

1 Q. State your name.

2 A. *Michael Kelly*

3 Q. Who is your employer?

4 A. *The City of Austin*

5 Q. What department do you work for?

6 A. *Watershed Protection and Development Review*

7 Q. How long have you worked for the City?

8 A. *12 years*

9 Q. I am handing you what's been marked as COA Exhibit 9. Do you recognize it?

10 A. *Yes*

11 Q. What is it?

12 A. *It is a summary resume of my education, qualifications and professional experience*

13 Q. Is the information contained in it true and correct?

14 A. *Yes*

15 Q. What are your job duties?

16 A. *1)Manage the design and construction of COA-sponsored water quality treatment and*

17 *erosion control projects; 2) Develop technical criteria for construction phase and post-*

18 *construction water quality controls (including erosion and sedimentation controls); 3)*

19 *Provide engineering support to all City Department's regarding stormwater management*

20 *and erosion control.*

21 Q. What type of studies/ analysis/review have you done?

22 A. *I have performed reviews of erosion and sedimentation control plans, performed*

23 *hydraulic and hydrologic modeling (including MUSLE/RUSLE erosion models), sediment*

1 *transport modeling in relation to site development plans and COA Capital Improvement*
2 *Projects.*

3 Q. How does your professional and educational experience relate to your testimony and
4 opinion in this matter?

5 A. *I received a Masters Degree in Agricultural Engineering from the University of*
6 *Wisconsin at Madison. The coursework was specifically geared towards training*
7 *engineers to analyze and stormwater quantity and quality, to quantify soil erosion due to*
8 *land disturbance (like agriculture and construction activities) and how to design*
9 *solutions to problems associated with stormwater runoff. My graduate advisor, Dr. Gary*
10 *Bubbenzer, was the author of the Wisconsin Construction Site Handbook, used by the State*
11 *of Wisconsin as a guidance document for reducing erosion from construction sites.*

12 *As part of my job duties, I have crafted the erosion and sedimentation control criteria to*
13 *be used on all projects under COA jurisdiction. I am a registered Professional Engineer*
14 *(#87774) in the State of Texas.*

15 Q. What is your connection with the permit application that is the subject of this proceeding?

16 A. *I am representing the City of Austin in my capacity as a soil and water resource*
17 *engineer.*

18 Q. What is the purpose of your testimony?

19 A. *To provide my best assessment of the implications of landfill expansion on the drainage*
20 *system. My assessment is based on my prior experience in drainage and erosion control*
21 *measures as well as my review of the site plans that have been submitted to the City of*
22 *Austin and my review of the permit application. I will provide recommendations on*
23 *methods to minimize soil loss from the landfill, prevent off-site migration of sediment and*

1 *minimize off-site drainage impacts and why I believe the proposed settlement meets these*
2 *goals.*

3 Q. Have you reviewed the application of BFI for a landfill permit amendment that is the
4 subject of this proceeding?

5 A. *Yes.*

6 Q. What parts of the application did you review in particular?

7 A. *I reviewed the entire application, paying particular attention to Part III and Part IV. I*
8 *also reviewed the Stormwater Pollution Prevention Plan (SWPPP).*

9 Q. Why?

10 A. *To determine the proposed provisions for drainage, water quality and erosion control*

11 Q. Are you familiar with the proposed site?

12 A. *I am familiar with the site.*

13 Q. Did you have concerns about the BFI permit application that prompted a request for party
14 status in the matter referred for hearing?

15 A. *Yes. The application and SWPPP provided only generic plans for soil erosion control. It*
16 *appeared that the proposed methods for controlling erosion were not to the Maximum*
17 *Extent Practicable.*

18 Q. Have you reviewed the prefiled testimony for the applicant in this case?

19 A. *Yes.*

20 Q. Does the applicant's prefiled testimony address the concerns which prompted the city to
21 contest this application?

22 A. *No.*

1 Q. Please state the remaining concerns not addressed in the applicants prefiled testimony and
2 suggest any special conditions that could be added to address these concerns?

3 A. *The pre-filed testimony does not address the following concerns: 1) timing of temporary*
4 *stabilization of intermediate cover; 2) proper installation and establishment of vegetative*
5 *cover; 3) adequate perimeter controls to prevent off-site migration of sediment; 4)*
6 *inclusion of more robust erosion and sedimentation measures in the SWPPP; 5) routing*
7 *of landfill runoff to the existing detention pond, and proper vegetative stabilization of*
8 *said detention pond.*

9 Q. Are there any other changes that should be made to the draft permit?

10 A. *The draft permit should be amended to address the concerns mentioned above.*
11 *Specifically, BFI should place intermediate cover and temporarily stabilize the cover*
12 *over slide slope areas that will not be disturbed for 60 days and to do the same for top*
13 *deck areas when no activity for 120 days. The top deck areas should also include a*
14 *buffalo grass sod vegetated filter strip from the top of the downchute to 100 feet*
15 *upgradient of the downchute and wide enough to capture all runoff that flows down each*
16 *downchute. The methods for establishing vegetative cover should comply with the City of*
17 *Austin's Environmental Criteria Manual, Section 1.4.7. In addition silt fence or mulch*
18 *berms should be placed at the top of the side slope between the vegetated filter strip and*
19 *the down chute, as well as at the bottom of each downchute. Perimeter sedimentation*
20 *controls (such as silt fence, mulch berms) should be in place prior to establishment of*
21 *stockpiles. For piles that have slope lengths greater than 20 ft, a mid slope silt*
22 *fence/mulch berm should be installed within 14 days of establishment of the stockpile. All*
23 *side slopes with intermediate cover should have similar perimeter controls installed*

1 *within 14 days of installation of cover. The perimeter controls should be at the base of*
2 *all such slopes and on the top deck at a point before the top of the adjacent slope. These*
3 *changes should be included in an amended SWPPP. Finally, BFI should complete the*
4 *construction of the detention pond in the northeast portion of the landfill. The pond*
5 *should be permanently stabilized with vegetation within 30 days of pond completion.*
6 *Then, flow from Drainage Area 2 should be routed to the completed detention pond.*

7 Q. Do you have concerns related to drainage on the landfill site?

8 A. *Yes. I have concerns that the current stormwater system does not adequately treat the*
9 *runoff from the site. There are drainage areas that do not drain to stormwater ponds*
10 *prior to discharging to off-site drainage systems.*

11 Q. Do you have concerns related to erosion and sedimentation controls on the site?

12 A. *I have concerns that the amount of exposed soil will produce sediment discharge in*
13 *excess of what the proposed measures in the application and SWPPP can control. I have*
14 *concerns that the current permit application does not adequately address revegetation of*
15 *disturbed soils.*

16 Q. Do you have concerns regarding land use compatibility of the landfill with the
17 surrounding areas?

18 A. *Yes. Residential areas that are adjacent to a landfill are subject to increased localized*
19 *flooding and degraded water quality if the stormwater is not properly managed.*

20 Q. Do you have concerns related to the revegetation proposed on the site for intermediate
21 and final cover?

22 A. *Yes.*

23 Q. What are those concerns?

1 A. *See comments on recommended changes to permit above.*

2 Q. I am handing you what's been marked as COA Exhibit 3. Do you recognize it?

3 A. *Yes.*

4 Q. What is it?

5 A. *It is an agreement that substantially increases the requirements and protections that the*
6 *site operator with implement at the landfill. It will result in less exposed soil, quicker and*
7 *denser establishment of vegetation, proper maintenance and establishment of the*
8 *vegetation, better capture of sediment on the site so that ultimately the stormwater runoff*
9 *leaving the site will have significant reductions in sediment.*

10 Q. Is it your opinion that the special conditions contained in COA Exhibit 3 will satisfy your
11 concerns regarding drainage?

12 A. *Yes.*

13 Q. Does this conclude your testimony?

14 A. *Yes.*

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Austin, Texas 78767- 1088
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EXPERIENCE

City of Austin
Watershed Protection and Development Review Department
November 1, 1996-Present
Supervising Engineer

1/05-present: Supervising Engineer, Stormwater Treatment and Stream Restoration Section.

Duties: Senior Division Engineer charged with approval of all construction plan sets, analytical reports and design criteria for channel restoration and stormwater treatment projects. Research and adopt hydrologic and hydraulic computer models for in-house design and regulatory review of channel and pond projects. Update regulations to reflect state of science in stormwater treatment devices and erosion and sedimentation controls.

8/2002-1/2005: Lead Engineer for Austin Clean Water Program.

Duties: developed design criteria and procedures to remove sanitary lines from the channel and floodplain wherever practical, and where not practical, ensure design accounts for hydraulic, sediment transport and geomorphic conditions that impact channel stability and pipeline integrity.

11/1996-8/2002: Water Resources Design Engineer.

Duties: Engineered channel design and implementation for major projects to restore channel stability to both bed and banks using Natural Channel Design and Biotechnical Stabilization techniques.

Private Consultant 1996
(Employed by land owner, US Forest Service)

- Designed and installed system to repair levee and dam for millpond
- Designed and installed plans for drainage basin restoration, slope stabilization and channel restoration on US Forest Service lands impacted by logging roads
- Supervised construction crews during installation of both projects

Wisconsin Department of Natural Resources 1995
Bureau of Water Regulation and Zoning
Engineer Assistant

- Performed hydraulic and hydrologic modeling for floodplain
 - determinations, dam safety, detention pond design and in-stream structure design
 - Performed surveys, dam safety inspections and hydraulic capacity analyses
 - Reviewed streambank stabilization plans

University of Wisconsin- Madison
Graduate Research Assistant 1994-1996

- Responsible for maintenance and data collection/analysis on wetland constructed to treat dairy milkhouse wastewater
- Authored annual reports and journal articles on research status

Wisconsin Department of Natural Resources 1994
Bureau of Water Resource Management,
Non-point Source Pollution Unit Engineer Assistant

- Authored chapter on Stormwater Infiltration Best Management Practices
- Developed technical report as basis for Animal Waste Regulations
- Created precipitation input files for use in Stormwater Management Model

EDUCATION

University of Wisconsin-Madison August, 1996
MS Agricultural Engineering
Soil & Water Resources Concentration

University of Wisconsin-Milwaukee Spring, 1994
Engineering Course Requirements for Agricultural Engineering MS Program

Austin Community College January, 1992- January, 1994
Pre-Engineering

University of Wisconsin-Madison September, 1984 - May, 1988
Bachelor of Arts: Psychology
Graduated with Distinction and Honors

AREAS OF EXPERTISE

Open Channel Hydraulics, Sediment Transport in relation to Stream Mechanics

Stormwater Management for Water Quality and Quantity

Construction Phase Erosion and Sedimentation Management

Slope Stability of Embankments

ACTIVITIES & REGISTRATIONS

Professional Engineer (TX #87774) 02/09/01

- Member American Society of Civil Engineers
- Dripping Springs Planning and Zoning Commissioner 2002-2003
- Alpha Epsilon (Agricultural Engineering Honor Society) 1995-96 Vice President

PUBLICATIONS & PRESENTATIONS

Byars, Morgan S. and Michael P. Kelly, "Sediment Transport in Urban Stream"

- Rehabilitation," Proceedings from American Society of Civil Engineers
- Wetlands Engineering and River Restoration Conference, Reno, NV, August 27-31, 2001. Resulted in receiving the ASCE Hawley Award for Technical Papers.

Instructor for courses in channel restoration and slope stability for the following organizations:

- University of Wisconsin-Madison, Dept. of Engineering Professional Development
- United States Army Corps of Engineers
- American Society of Civil Engineers