

MINUTES OF THE HOUSE ENVIRONMENT COMMITTEE

The meeting was called to order by Chairman Joann Freeborn at 3:30 P.M. on March 21, 2006 in Room 231-N of the Capitol.

All members were present except:

- Representative Bill Light- excused
- Representative Pat George- excused
- Representative Ted Powers- excused
- Representative Tom Sloan- excused

Committee staff present:

- Raney Gilliland, Legislative Research Department
- Lisa Montgomery, Revisor of Statutes Office
- Pam Shaffer, Committee Secretary

Conferees appearing before the committee:

- Dale Larsen, Westar Energy Director Construction and Maintenance
- Brady Pryor, Westar Energy Fly Ash Management
- Joe Dick, Board of Public Utilities
- William Penrod, Electric Cooperative
- Art Paylor, Ash Grove Cement Co

Others attending:

See attached list.

Chairperson Freeborn asked for everyone in the gallery to please sign the guest list. The secretary will be emailing minutes to all committee members for minutes not approved today by the end of this week, if secretary has not heard from anyone regarding corrections by next Friday, March 31, the minutes will be considered approved.

The committee members were give a few minutes to look over the minutes for January 31, February 2, 7 and 9. Representative Olson moved to approve the minutes, Representative Svaty seconded, motion carried.

Chairperson Freeborn told the committee that she had authorized Representative Flora to organize todays presentations concerning fly ash and related information. Chairperson Freeborn then turned the meeting over to Representative Flora, who stated he had become interested in fly ash and how to use it, so he had asked some gentleman to come today and talk about fly ash and how to use it.

Mark Shreiber, Westar Energy introduced Dale Larsen Director Construction and Maintenance for Westar Energy to begin the presentation on Fly Ash. Mr. Larsen had no written testimony. He described fly ash as the waste product of burning coal in power stations. Burning coal produces two general types of solid ash; bottom ash, which is the heavy "chunky" cinders that fall down and are removed from the bottom of power plant boilers, and fly ash, which is the lighter, fine particles that leave the boiler with the exhaust gasses. Fly ash particles are removed from the gasses before they go out the stack by filtration in baghouses or electrostatic precipitators. Class C fly ash is produced by burning coal from Wyoming and Montana and is about 25% calcium, if you put water with it, it will set up and harden in about 15 minutes. Class F fly ash is produced by burning coal from Colorado, which is mostly carbon. Jeffery Energy produces over 300,000 ton of fly ash annually, and over 200,000 ton is sold per year. They produce over 100,000 ton of bottom ash annually and Jackson county uses most of it in resurfacing roads. The fly ash from the Lawrence plant is not useable because gypsum is mixed in the scrubber to remove the sulfur, which ruins the marketability of the product.

Brady Pryor, Westar Fly Ash Management, Class C fly ash sets up by itself, does not need anything added to it, the old Class F you needed to add lime or cement to it for it to set up. Mixing the fly ash in with soil, helps solidify roads and foundations prior to paving. Fly ash fills in voids better than cement, no ragged edges.

Joe Dick, Board of Public Utilities Kansas City, KS, (See attachment 1) said that they use a lot of fly ash that comes out of two power plants and they sell some fly ash, they burn a low sulfur coal out of Wyoming. They

CONTINUATION SHEET

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use fly ash to fill in rock quarries in the Argentine district of Kansas City, they are 3/4 filled.

Bill Penrod, Holcomb Electric Cooperative explained that they have a dry scrubber so their fly ash is between Class C and F. Most of their product goes into their landfill. It sets up to the consistency of a cinder block, a very hard, very stable product. Their bottom ash they sell to stabilize feedlots. Both of their materials have been tested and there is no leaching of harmful elements or metals from either of them. There is no market in their area for this product. They burn Wyoming coal, but due to their different scrubber, they get different fly ash.

Rick Chider, Kansas Department of Transportation (KDOT), Bureau of Materials and Research, gave each committee member a handout (see attachment 2). They have the opportunity to collect a lot of data, which is reflected on the handout, he agrees with everything that has been presented so far. Within KDOT they use fly ash in several different aspects, soil absorption, and they are getting around to more opportunities to use it in concrete, 78,000 tons of fly ash were used in 2000, the use has decreased to about 42,000 tons in 2005 due to the tendency of the product to crack over the long term. They do still use a lot of ash for soil stabilization.

Art Paylor, Ash Grove Cement Company said they produce more cement than is used in the state of Kansas. Their machines are up and running producing cement 94% of the time, producing about 3 million ton of finished cement a year. Kansas consumes about 1.5 million ton of cement a year. The cost of cement has been increasing because of demand and fuel prices. Fuel used to run the machines, operate the kilns, trucks transporting materials, costs of these fuels have all gone up. They get some fly ash from Westar to mix in their cement.

Questions and discussion followed the presentations.

Chairperson Freeborn adjourned the meeting at 4:55.

HOUSE ENVIRONMENT COMMITTEE GUEST LIST

DATE: 03/21/06

NAME	REPRESENTING
Joe Dick	KC BPU
Mark Schreiber	Westar Energy
Art Paylor	Ash Grove Cement
Brady Pryor	Ash Grove Resources
Rick Kreider	Ks DOT
Ken Gudenkauf	KDOT
John Dale Larson	Westar Energy
Wendy Mumma	KAPA-KRMCA
Steve Miller	Sunflower Electric
WAYNE PENROD	Sunflower Electric
Dave Holthaus	KEC
LARRY BERG	MIDWEST ENERGY

FLY ASH

- **What is fly ash?**

Fly ash is a waste product from burning coal in power stations. Burning coal produces two general types of solid waste:

Bottom Ash: the heavy “chunky” cinders that fall down and are removed from the bottom of power plant boilers.

Fly Ash: the lighter, fine particles that leave the boiler with the exhaust gasses. At BPU, fly ash particles are removed from the gasses before they go out the stack by filtration in baghouses or electrostatic precipitators.

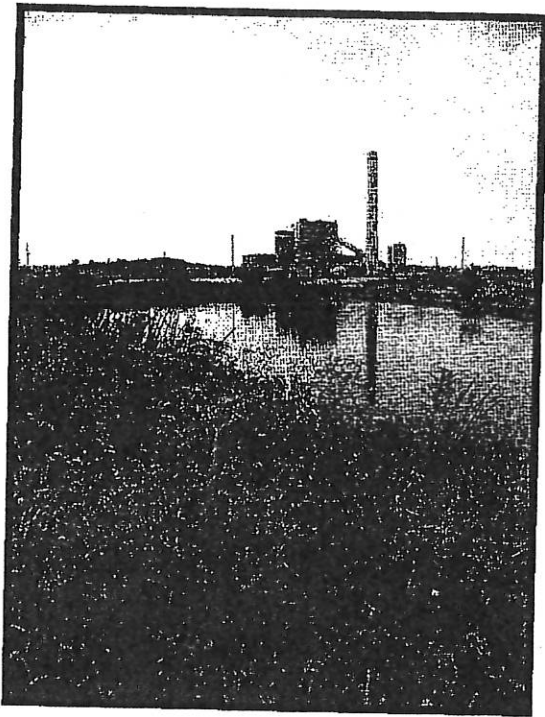
- Both bottom ash and fly ash are the remnants of coal combustion. When coal is combusted the carbon is burned off and the remaining ash is mainly silicon dioxide (SiO_2), aluminum oxide (Al_2O_3), and iron oxide (Fe_2O_3) and some metals.
- more than 99% of the fly ash BPU generates is collected and kept from entering the air using electrostatic precipitators.
- BPU burns low sulfur coal from the Powder River Basin (PRB) area in Wyoming. PRB coal contains about 5% ash.
- **How much fly ash does BPU generate?**
BPU generates about 78,000 tons of fly ash from its three operating boilers each year.
- **What happens to our fly ash?**
BPU operates KDHE-Permitted landfills at both its operating power stations. However, BPU has contracted with waste brokers and much of the fly ash is transported off-site. Most of the fly ash is used for filling mines for mine remediation, road base construction, roofing tiles, and other uses. The material that cannot be used for beneficial purposes is disposed of.
- In 2004, BPU sold 2 tons of fly ash, disposed of 37,191 total tons of ash offsite, and sold 939 tons of bottom ash from Quindaro Power Station. The BPU sold 32,921 tons of fly ash and disposed of 7,537 tons offsite from Nearman Creek Power Station.

- In 2005, BPU landfilled 193 tons of ash onsite at Quindaro Power Station. The BPU landfilled 11,426 tons of ash onsite at Nearman Creek Power Station

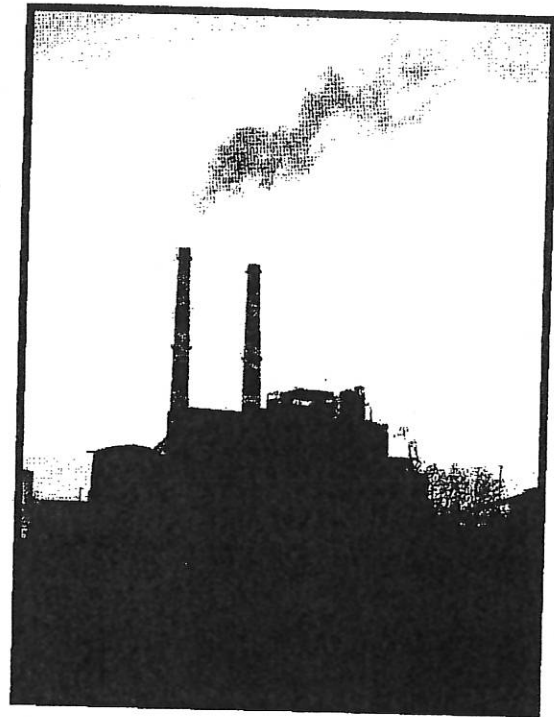
- **Is fly ash harmful?**

BPU ashes are not hazardous wastes; however the EPA is concerned about the trace amounts of heavy metals contained in fly ash that have the potential of contaminating ground and surface water via leakage from landfills. EPA does not allow use of fly ash in ways that humans have direct contact with them.

These landfills are monitored by BPU Environmental on a semi-annual basis. During these monitoring events, environmental services employees collect ground water samples and have them analyzed by EPA approved laboratories.



Nearman Creek Power Station



Quindaro Power Station

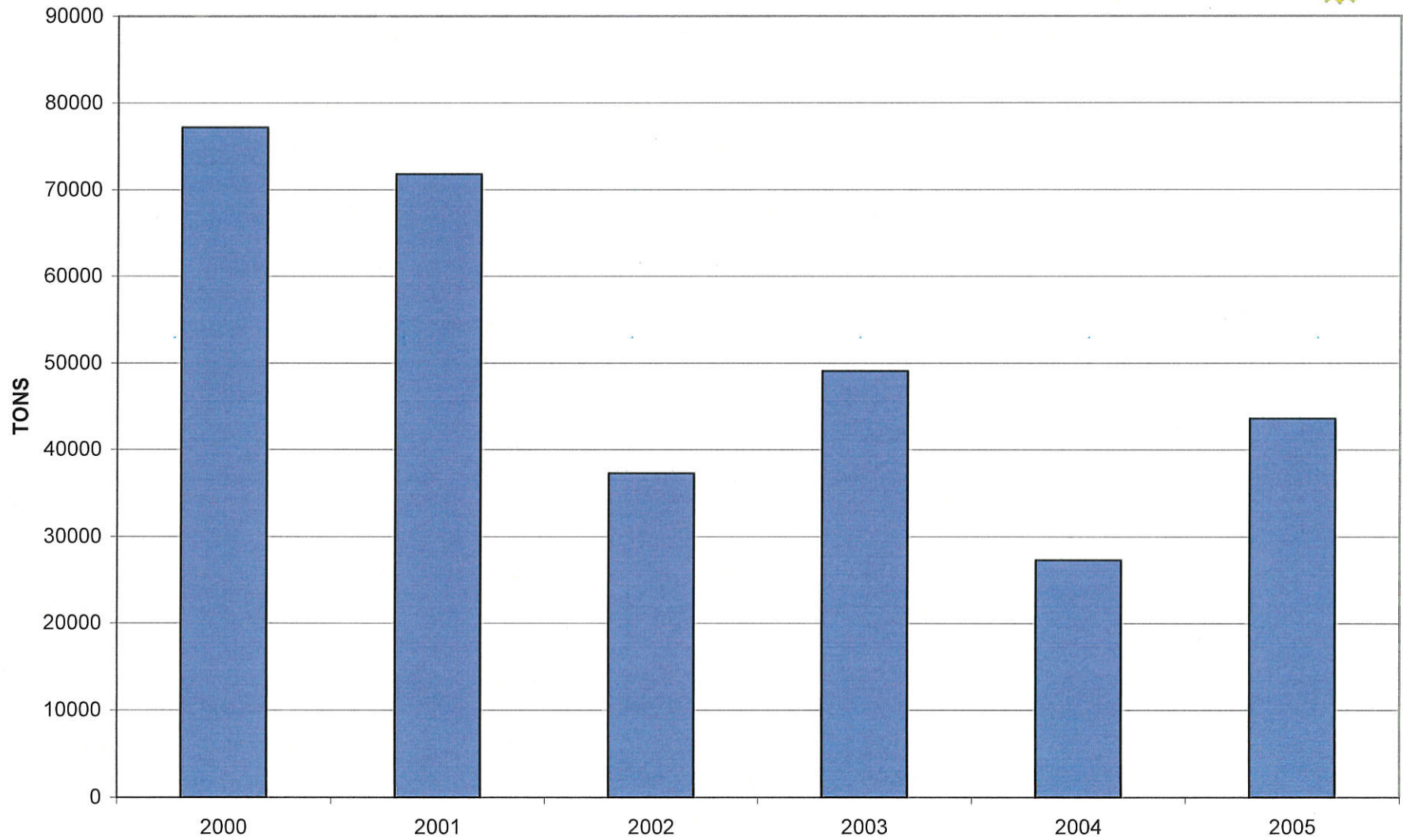
All Data

Year	Material	Tons
2000	Total Fly Ash by Year	77204.66
2001	Total Fly Ash by Year	71828.31
2002	Total Fly Ash by Year	37283.54
2003	Total Fly Ash by Year	49115.86
2004	Total Fly Ash by Year	27327.57
2005	Total Fly Ash by Year	43650.09
2001	Concrete Pipe (Class C)	2939.09
2002	Concrete Pipe (Class C)	98.52
2003	Concrete Pipe (Class C)	23.81
2004	Concrete Pipe (Class C)	103.66
2005	Concrete Pipe (Class C)	18.17
2000	Soil Stab: Catogory I & II	55664.86
2001	Soil Stab: Catogory I & II	44724.80
2002	Soil Stab: Catogory I & II	30645.90
2003	Soil Stab: Catogory I & II	33547.32
2004	Soil Stab: Catogory I & II	8958.50
2005	Soil Stab: Catogory I & II	26488.06
2000	Soil Stab: Catogory III	20949.81
2001	Soil Stab: Catogory III	22723.71
2002	Soil Stab: Catogory III	6364.11
2003	Soil Stab: Catogory III	15114.64
2004	Soil Stab: Catogory III	17598.33
2005	Soil Stab: Catogory III	16332.58
2000	Slurry Grout	589.99
2001	Slurry Grout	1440.70
2002	Slurry Grout	175.01
2003	Slurry Grout	430.10
2004	Slurry Grout	667.09
2005	Slurry Grout	811.27



2-2

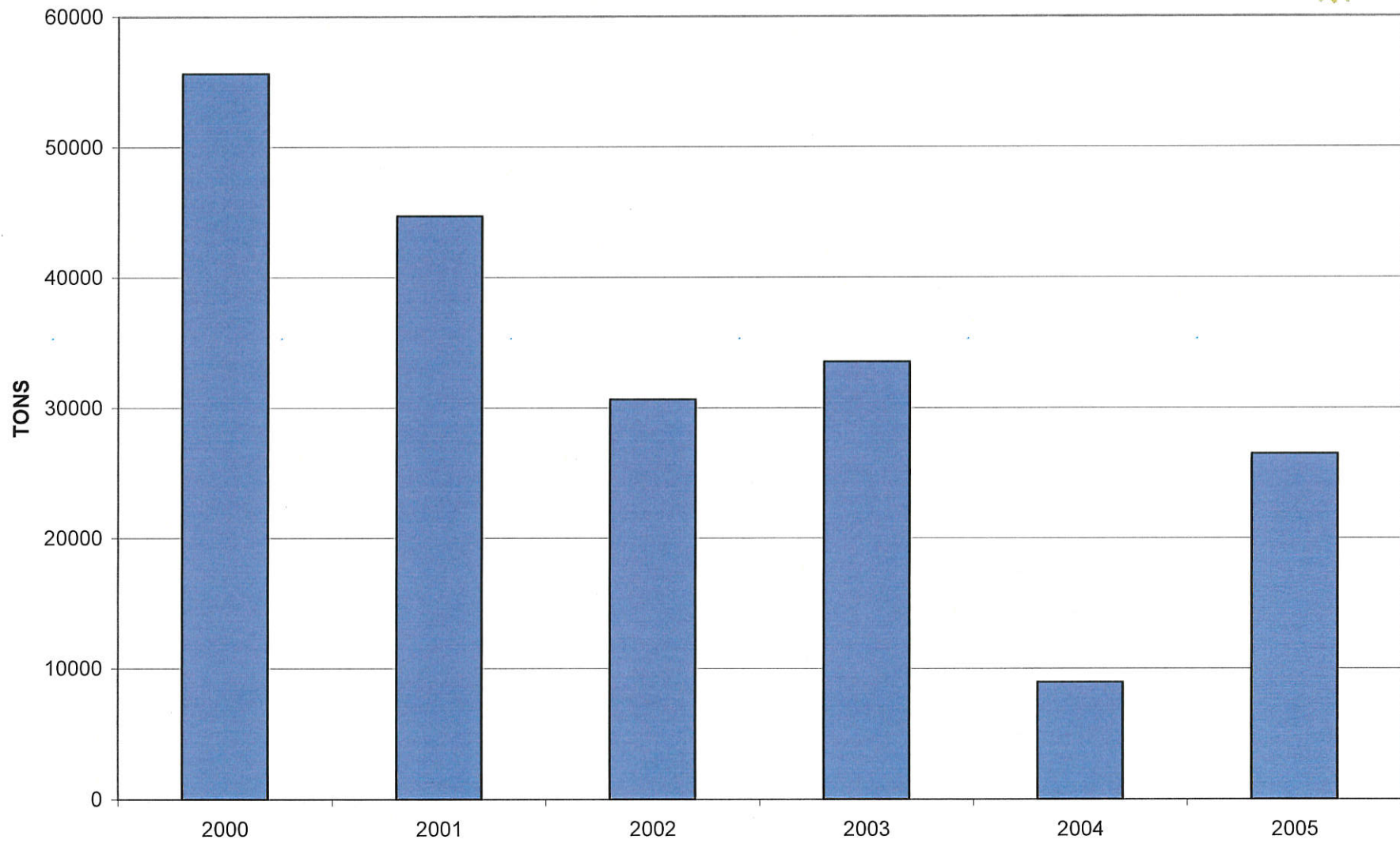
'00-'05 All Fly Ash



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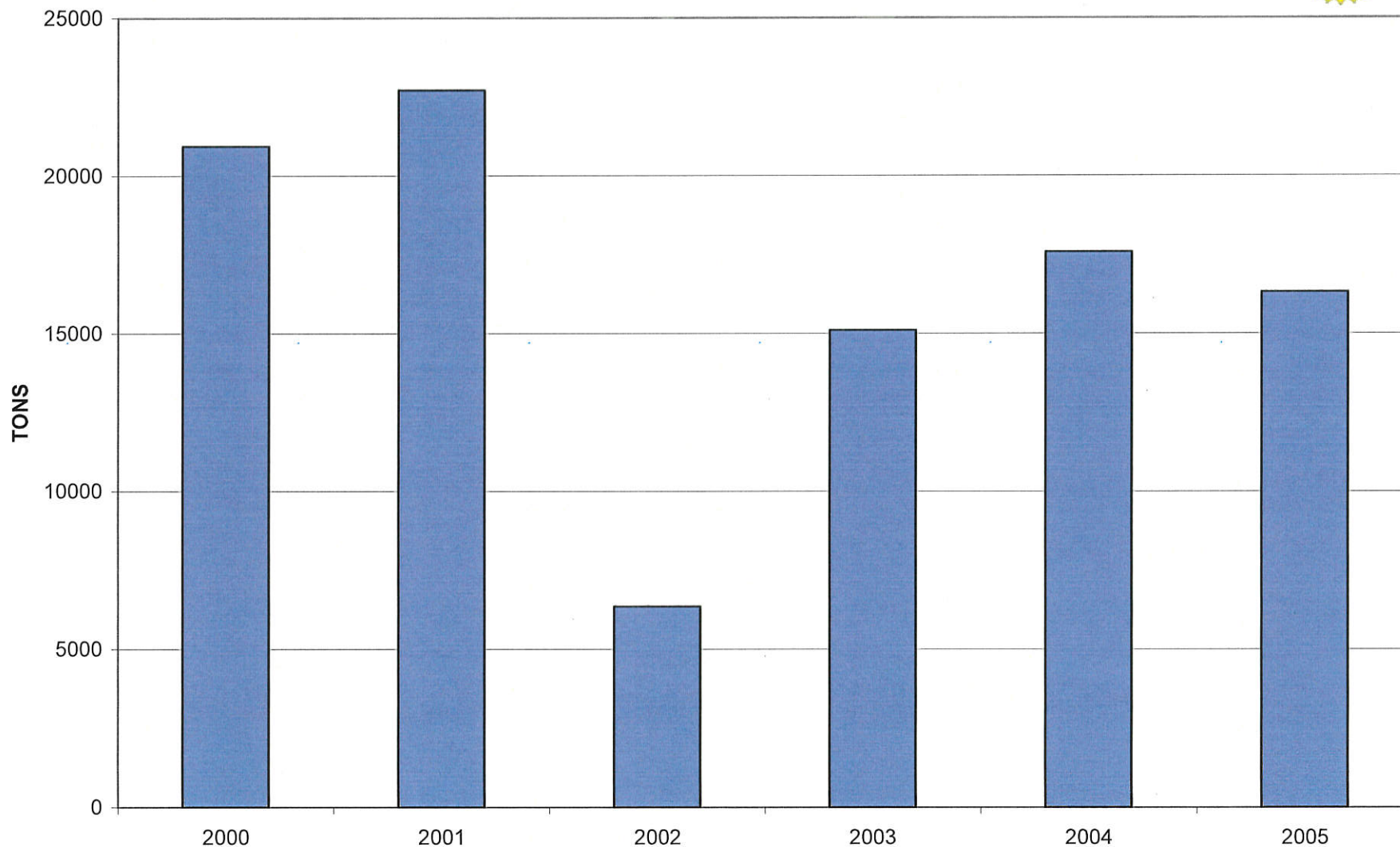
'00-'05 Soils Stabilization



2-4

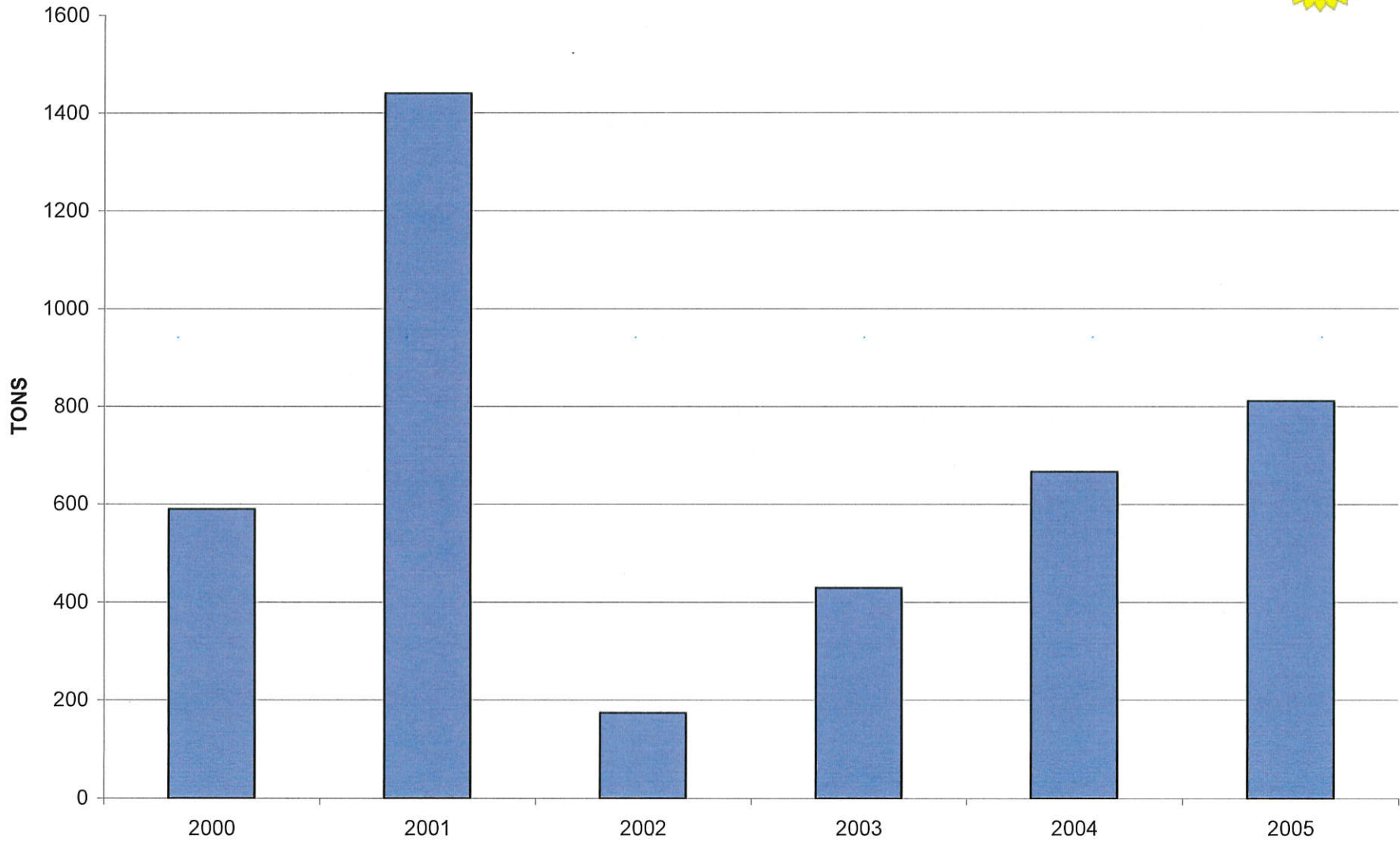


'00-'05 Soils Modification



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'00-'05 Slurry Grout



2-6

'00-'05 Concrete Pipe

