supervisor and operators will make every effort to choose unloading areas which are less susceptible to wind effects.

Vector Control

Conditions favorable to the production of vectors will be minimized through compaction and covering procedures. The lack of putrescible wastes at this site should also minimize the attraction of vectors. Approved pesticides will be employed for vector control, when necessary.

Dewatering of Excavations

The subsurface soils investigation conducted at the site indicates that the quantity of groundwater at the site is limited and occurs in isolated pockets in joint planes and drying cracks in the clays and shales in the southern part of the site and in pockets of sand and gravel layers overlying the clays in the northern portion of the site. The base grading plan is laid out to allow any water which is intercepted to be drained out without adversely affecting excavation or sidewall liner construction, where required. The site has applied for a National Pollution Discharge Elimination System (NPDES) Multi Sector Stormwater Permit. Uncontaminated water can be drained or pumped from the excavation and discharged off-site. Contaminated water will not be discharged from the site without specific written authorization.

Dust and Mud Control

During periods of dry weather, the non-paved site roadways will require intermittent blading and watering to maintain trafficability and provide dust control.

During wet weather, all-weather unloading pads will be used to minimize the amount of mud the trucks are in contact with. After leaving the unloading area, the trucks will travel over an all-weather road to the ticket station and the paved site access road to F.M. 312. This length and type of roadway should minimize the amount of mud tracked onto F.M. 312.

Odor Control

Cover provided as a part of the ongoing fill operations should be adequate to control odors at the site. The lack of putrescible waste in the site will minimize odor production potential. Any ponded water at the site will be controlled to avoid its becoming an odor nuisance.

Placing and Compacting Refuse

The size of the open working face will be limited to the width required to accommodate one day's waste generation. In order to meet this criteria and also accommodate the anticipated vehicular traffic generation, the daily working face is anticipated to be approximately eighty feet wide. The waste will be evenly placed, spread, and then compacted (using the landfill compactor) in layers not to exceed approximately two feet in depth. Approximately two of these layers will be required each day. A 4:1 (horizontal to vertical) slope will be maintained on the working face.

Landfill Cover

A compacted cover layer six inches thick will be applied over waste fill not less than weekly. Cover applied at the top surface and interim aerial lifts may exceed the standard six inch thickness to promote trafficability. Areas of fill which have not reached completion grade and are not expected to receive additional waste for a period of 180 days or more will be covered with an additional six inches of soil to form an intermediate cover. Weekly and intermediate cover will consist of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste.

Cover will be provided on the working face as necessary to control windblown material and at least weekly prior to closing on the weekend. During rainy periods the working face will be covered daily to minimize the infiltration of rainfall into the waste. Cover operations will be conducted during operating hours as space is available for placing the cover material without conflicting with vehicle unloading, solid waste placement and compaction.

As the proposed waste elevation in each area of the fill is reached, a minimum of two (2) feet of well-compacted clay (SC or CL) material will be placed over the compacted area. At least six inches of final cover material composed of topsoil capable of maintaining grass will be placed over the compacted clay cover. If CH clay material is used for final cover, 12 inches of topsoil must be provided (over a minimum of 18 inches of CH material) to insure vegetative establishment. After these areas are filled, they should be prepared for seeding or sprigging with appropriate grasses. Final cover on side slopes will vary from 6 feet thick at the toe to 2.5 feet thick at the top as depicted on sheet 4 of Attachment 8. The side slope final cover will be constructed as berms as fill progresses to visually screen the disposal area.

Cover Application Log

A log will be maintained at the site showing dates and volumes for excavation including source area, dates and volumes of cover, including a description of the type cover and designating the area covered.

Ponded Water

The ponding of water over waste on the municipal solid waste landfill (MSWLF) unit, regardless of its origin, will be prevented. Ponded water that occurs in the active portion of a MSWLF unit

WASTE STREAM QUALITY CONTROL PLAN TRAVIS COUNTY LANDFILL

Introduction

The landfill will accept only Type IV waste including:

- Construction waste
- Demolition debris
- Brush and landscape waste
- Rubbish that is free from unacceptable waste

Unacceptable wastes include the following:

- Putrescible waste (garbage)
- Radioactive waste
- Class I industrial nonhazardous waste
- Class II industrial nonhazardous waste
- Regulated hazardous waste
- PCB waste
- Vacuum truck waste
- Infectious or pathological waste
- Septic tank waste
- Friable asbestos
- Dead animals or slaughterhouse waste

Waste delivered in enclosed vehicles or enclosed containers can only be accepted if all the conditions set forth in the below section entitled "Acceptance of Enclosed Containers/Vehicles" are met. For clarification, loads which are tarped or covered to prevent loss of waste material en route to the landfill will not be considered enclosed if the tarp or cover can be removed for inspection of the load.

Acceptance of Enclosed Containers/Vehicles

Waste in enclosed containers or enclosed vehicles will not be accepted except as per §330.135. Each enclosed container or enclosed vehicle will have all required approvals and/or permits from the executive director in accordance with §330.32.

Enclosed containers or enclosed vehicles will only be accepted at their designated time and on their specified day. A TNRCC inspector will be on-site and must witness the unloading process to ensure that no putrescible waste or household waste is present. Any waste considered unacceptable by the inspector will be removed from the working face and subsequently from the site.

Each transporter delivering waste in enclosed containers or enclosed vehicles will, prior to discharge, provide the landfill operator with a transporter trip ticket for the route he/she is delivering. Trip tickets will be maintained in the operating record.

If a transporter fails to comply with all required rules and regulations, their authorization may be revoked by the TNRCC and landfill management.

If waste in enclosed vehicles are accepted at the landfill that are not exempted as per the following paragraph, the landfill will participate in the TNRCC funding program to monitor these activities. The executive director will determine the approximated annual cost for implementing and maintaining the surveillance and enforcement of all activities associated with the acceptance of enclosed containers or enclosed vehicles at Type IV landfills.

Stationary compactors permitted in accordance with §330.25 and municipal transporter routes permitted in accordance with §330.32 are exempt from the above detailed requirements. However, the landfill operation will obtain a hauler trip ticket from the transporter for the municipal transporter route or stationary compactor, as appropriate, prior to allowing discharge of the waste material. These trip tickets will be maintained in the operating record.

Responsibilities of Gate Attendant

The major responsibilities of the gate attendant are to verify that all incoming waste is acceptable for disposal in a Type IV Landfill, obtain necessary documentation regarding the hauler and waste source, advise haulers of site rules, and levy landfill fees and surcharges as appropriate.

The gate attendant will reject all loads containing regulated hazardous wastes, infectious wastes or Class I industrial nonhazardous waste. Other loads may be rejected if it is not practical to selectively remove unacceptable materials.

Responsibilities of Equipment Operator

The equipment operator or his designee is one of the landfill's main contacts with the customers. He must inspect each load as it is discharged at or near the working face to verify that unacceptable materials are not contained in the load.

If unacceptable materials are discovered the equipment operator will take the following steps:

- (1) Isolate the waste.
- (2) Discuss the matter with the customer, explaining the site rules concerning acceptable materials. At the same time arrangements will be made for either the customer or site personnel to remove the unacceptable material from the unloading area.
- (3) Verify that unacceptable materials are either loaded back on the offender's vehicle or placed in waste containers on-site for later removal to an approved disposal site.
- (4) Complete a unacceptable material report identifying the customer, waste description, volume, waste source, vehicle and other pertinent comments for the landfill files.
- (5) Verify that unacceptable materials placed in collection bins are removed from the site within the prescribed time limit (24 hours maximum).

Disposal of Unacceptable Materials

A waste container will be located near the working face and at the ticket station for deposit of small quantities of putrescible waste or other unacceptable wastes that are removed from loads at the gate or from the unloading area. The waste containers will be picked up daily by a commercial hauler and disposed of in a Type I Landfill. The hauler will be required to supply a record of each disposal to the landfill.

<<Prev Rule

Texas Administrative Code

Next Rule>>

TITLE 30

ENVIRONMENTAL QUALITY

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 330

MUNICIPAL SOLID WASTE

SUBCHAPTER F

OPERATIONAL STANDARDS FOR SOLID WASTE LAND
DISPOSAL SITES

RULE §330.133

Landfill Cover

(a) Daily cover. All landfills, with the exception of Type IV landfills, shall provide six inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste at the end of each operating day to control disease vectors, fires, odors, windblown litter or waste, and scavenging, unless the executive director requires a more frequent interval to control disease vectors, fires, odors, windblown litter or waste, and scavenging. Landfills that operate on a 24-hour basis shall cover the working face or active disposal area at least once every 24 hours. All Type IV facilities shall follow the requirements of this subsection except the rate of cover shall be no less than weekly, unless the commission approves another schedule.

(b) Intermediate cover. All areas that have received waste but will be inactive for longer than 180 days shall provide intermediate cover. This intermediate cover shall be an additional six inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste for a total of not less than 12 inches of cover. The intermediate cover shall be graded to prevent ponding of water. Run-off from areas which have received intermediate cover shall not be considered as having come into contact with the working face or leachate for the purpose of §330.55(b)(6) of this title (relating to Contaminated Water Treatment).

(c) Alternative material daily cover. Alternative material daily cover (ADC) may be allowed by permit provision or by modification in accordance with §305.70 of this title (relating to Municipal Solid Waste Class I Modifications).

(1) An ADC operating plan shall be included in the site development plan that includes the following:

(A) a description and thickness of the alternative material to be used;

(B) its effect on vectors, fires, odors, and windblown litter and waste;

(C) the operational methods to be utilized at the site when using this alternative material;

(D) chemical composition of the material and the Material Safety Data Sheet(s) for the alternative material; and

(E) any other pertinent characteristic, feature, or other factors related to the use of this alternative material.

(2) A status report on the ADC shall be submitted on a quarterly basis to the executive director describing the effectiveness of the alternative material, any problems that may have occurred, and corrective actions required as a result of such problems. If no problems occur within four consecutive quarters of use, status reports will no longer be required.

(3) ADC shall not be allowed when the landfill is closed for a period greater than 24 hours, unless the executive director approves an alternative length of time.

(d) Temporary waiver. The executive director may grant a temporary waiver from the requirements of subsections (a)-(c) of this section if the owner/operator demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.

(e) Final cover. Final cover for the landfill shall be in accordance with the site closure plan.

(f) Erosion of cover. Erosion of final or intermediate cover shall be repaired promptly by restoring the cover material, grading, compacting, and seeding it as necessary. Such periodic inspections and restorations are required during the entire operational life and for the post-closure maintenance period.

(g) Cover log. Each landfill shall keep a cover application log on site readily available for inspection by commission representatives and authorized agents or employees of local governments having jurisdiction. This log shall specify the date cover (no exposed waste) was accomplished, how it was accomplished, and the last area covered. This applies to daily, intermediate, and alternate daily cover. For final cover, this log shall specify the area covered, the date cover was applied, and the thickness applied that date. Each entry shall be certified by the signature of the on-site supervisor that the work was accomplished as so stated in the log.

Source Note: The provisions of this §330.133 adopted to be effective October 9, 1993, 18 TexReg 4023.

Next Page Previous Page

List of Titles

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LOC I-BSM	APP CRS	Rwy Idg	12248
110.3	353°	TDZE	496
		Apt Elev	542

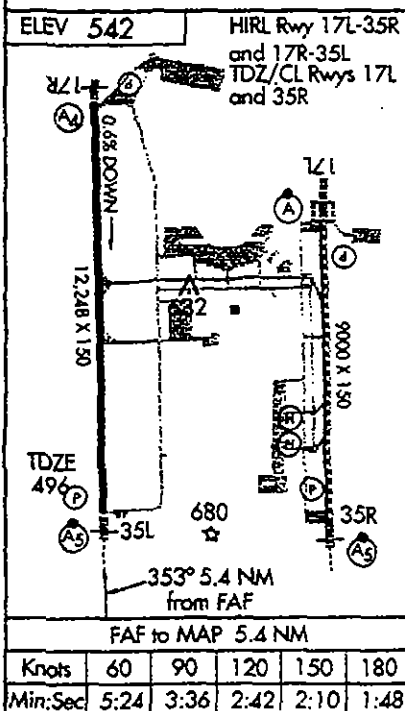
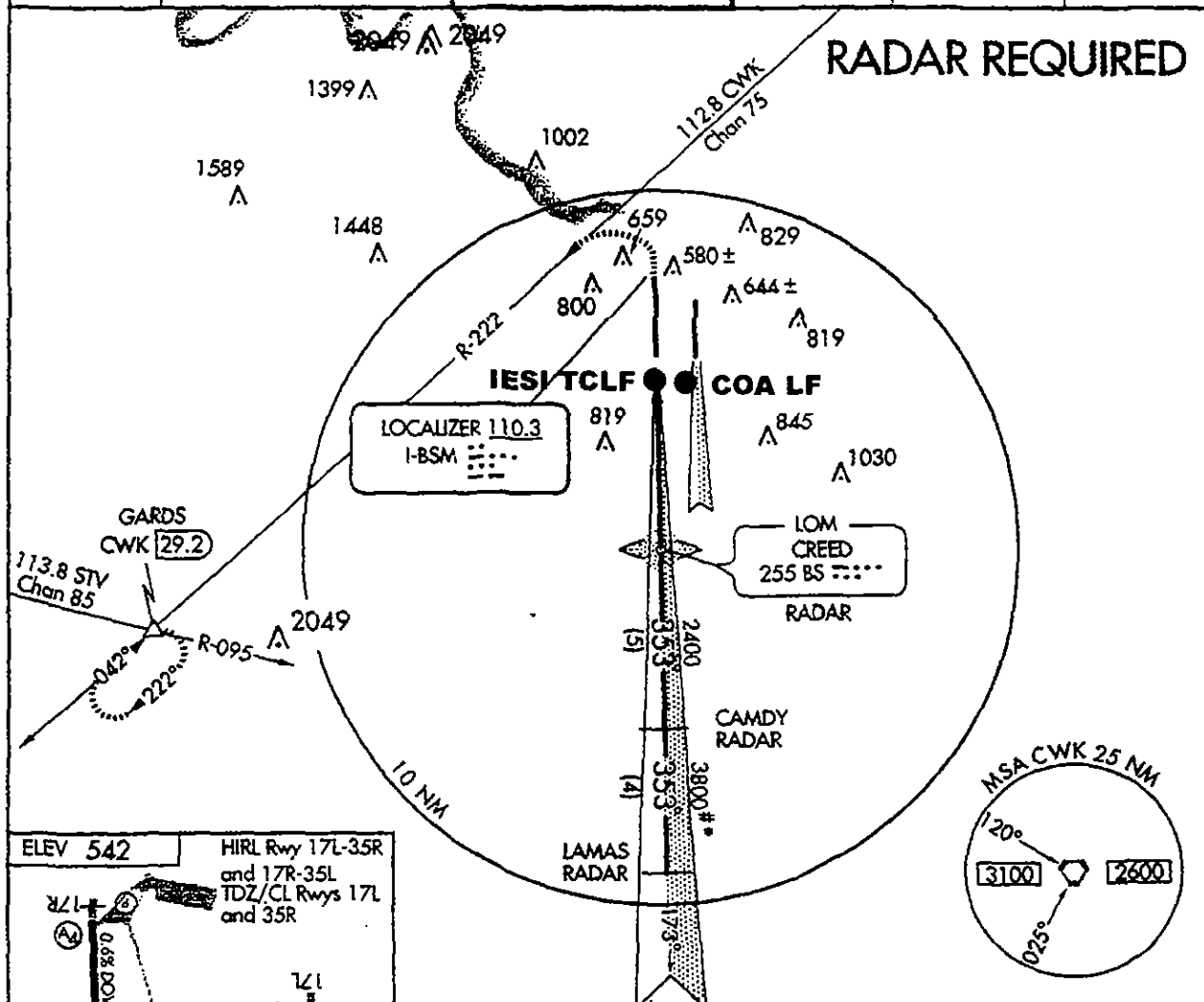
ILS RWY 35L **AUSTIN-BERGSTROM INTL (AUS)**

- Simultaneous approach authorized with runway 35R.
 For inoperative MALSR, increase ILS Cat E visibility to RVR 4000, and LOC Cat E visibility to 1 1/2 mile.



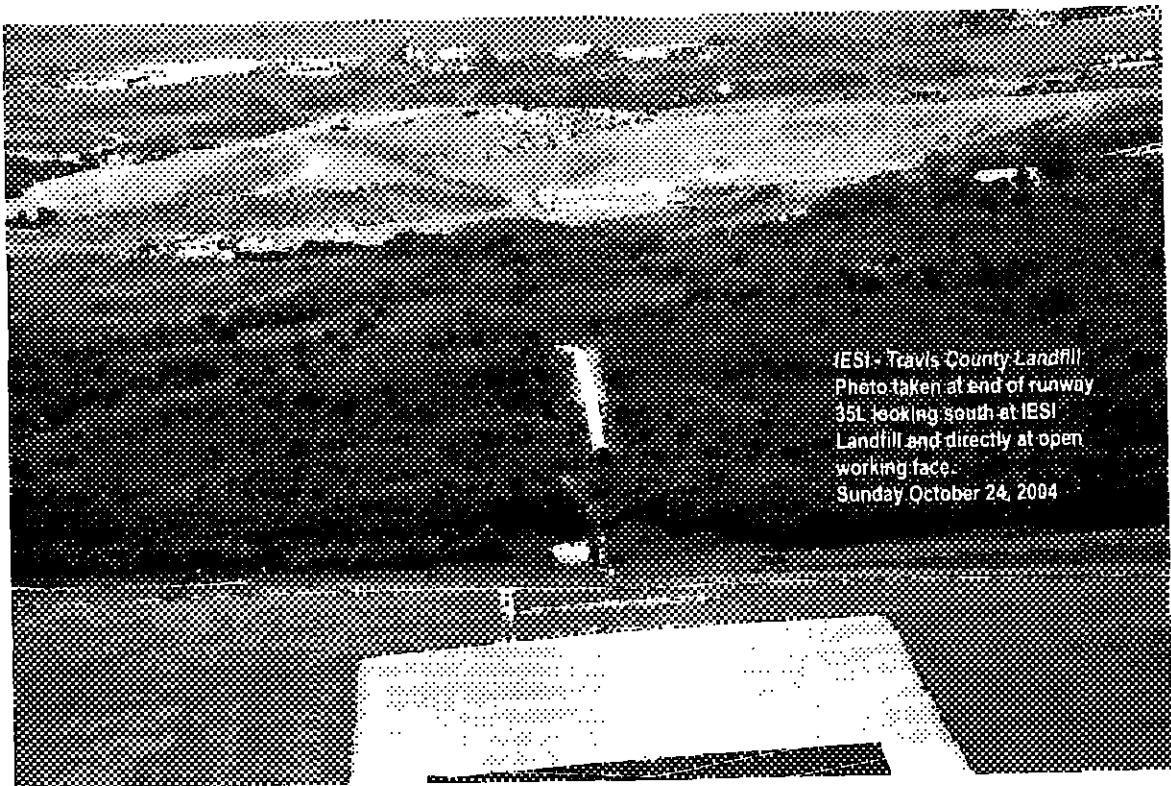
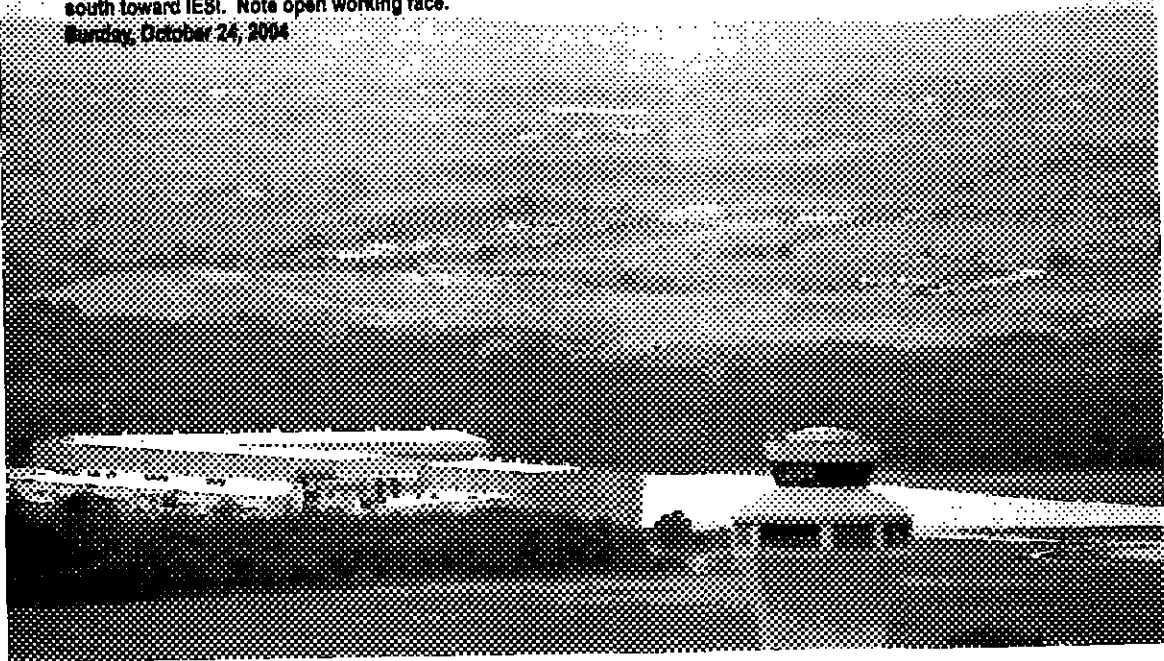
MISSED APPROACH: Climb to 1000, then climbing left turn to 3000 via CWK VORTAC R-222 to GARDS Int/CWK 29.2 DME and hold.

ATIS	AUSTIN APP CON	AUSTIN TOWER	GND CON	CLNC DEL	UNICOM
124.4	118.8 317.65 (355°-175°) 119.0 370.85 (176°-354°)	121.0 281.5 (EAST) 118.225 254.25 (WEST)	121.9 348.6	125.5 263.0	122.95



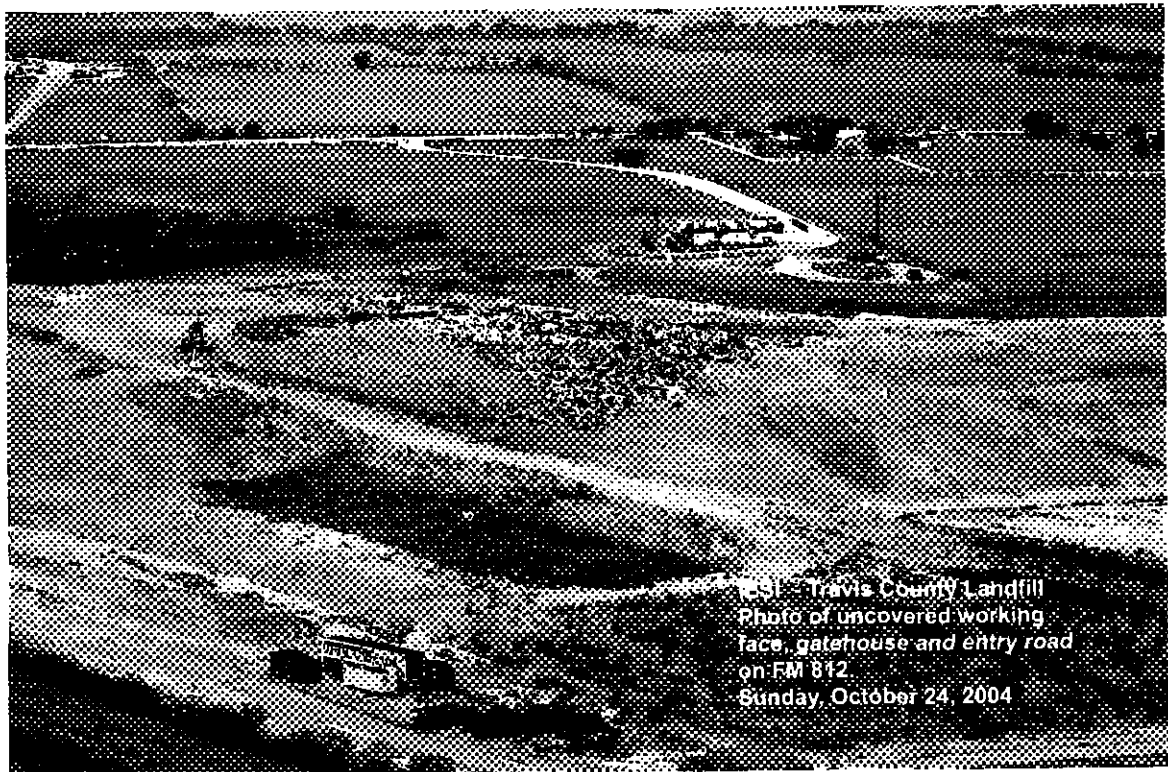
	1000	3000	GARDS	CAMDY RADAR	LAMAS RADAR
			△		
			CWK R-222	CWK 29.2	
			LOM RADAR	3958	5000*
			2296	4400	GS 3.00° TCH 60
			2400 #	3800 #	*2400 when authorized by ATC
# LOC only	5.4 NM	5 NM	4 NM		
CATEGORY	A	B	C	D	E
S-ILS 35L			696/24	200 (200-1/2)	
S-LOC 35L	980/24	484 (500-1/2)	980/40 484 (500-3/4)	980/50 484 (500-1)	980/60 484 (500-1 1/2)
CIRCLING	1040-1	498 (500-1)	1040-1 1/2 498 (500-1 1/2)	1160-2 618 (700-2)	1260-2 1/2 718 (800-2 1/2)

IESI Travis County Landfill
Photo taken near airport control tower looking
south toward IESI. Note open working face.
Sunday, October 24, 2004

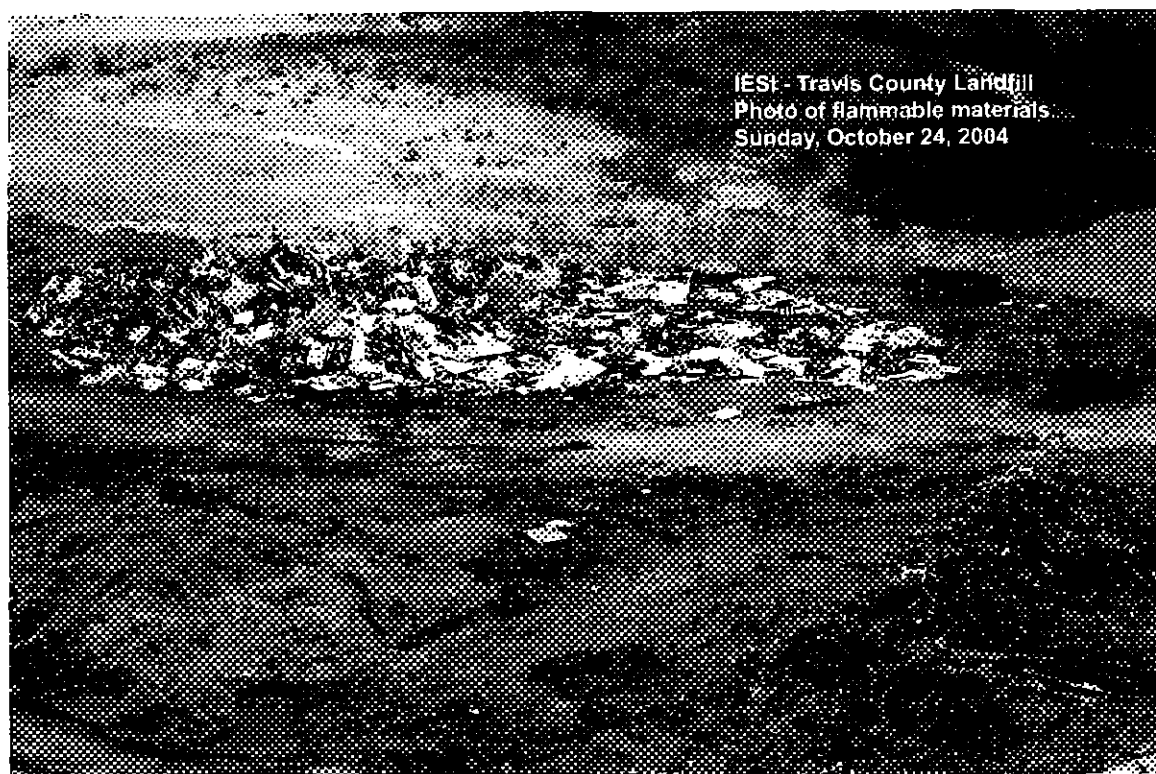
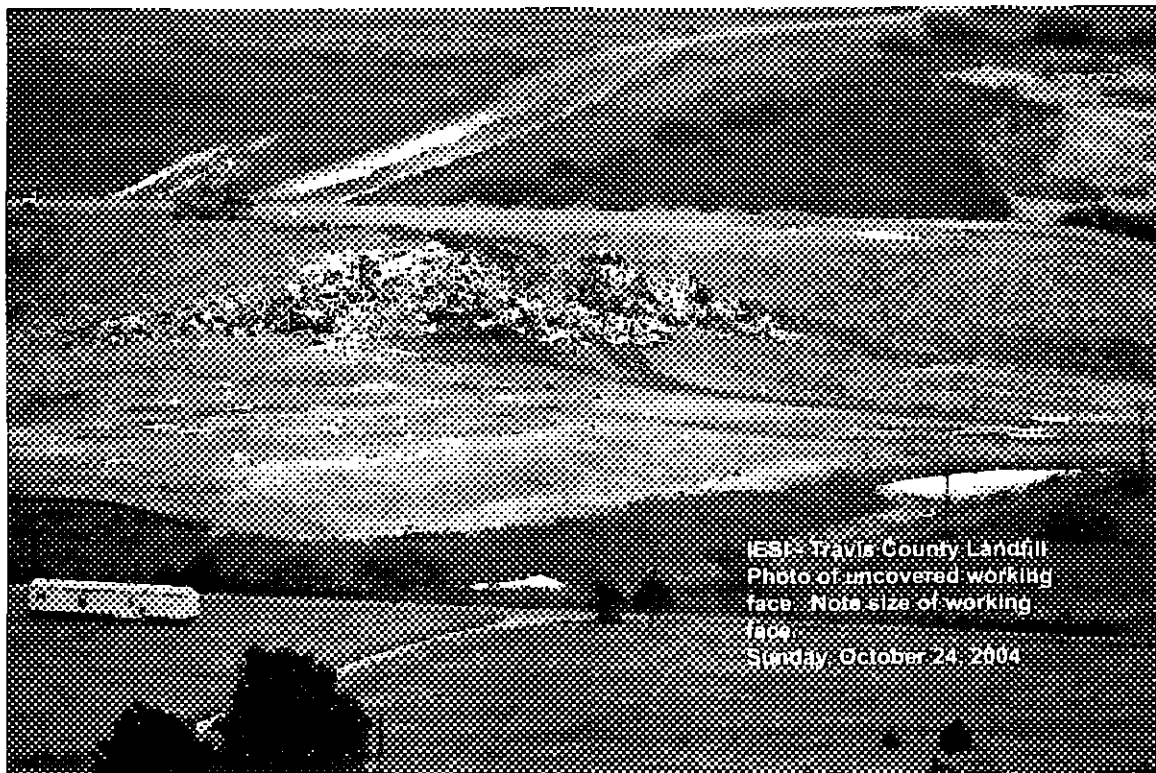


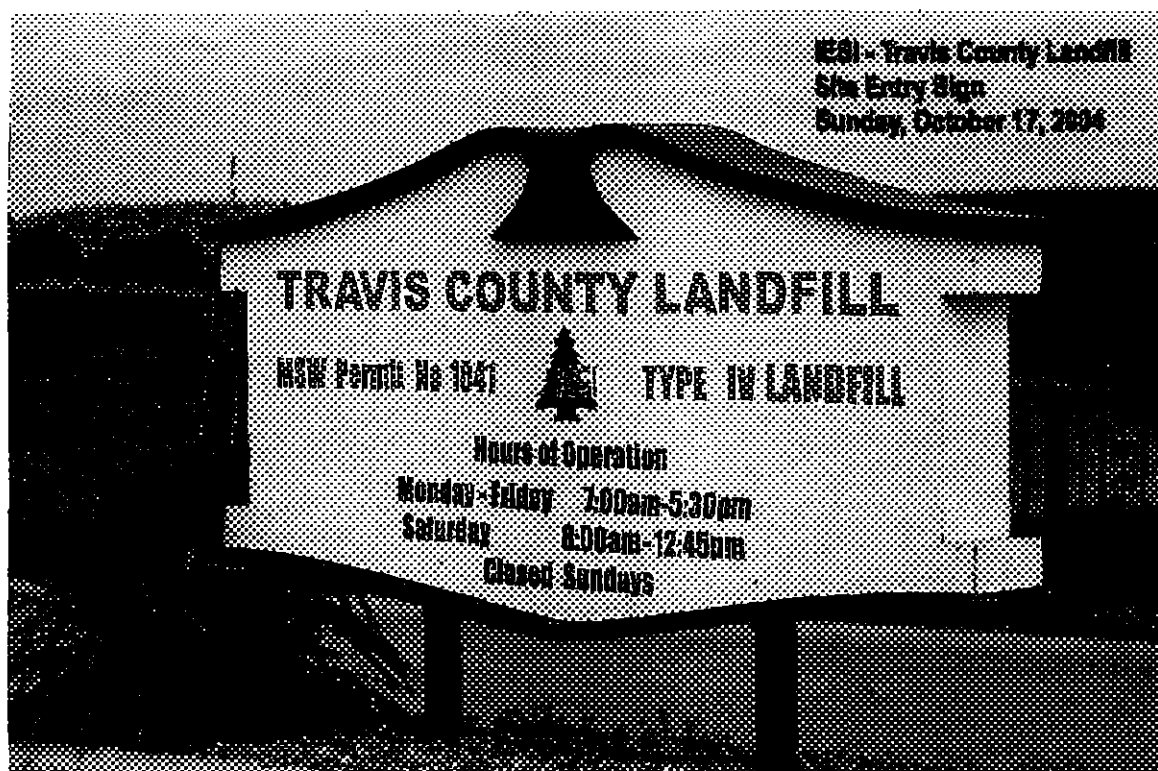
IESI - Travis County Landfill
Photo taken at end of runway
35L looking south at IESI
Landfill and directly at open
working face.
Sunday October 24, 2004

CSI - Travis County Landfill
Photo of uncovered working
face taken from public roadway
on west side of landfill. Note
bustards on working face.
Sunday, October 24, 2004

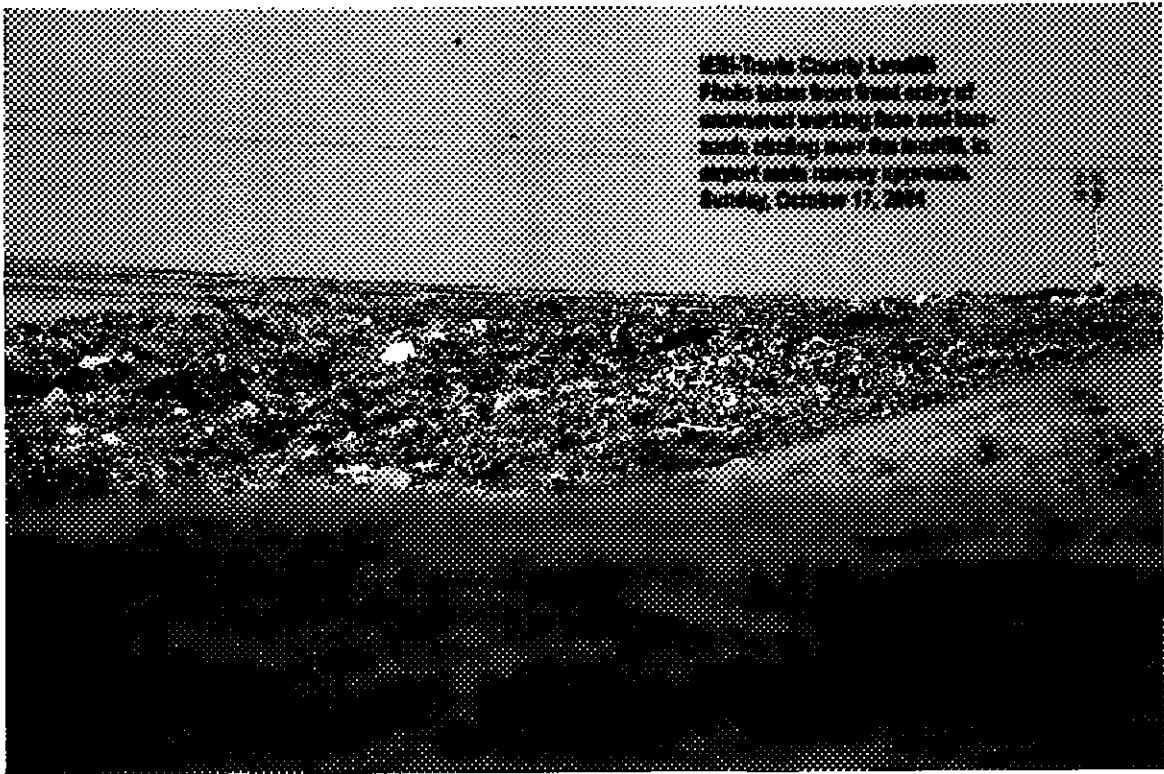


CSI - Travis County Landfill
Photo of uncovered working
face, gatehouse and entry road
on FM 812
Sunday, October 24, 2004

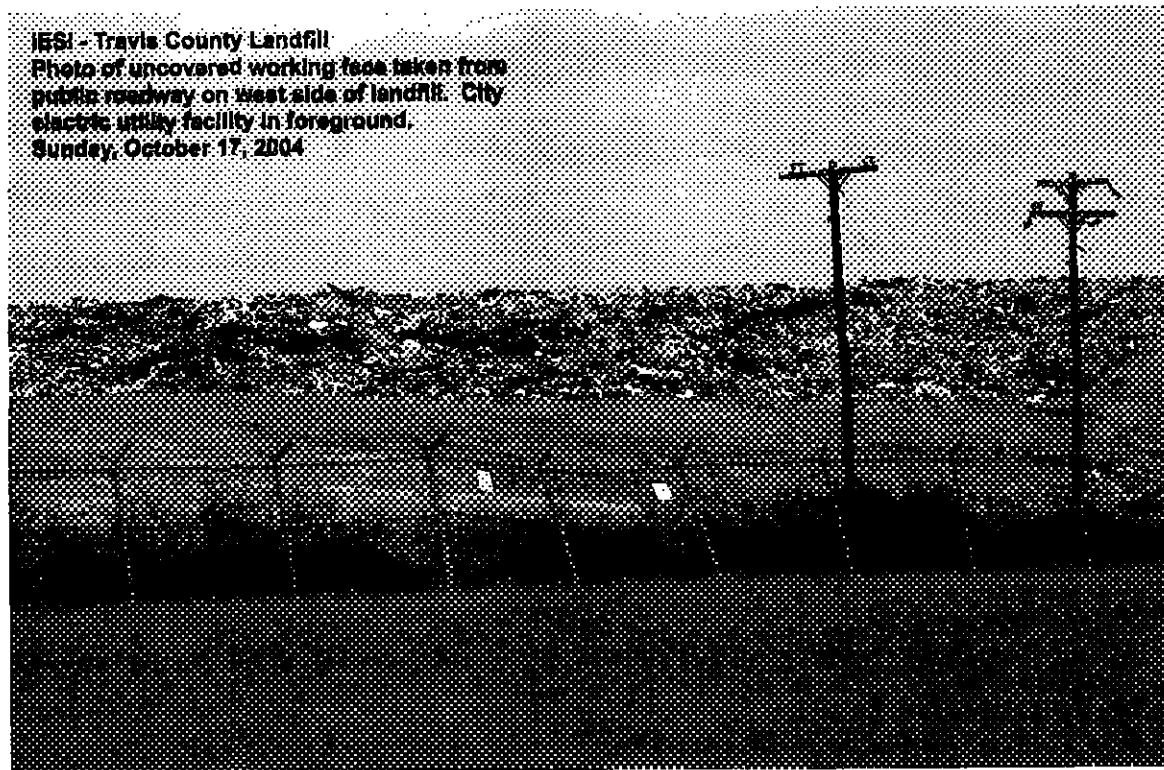


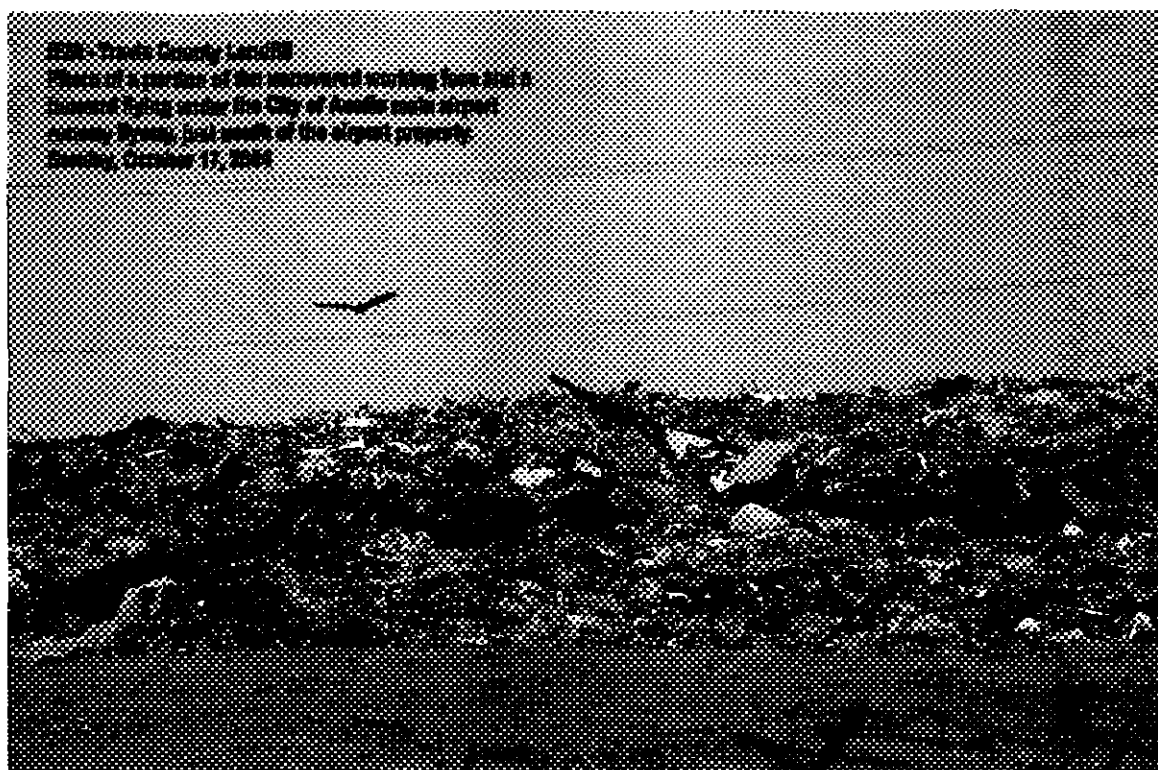
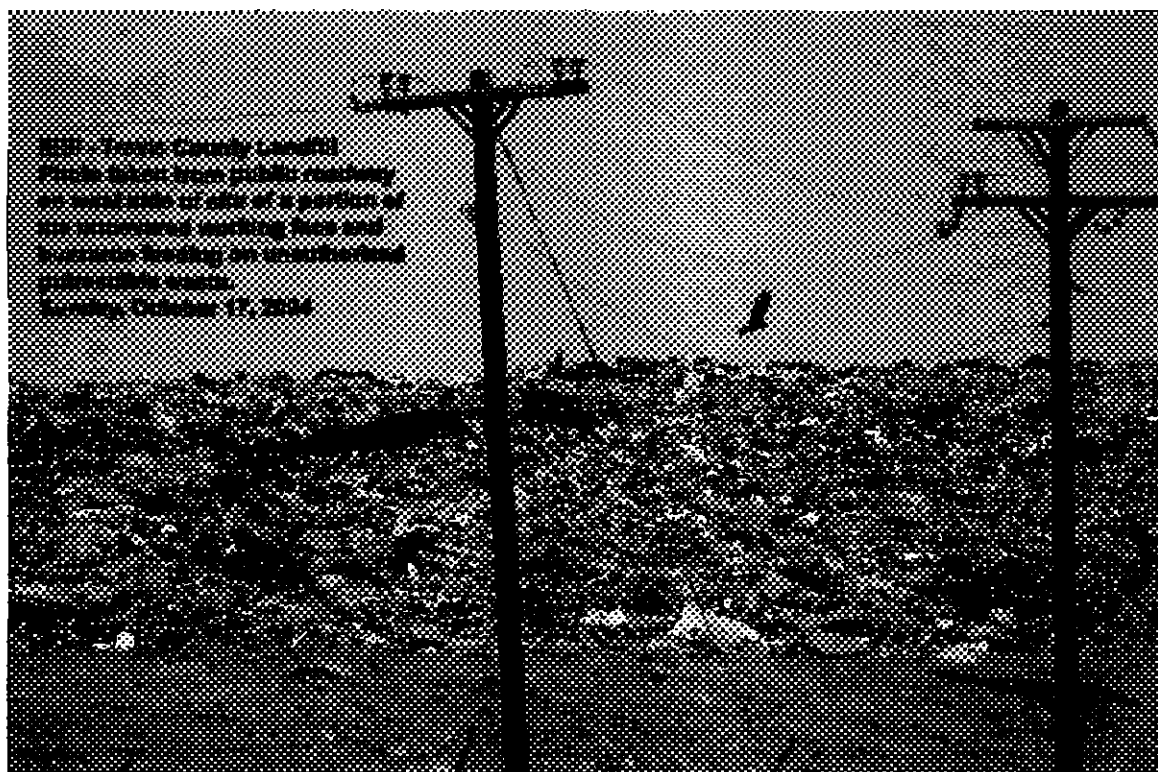


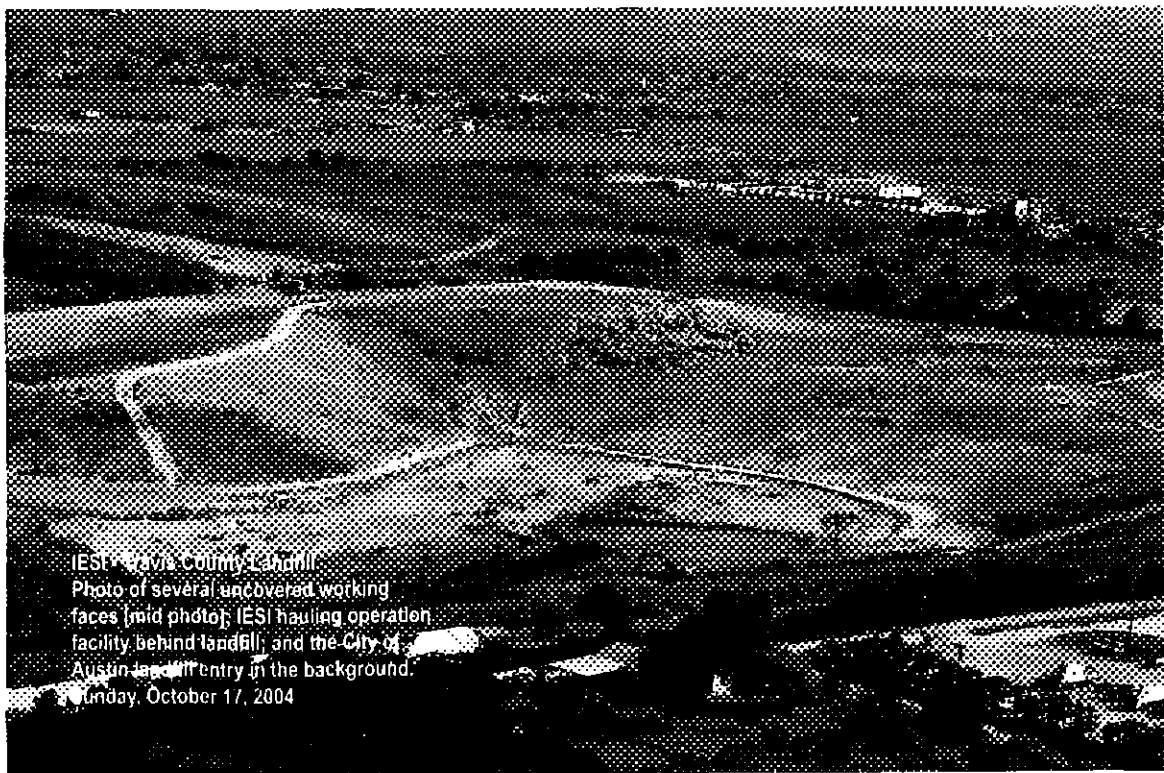
IESI - Travis County Landfill
Photo taken from front entry of
uncovered working face and from
north station over the landfill to
airport main runway approach.
Sunday, October 17, 2004



IESI - Travis County Landfill
Photo of uncovered working face taken from
public roadway on West side of landfill. City
electric utility facility in foreground.
Sunday, October 17, 2004





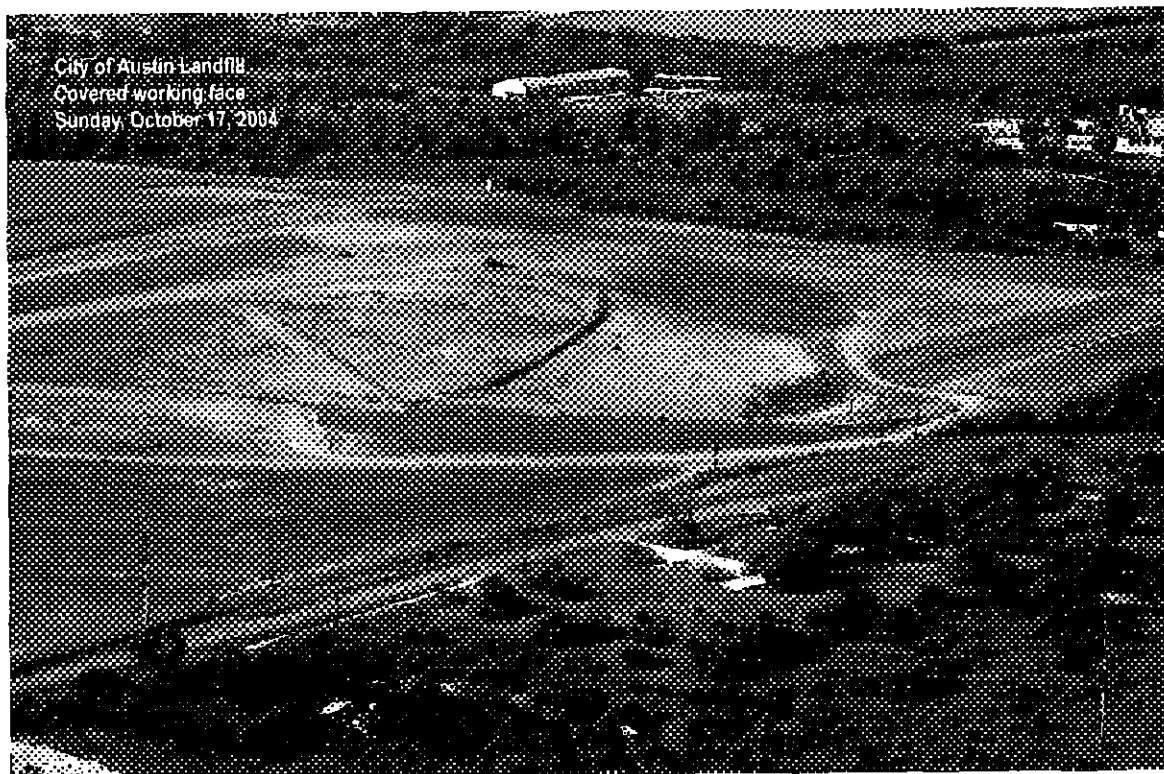
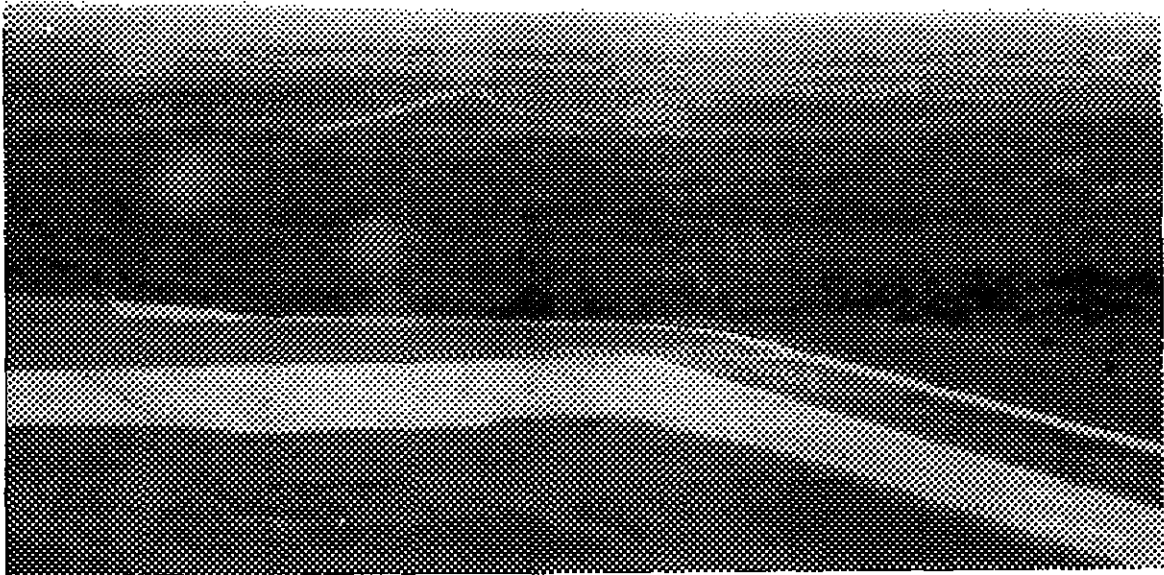


IESI - Travis County Landfill
Photo of several uncovered working
faces (mid photo), IESI hauling operation
facility behind landfill, and the City of
Austin landfill entry in the background.
Sunday, October 17, 2004



IESI - Travis County Landfill
Photo of several uncovered working faces.
Sunday, October 17, 2004

A view of the City of Austin landfill and Moya Park from
Austin Bergstrom International Airport east runway.
Sunday, October 17, 2004





← N

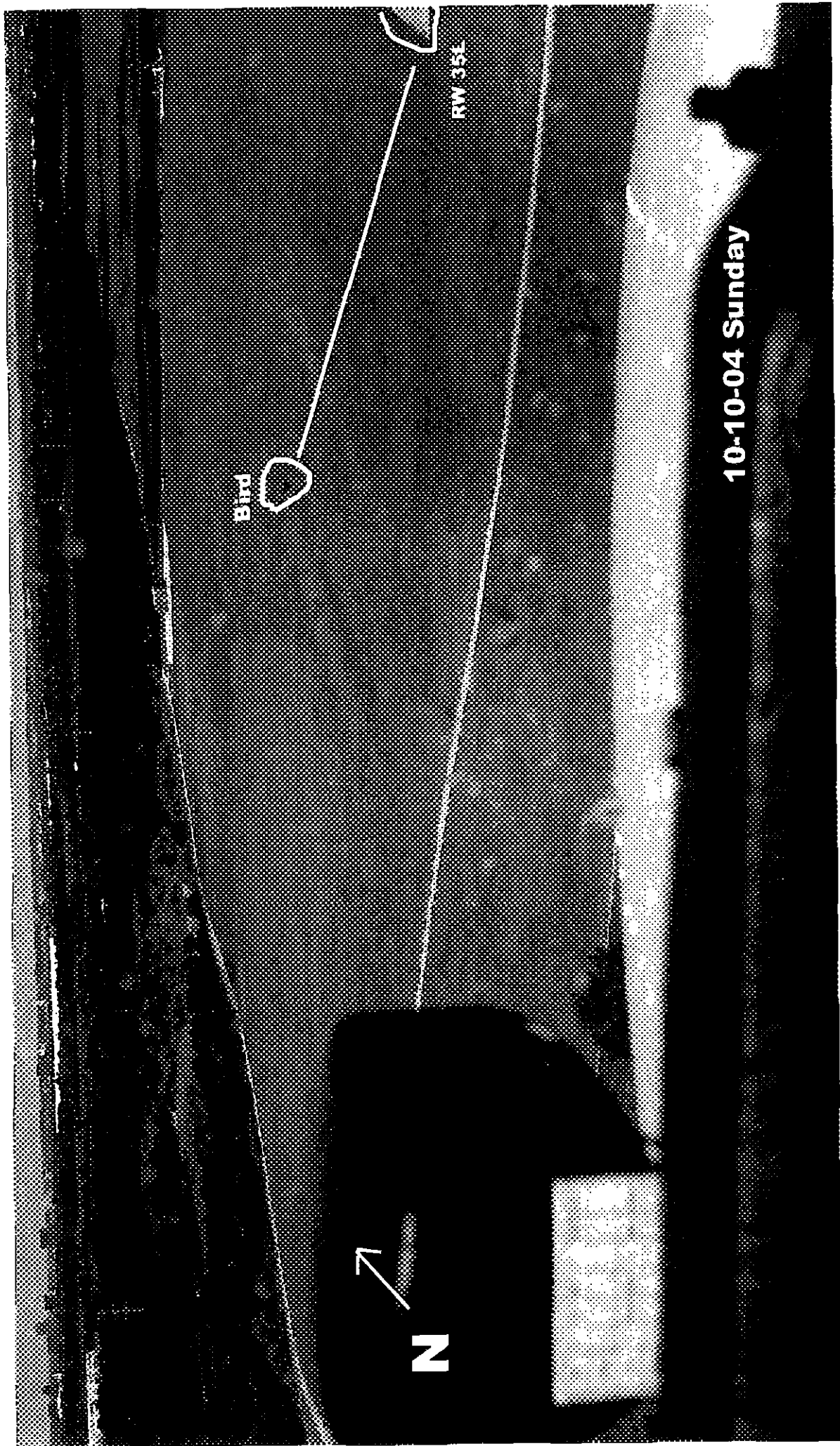
10/10/04 - Sunday

10/10/04 Sunday

← N

Flammable Materials

10/10/04 - Sunday



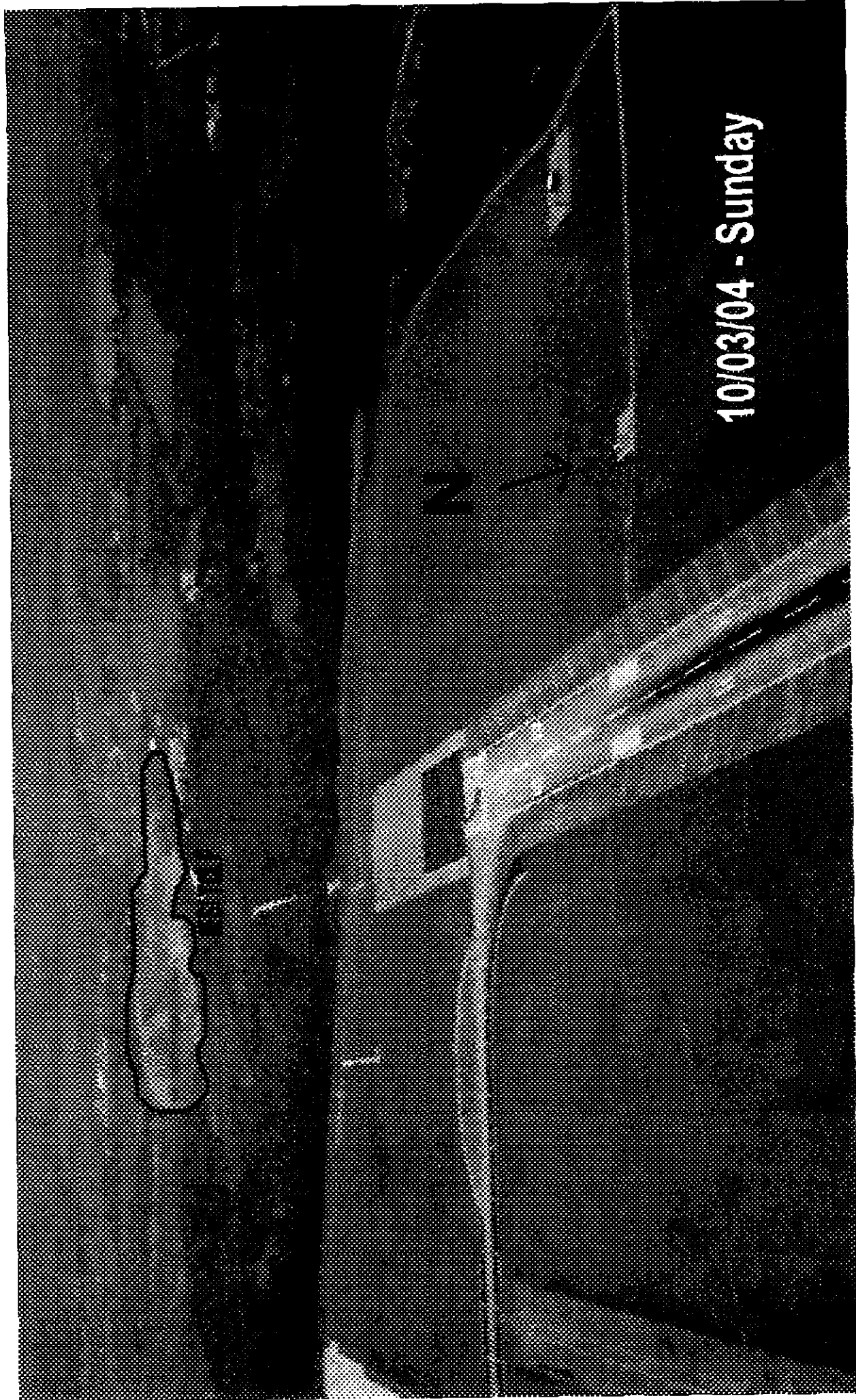
Bird

RW 35L



N

10-10-04 Sunday



10/03/04 - Sunday

N

RW 35L

Open working face

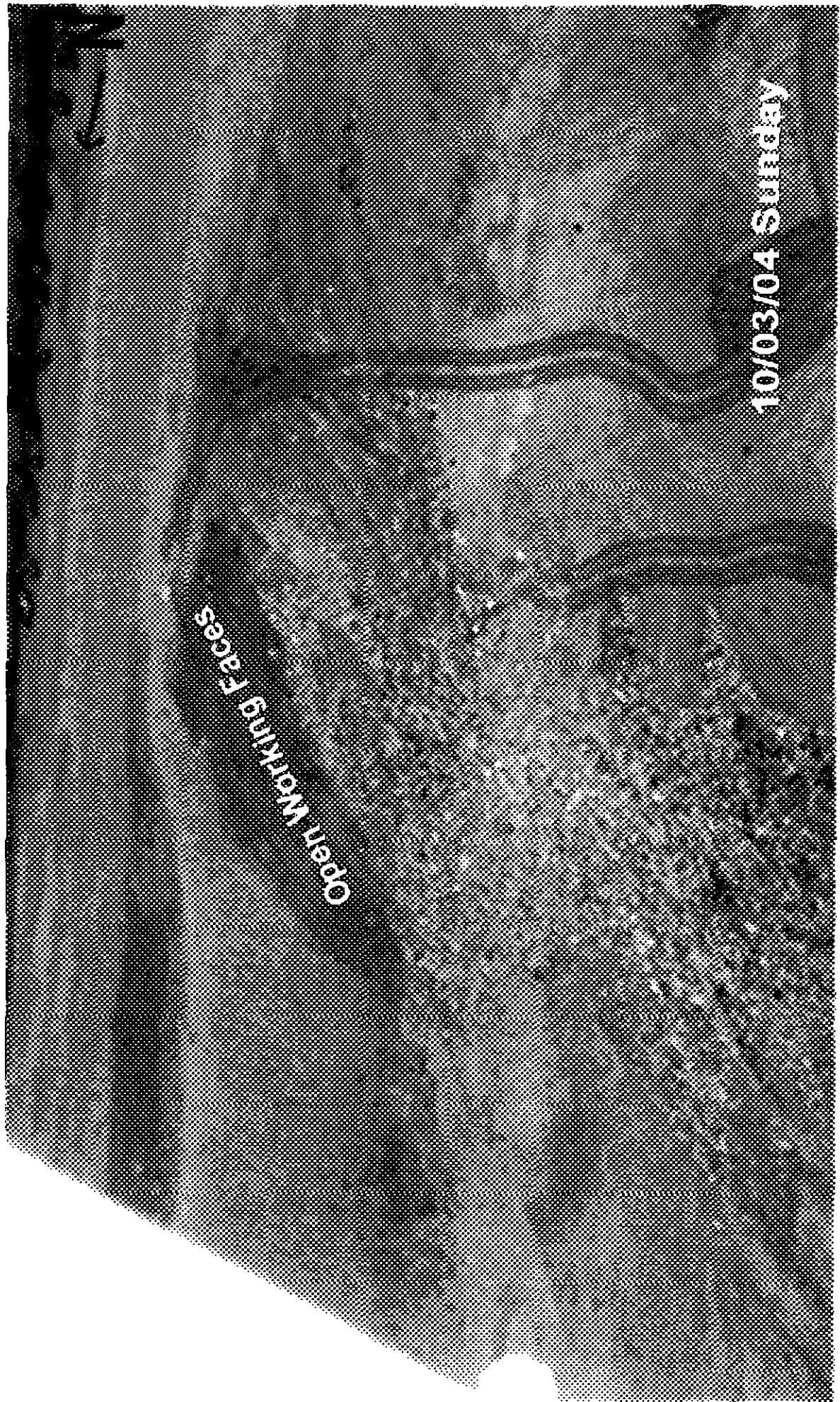
10/03/04 - Sunday

RW 35L

Brush

N

10/03/04 - Sunday



Open Working Faces

10/03/04 Sunday

RW 35L

Open Working Faces

09/26/04 - Sunday



N



09/20/04 - Sunday

↑
N

TH SH

Open working faces

09/12/04 Sunday

2

Open working faces

09/12/2004 Sunday

N
↓

09/12/2014 Sunday

Open working faces



← N

09/05/04 Sunday

Open working faces



Flammable Materials

Open Working Area

00005/04 Sunday

N



08/29/04 Sunday

N

08/29/04 Sunday





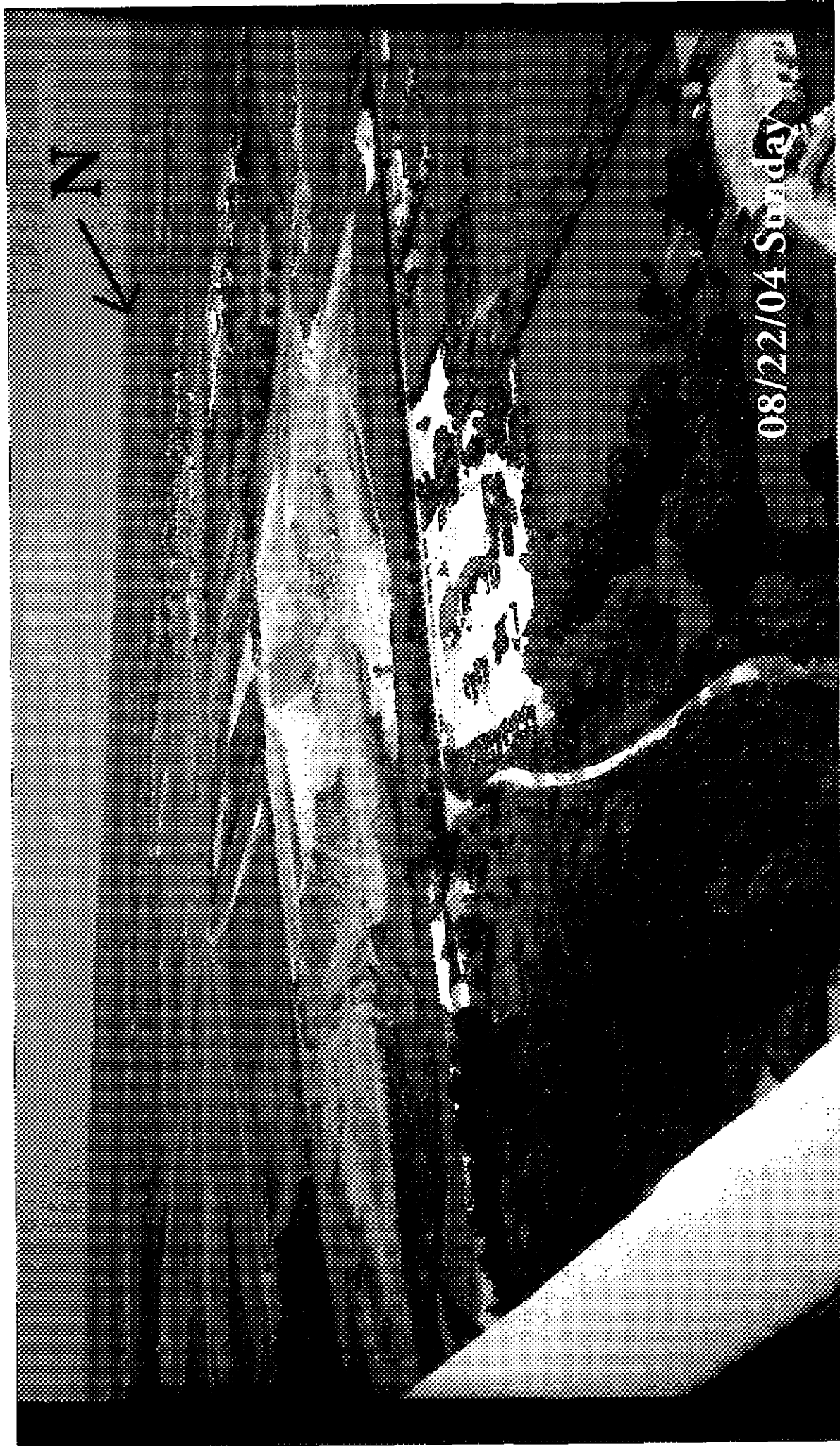
N

08/29/04 Sunday

N



08/22/04 Sunday



N

08/22/04 Sunday



N



08-22-04 Sunday

Stephen E. Cone, Jr., Chairman
Warren C. Harmon, Vice Chairman
Mel Phillips, Jr., Secretary
Jack McCreary, Member
Walter Umphrey, Member
George M. Underwood, Jr., Member



410 West 11th Street
Austin, Texas 78711
(512) 476-9262

Texas Aeronautics Commission

February 2, 1987

Mr. Elbert Hooper, P.C.
Hooper, Robinson, Moeller and Haag
Attorneys at Law
8100 Shoal Creek Blvd., Suite 200
Austin, Texas 78758-8053

Dear Mr. Hooper:

The Texas Aeronautics Commission has reviewed your letter of January 26, 1987, and the attached land use report on the proposed Travis County Landfill Company - Landfill Permit Application No. 1841, changing the landfill permit request from Type I to Type IV.

We withdraw our objections to the proposed landfill provided that the permit granted contains the following provisions:

- (a) If the landfill for some reason should attract sufficient birds to create a bird strike hazard to the jet aircraft landing on Runway 35 at Bergstrom AFB, as determined by a competent authority, that the sponsor would take immediate action to correct and neutralize the environment that is attracting the birds; and
- (b) that the sponsor obtain a mutually agreed arrangement concerning the landfill operation with the Commander, Bergstrom Air Force Base.

Thank you for furnishing us the updated information on the landfill application. Should you have any questions, please do not hesitate to contact us.

Sincerely,

tat

cc: Mr. Wiley W. Osborn, P.E., Texas Department of Health
Commander, Bergstrom Air Force Base
Lt. Col. William N. Wilhelmi, USAF, Federal Aviation Administration



U.S. Department
of Transportation
Federal Aviation
Administration

Austin ATC Tower
3600 Manor Road
Austin, Texas 78723

January 28, 1987

Mr. Elbert Hooper, P.C.
8100 Shoal Creek Blvd., Suite 200
Austin, Texas 78758-8053

Dear Mr. Hooper:

We have reviewed your revised proposal concerning Landfill Permit Application No. 1841 and do not perceive a Type IV waste disposal site to pose a problem to air traffic operations at Bergstrom Air Force Base.

Our only concern is the possibility that some time in the future the landfill might be misused therein creating a bird problem.

Sincerely,

Roy E. Harmon

Roy E. Harmon
Manager

ATTACHMENT

RECEIVED

JAN 29 1987

Ans'd.....



U.S. Department
of Transportation
Federal Aviation
Administration

JAN 7 1987

Southwest Region
Arkansas, Louisiana
New Mexico, Oklahoma,
Texas

PO Box 689
4400 Blue Mound Road
Fort Worth, Texas 76101

Mr. Wiley W. Osborne, P.E.
Chief, Permits and Programs Branch
Division of Solid Waste Management
Texas Department of Health
1100 West 49th Street
Austin, TX 78756

ATTACHMENT

Dear Mr. Osborne:

This is a follow-on to our November 14, 1986, letter to you concerning Permit Application No. 1841, a solid waste disposal site south of Bergstrom Air Force Base. We discussed the proposal in more detail with Mr. Nick Classen, your project engineer, in late December, and we agreed to state the reasons we did not object to issuance of the permit.

While the proposed landfill will be within the distance from an airport used by turbojet aircraft (Bergstrom) which would classify a landfill as an incompatible use, we found that no civil airports fell within that distance, and we do not attempt to speak for the military on such matters. The Air Force has the resources to review and comment on these proposals, and it was on this basis that we did not object provided the Air Force had an opportunity to review and comment. We also considered the applicant's assertions that no major bird strike near Bergstrom could be directly attributed to the existing landfill, and that the mitigating actions recommended by the Keith A. Arnold Company would be implemented.

As you know, the Air Force subsequently objected to the proposal, and we urge you to consider their analysis of the bird hazard potential during the public hearing and review process.

Sincerely,

Robert W. Hutchins

Robert W. Hutchins
Supervisor, Airports Safety Section

cc:
Texas Aeronautic Commission, P.O. Box 12607, Capitol Station,
Austin, TX 78711



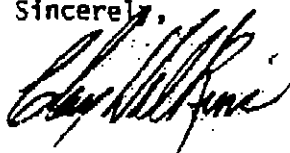
(312) 777-7777
 JLD-360
 NWK NWC

Based on the above facts and information, we believe that the proposed landfill would present an unacceptable and substantial flight hazard to air navigation from birdstrikes to the high performance jet aircraft landing on Runway 35 at Bergstrom Air Force Base. We strongly recommend that the Texas Department of Health disapprove Application No. 1841.

Mr. Wiley H. [unclear]
December 18, 1986
Page 2

Should you have any questions, please do not hesitate to contact us.

Sincerely,



tat

Enclosure

cc: Lt. Col. William H. Wilhelm, U.S.A.F. Representative, Southwest Region
Commander, 67th CSG/DE, Bergstrom AFB
Mr. Gene Faulkner, FAA, Southwest Region

10030100022

ATTACHMENT

ORDER

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

5200.5

RECEIVED

10/16/74

MAR 26 1980

TEXAS AERONAUTICS COMMISSION
AUSTIN TEXAS

SUBJ: FAA GUIDANCE CONCERNING SANITARY LANDFILLS ON OR NEAR AIRPORTS

1. **PURPOSE.** This order provides guidance concerning the elimination or monitoring of open dumps, waste disposal sites, and sanitary landfills on or in the vicinity of airports.
2. **DISTRIBUTION.** This order is distributed to Washington headquarters and Regional Airports, Flight Standards and Air Traffic offices to division level; all Airports District Offices; and Flight Standards and Air Traffic field facilities.
3. **BACKGROUND.** Garbage dumps, sanitary landfills or whatever title is used for this type of operation attract rodents and birds, erodes the airport environment, and where the dump is ignited, creates smoke - all which are undesirable and are potential hazards to aviation.

While the chance of an unforeseeable, random bird strike in flight will always exist, it is nevertheless possible to define the high-risk conditions within fairly narrow limits. Those high-risk conditions exist in the take-off, climb-out, approach and landing areas on and in the vicinity of airports. The increasing number of bird strikes reported on aircraft has become a matter of concern to the FAA and to airport management. Various studies and observations have resulted in the conclusion that sanitary landfills are artificial attractants to birds. Accordingly, landfills located in the vicinity of an airport may be incompatible with safe flight operations. Those conditions that are not compatible must be eliminated, to the extent practicable. Airport owners need guidance in making this decision, and the FAA must be in a position to assist. Some airports are not under the jurisdiction of the community or local governing body having control of land usage in the vicinity of the airport. In these cases, the airport owner should use its influence and best efforts to close or control landfill operations within the general vicinity of the airport.

4. **ACTION.**

ATTACHMENT

- a. Sanitary landfills located within the areas established for an airport by these guidelines as set forth in paragraph 5 of this order should be closed. If a sanitary landfill is determined as

Distribution: WRAS/AT/FS-2; FFS-0, FAT-0,
FAS-1 (Normal)

Initiated By: AAS-680

incompatible land use under guidelines of paragraph 5 and cannot be closed within a reasonable time, it should be designed and operated in accordance with the criteria and instructions issued by the Environmental Protection Agency, the Department of Health, Education and Welfare, and other such regulatory bodies that may have applicable requirements. FAA should advise airport owners against locating, permitting or concurring in the location of a landfill on or in the vicinity of airports.

- b. The operation of a sanitary landfill located beyond the areas described in paragraph 5 and designed in accordance with the guidelines identified in the foregoing paragraph must be properly supervised to insure compatibility with the airport. If at any time the landfill, by virtue of its operation, presents a potential hazard to aircraft operations, the owner shall take action to correct the situation or terminate operation of the landfill. Failure to take corrective action could place the airport owner in noncompliance with the commitments under a grant agreement.
- c. An inspection of current operations at existing landfill sites which have a reported potential bird hazard problem will periodically be made and evaluated. A Bird Hazard Group formed under Order 5200.4 dated 11/20/73 could appropriately be available for consultation regarding this activity. Should it be found that birds attracted to the landfill site do in fact constitute a potential hazard to aircraft, the condition will be reported to AAT-430, National Flight Data Center (NFDC), for possible inclusion in the Airman's Information Manual. The appropriate FAA office should immediately evaluate the situation to determine compliance with the grant agreement and take such action as may be warranted under the guidelines as prescribed in Order 5190.6, Airports Compliance Requirements.
- d. This order does not apply to landfills used exclusively for the disposal of rock and earth.
- e. This order is not intended to resolve all related problems, but is specifically directed toward eliminating sanitary landfills in the proximity of airports, thus providing a safer environment for aircraft operations.
- f. The airport operations manual should require landfill site inspections at least semimonthly for those landfill operations that cannot be closed to assure that bird population is not increasing.

ATTACHMENT

- g. Additional information on solid waste disposal, air quality, and related problems may be obtained from the following agencies:

Bureau of Sport Fisheries and Wildlife
U.S. Department of the Interior
18th and C Streets, N.W.
Washington, D.C. 20240

Office of Solid Waste Management
Programs (HM-562)
U.S. Environmental Protection Agency
1835 K Street, N.W.
Washington, D.C. 20406

U.S. Department of Health, Education & Welfare
330 Independence Avenue, S.W.
Washington, D.C. 20201

5. CRITERIA. Sanitary landfills will be considered as an incompatible use if located within areas established for the airport through the application of the following criteria:
- a. Landfills located within 10,000 feet of any runway used or planned to be used by turbojet aircraft.
 - b. Landfills located within 5,000 feet of any runway used only by piston type aircraft.
 - c. Landfills outside of the above perimeters but within the conical surfaces described by FAR Part 77 and applied to an airport will be reviewed on a case-by-case basis.
 - d. Any landfill located such that it places the runways and/or approach and departure patterns of an airport between bird feeding, water, or roosting areas.

William V. Vitale

WILLIAM V. VITALE, Acting Director
Airports Service, AAS-1



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS, 4TH TACTICAL RECONNAISSANCE WING (TRAC)
BERGSTROM AIR FORCE BASE TX 76015

TEXAS
1986 NOV 20 11:40
ALL OF
SOLID WASTE MGMT.

REPLY TO
ATTN OF: CC

25 November 1986

SUBJECT: Proposed Landfill - Permit Application No 1841

REVIEW
AGENCY
LETTERS

TO: Texas Department of Health
Attn: Mr Wiley Osborne, P.E. Chief
Permits and Programs Branch
Division of Solid Waste Management
1100 W 49th Street
Austin, Texas

1. Thank you for notifying us of the proposal to operate a landfill on a site south of Bergstrom AFB TX (Permit Application No 1841). The proposal is of great concern to us because it has the very real potential of adversely affecting our flying operations.
2. Experience has shown that landfills attract birds, regardless of how carefully they are managed. All types of aircraft are vulnerable to birdstrike damage. With higher speed jet aircraft such as those at Bergstrom, the damage would be more extensive; possibly causing loss of the aircraft or the aircrew. For the safety of our flight crews and protection of our aircraft, we must oppose the landfill. This opposition is based on the project's proximity to our main runway and its physical relationship to our primary flight tracks.
3. A portion of the proposed 112 acre landfill site is located approximately 2000 feet from our main runway. It is also directly under our final approach track (Atch 1 - Map). When landing to the north, aircraft are on a flight profile that places them over the site at altitudes that vary from approximately 330' above ground level (AGL) to 140' AGL (Atch 2 - Flight Profile). Several of the various species of birds that are attracted to landfills are commonly found at these same altitudes. An aircraft's maneuverability is limited when it is in a landing configuration, especially at low altitudes, which only increases the possibility of a serious mishap in the event of a birdstrike.
4. When the USAF Bird Aircraft Strike Hazard (BASH) team was recently asked to review this proposal, they made the following comments:
 - a. Sanitary landfills are the single most attractive land use practice to birds. A landfill placed on final approach crossed by aircraft (especially under 1000 feet AGL) creates an extreme flight hazard which is unacceptable to the Air Force.
 - b. It is difficult to predict bird numbers and types which will be attracted to a landfill at a given time, though one can be certain that birds (migratory and resident populations) will seek the food source in dangerous numbers regardless of mitigating measures.

ATTACHMENT

Readiness is our Profession

5. As you are probably aware, Bergstrom AFB did not object to the city's application to expand their landfill in 1983. The key difference between the city's action and this proposal is the critical location of the new landfill. The majority of the city's landfill is east of the extended runway centerline. While, as stated above, the proposed site is directly under our primary flight tracks. Incidentally, the base has experienced bird problems associated with the city's landfill operations (Atch 3 - Ltr).

6. In summary, we strongly oppose the establishment of the proposed landfill and we urge you to deny the application. If it is necessary to have a public hearing before the application can be denied, we request that such a hearing be held. Please do not hesitate to contact me at 479-2473 or Lt Col Robert Nourse of our Base Safety Office at 479-3334, if we can provide additional information or clarify our position.

Carl E. Franklin
CARL E. FRANKLIN
Colonel, USAF
Commander

- 3 Atch
1. Location Map
2. Flight Profile
3. Ltr to City

cc: US Congressional Rep - 10th Dist
Arpt Hazard Zoning Bd, Austin TX
Travis Co Comm - Precinct 4
HQ TAC/DEEV
HQ AFESC/DEV
FAA, AAS 300 Wash, D.C.
FAA, SW Region, Ft Worth TX
FAA, Austin TX

ATTACHMENT