GRU
GAINESVILLE REGIONAL UTILITIES
STRATEGIC PLANNING

January 12, 1999

Mr. Buck Oven, Administrator Siting
Florida Dept. of Environmental Protection
2600 Blair Stone Rd., MS 48
Tallahassee, FL 32399-2400

RE: Gainesville Regional Utilities
Deerhaven Generating Station, PA 74-04
Fly Ash Silo Baghouse and Bin Vent Filter Replacement

Dear Mr. Oven:

As you are aware, Gainesville Regional Utilities ("GRU") is planning to replace the existing Unit 2 fly ash handling system baghouses and bin vent filter during the upcoming outage scheduled to being in March of this year.

The existing pneumatic ash conveying centrifugal ash separator, baghouses and bin vent filter were installed in the early 1980s during construction of Deerhaven Unit 2 and are near the end of their useful life. The existing baghouses will be replaced with two Unit Conveyor Corporation ("UCC") combination filter/separator units which are designed to function as a separator and baghouse in a single vessel. Attachments 1 and 2 provide UCC product data for the filter/separator and the filter bags. Likewise, the bin vent filter will be replaced with a new UCC bin vent filter. The new equipment is of standard (i.e., off-the-shelf) UCC designs that have been installed at other facilities.

Specifications for the new equipment are as follows:

Filter/Separator Model No.	84-W-84
Cloth Area (sq. ft)	853
Bag Type	Nomex
Cleaning System	Pulsed air
Design Airflow (ACFM)	3339
Air: Cloth Ratio	3.9:1
Outlet grain loading (gr/SCF)	0.02
Guaranteed efficiency (%)	99.95

Please call me at (352) 334-3400 Ext. 1284 if you have any questions or require additional information.

Sincerely,

Yolanta E. Jonynas

Yolanta E. Jonynas
Sr. Environmental Engineer

xc: C. Heidt
C. Kirts, FDEP-NE District
A. Linero, FDEP-Tallahassee
A4.2

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(352) 334-3400 ext. 1260 P. O. Box 147117, Station A136, Gainesville, Florida 32614-7117 Fax: (352) 334-3151

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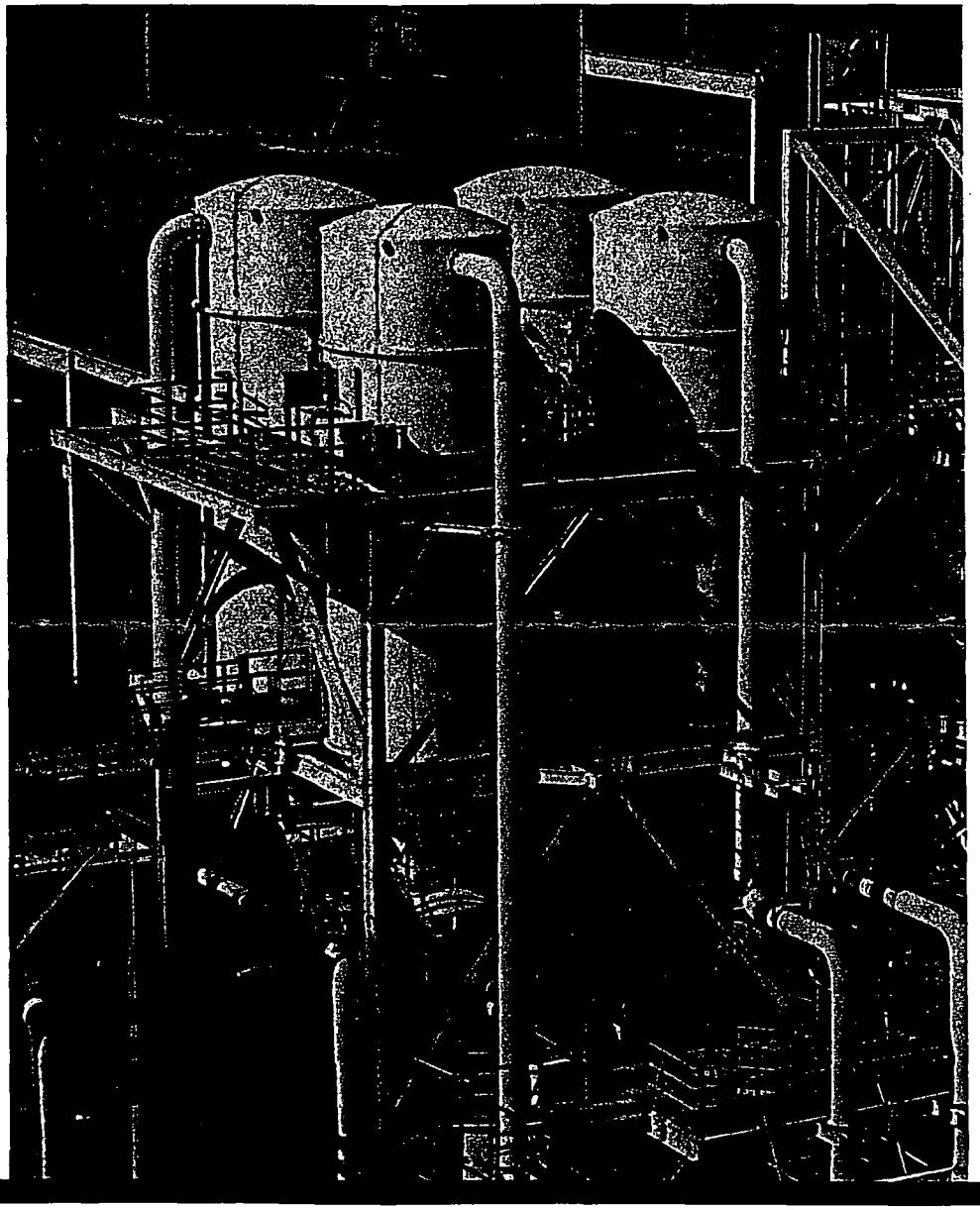
ATTACHMENT 1

Pro DATA

UNITED CONVEYOR CORPORATION

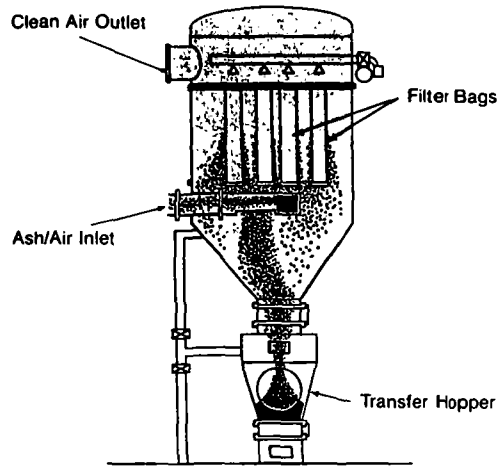
Filter/Separator Provides Continuous, All-In-One Operation

Using one vessel only, UCC's filter/separator removes coarse ash from conveying air in a separator section and then filters out the fine ash remaining. You can be confident that with its high separation efficiency, this economical unit will prevent damage to your mechanical vacuum producers, while it satisfies stringent emissions requirements. UCC's versatile filter/separator will handle fly ash, bottom ash and economizer ash.



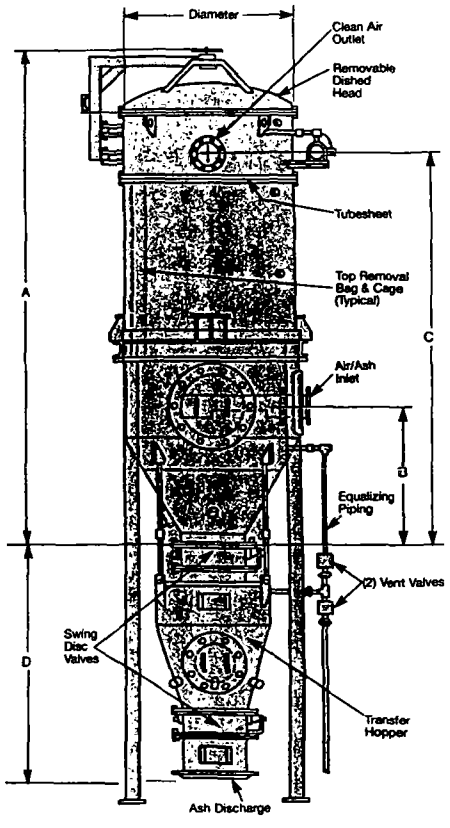
Single Vessel Design Allows Lower Cost

Because this unit integrates separation and filtration into one vessel, your equipment costs are substantially less than with two-or three-vessel systems. As well as saving on the cost of the separating equipment itself, you need fewer controls, fewer access structures and less piping. Furthermore, the single-vessel unit occupies very little space, allowing it to fit easily on a small or congested silo roof.

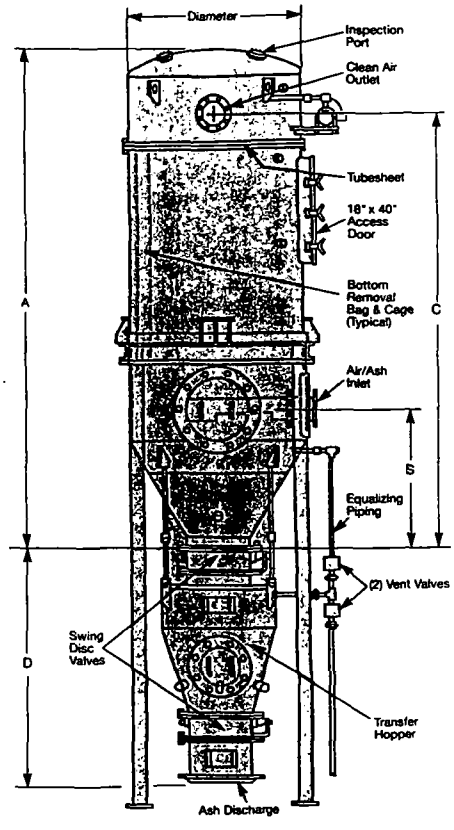


COMBINATION FILTER/ SEPARATOR

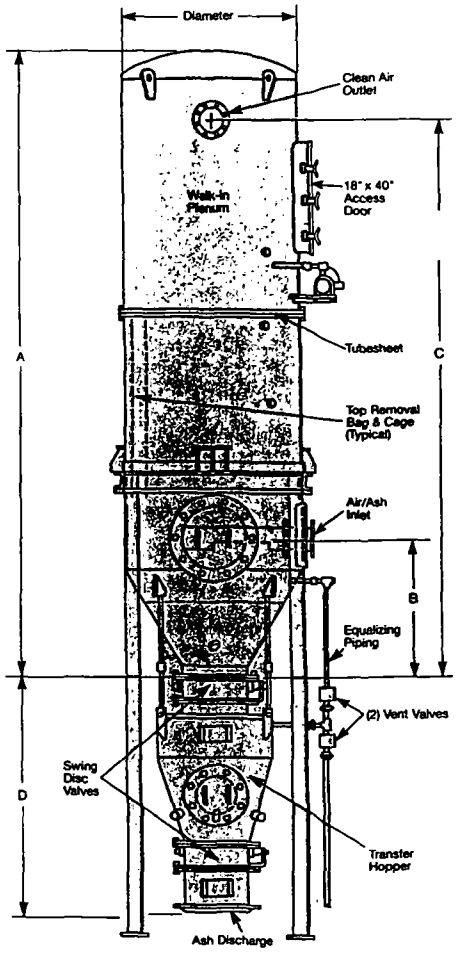
TOP ACCESS WITH "SWING HEAD"



BOTTOM ACCESS



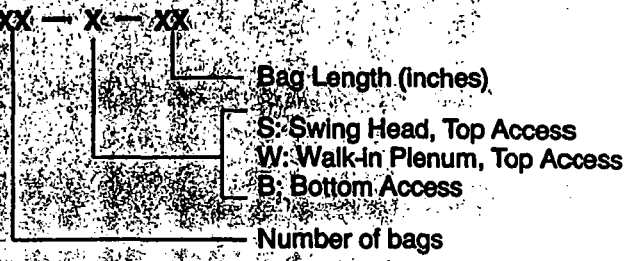
TOP ACCESS WITH WALK-IN PLENUM



Note: Optional platform and ladder structure not shown in these diagrams.

Model Number Explanation

Each model specifies a unique filter/separator as defined in the table below. The model number itself reveals certain information about the filter/separator, as shown in the following example:



Standard Models	Dia. (in.)	Cloth Area (sq. ft.)	Approx. Empty Wt.* (lbs.)	Air Manifold Compressed Air Usage (SCFM)** 80–100 psig	Dimensions			Largest Available Transfer Hopper (cu. ft.)
					A	B	C	
26-S-72	54	225	5570	26	15′ 7½″	4′ 9½″	12′ 5″	22
26-S-84	54	264	5690	26	16′ 7½″	4′ 9½″	13′ 5″	22
26-S-96	54	303	5820	26	17′ 7½″	4′ 9½″	14′ 5″	22
41-S-72	66	355	6670	28	15′ 7½″	4′ 7½″	12′ 3″	45
41-S-84	66	417	6790	28	16′ 7½″	4′ 7½″	13′ 3″	45
41-S-96	66	479	6920	28	17′ 7½″	4′ 7½″	14′ 3″	45
65-S-72	78	563	7010	31	16′ 7½″	5′ 5½″	13′ 1″	45
65-S-84	78	660	7120	31	17′ 7½″	5′ 5½″	14′ 1″	45
65-S-96	78	757	7330	31	18′ 7½″	5′ 5½″	15′ 1″	45
41-W-72	66	355	7300	28	18′ 6½″	4′ 7½″	16′ 5″	45
41-W-84	66	417	7700	28	20′ 6½″	4′ 7½″	18′ 5″	45
41-W-96	66	479	8200	28	22′ 6½″	4′ 7½″	20′ 5″	45
65-W-72	78	563	8330	31	19′ 5½″	5′ 5½″	17′ 2½″	45
65-W-84	78	660	8450	31	21′ 5½″	5′ 5½″	19′ 2½″	45
65-W-96	78	757	8830	31	23′ 5½″	5′ 5½″	21′ 2½″	45
84-W-72	90	727	9300	40	20′ 6½″	6′ 4½″	18′ 1½″	70
84-W-84	90	853	9600	40	22′ 6½″	6′ 4½″	20′ 1½″	70
84-W-96	90	979	10000	40	24′ 6½″	6′ 4½″	22′ 1½″	70
126-W-72	108	1091	11300	51	22′ 0″	7′ 7½″	19′ 4½″	110
126-W-84	108	1280	11600	51	24′ 0″	7′ 7½″	21′ 4½″	110
126-W-96	108	1469	12100	51	26′ 0″	7′ 7½″	23′ 4½″	110
126-W-120	108	1830	12900	51	30′ 0″	7′ 7½″	27′ 4½″	110
26-B-82	54	258	5390	26	16′ 2¾″	4′ 9½″	14′ 4½″	22
41-B-82	66	406	6490	28	16′ 2¾″	4′ 7½″	14′ 3″	45
65-B-82	78	644	7990	31	17′ 1¾″	5′ 5½″	15′ 1″	45
84-B-82	90	832	9090	40	18′ 2¾″	6′ 4½″	16′ 0″	70
126-B-82	108	1249	11690	51	19′ 7¾″	7′ 7½″	17′ 3″	110

DK mod.

*For continuous operation, add transfer hopper assembly weight.
For intermittent operation, add 700 lbs.
These weights DO NOT include support legs.

**Values are listed for compressor sizing — Actual usage may be less.

Options

- Cold Weather Package
- Temperature Switches
- Platforming and Structural Supports
- Vibrators or Fluidizing Trays in Hoppers
- Dust Detector
- Valve Limit Switches
- Additional Level Probes

Operational Selections

- Intermittent or continuous operation. For continuous operation, the required clearances for each transfer hopper assembly are:

Transfer Hopper Volume (cu. ft.)	Dimension "D"	Transfer Hopper Assembly Approx. Empty wt. (lbs.)
22	7′ 8½″	2000
45	9′ 6″	2300
70	10′ 10″	2700
110	10′ 8″	3400

Transfer Hopper Assembly includes transfer hopper, two swing disc valves and outlet adapter.
For intermittent operation, D = 2′ 6″ for all models.

Product DATA

Top Bag-Removal Options Simplify Maintenance

Time-saving, top bag-removal options are available. Our "swing head" design allows the top of the filter/separator to be raised and rotated aside. Our "walk-in plenum" design provides a large plenum and side access door above the filter bags, allowing maintenance during any kind of weather. With either of the top-removal designs, maintenance personnel can inspect all the bags for leaks and easily reach and replace any damaged bag while working in a clean, safe environment.

Nozzles Keep Bags Clean

Bag cleaning is accomplished using a pulse on demand system. This cleaning system ensures bags are not over cleaned (increasing bag life and filtering) and compressed air is not wasted. During a cleaning pulse cycle, the nozzle located above each bag forces clean air inside the bag, where a powerful pneumatic shock wave is created. Air flow through the bag stops and the bag flexes, causing accumulated particles to drop off. Because the nozzles are located high in the plenum, the entire bag area is available for filtering. No venturi is needed, thereby reducing the cost of cleaning equipment.

PULSE JET FILTER BAG

Components Designed for Ash Handling

The UCC Filter/Separator features a wear-resistant ash inlet. This inlet has an abrasion-resistant pipe with a dead area beyond its outlet slot. Material accumulates in the dead area, causing the incoming ash to wear on ash, instead of on the inlet material.

UCC's tubesheet, which retains the filter bags and cages, is also exceptionally durable; its 10" Hg pressure differential rating allows it to withstand upset conditions.

In addition, UCC's bag cages are fabricated entirely of stainless steel, providing outstanding corrosion resistance to boiler flue gas. The cages are also capable of withstanding a 10" Hg pressure differential, to prevent them from collapsing.

Special Variations to Meet Your Needs

If headroom is limited, you can specify our bottom bag removal model. It provides a side door for access to the baghouse, where the bag and cage can be easily removed by loosening a band clamp.

For continuous conveying during ash discharge into the silo, you can specify a transfer hopper in addition to the basic filter/separator. If you have a small capacity system, where conveying can be interrupted periodically to discharge the collected material, a filter/separator without the transfer hopper would be a more economical choice.

Dump On Demand System

This is a more efficient method of operation than the timed-cycle system. The transfer hopper is dumped when the high level probe is activated by ash level. This system reduces the cycling of the transfer hopper swing disc valves, thereby increasing their wear life.

For additional information describing UCC filter/separators, please contact United Conveyor Corporation or your UCC Sales Representative.

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Printed in USA

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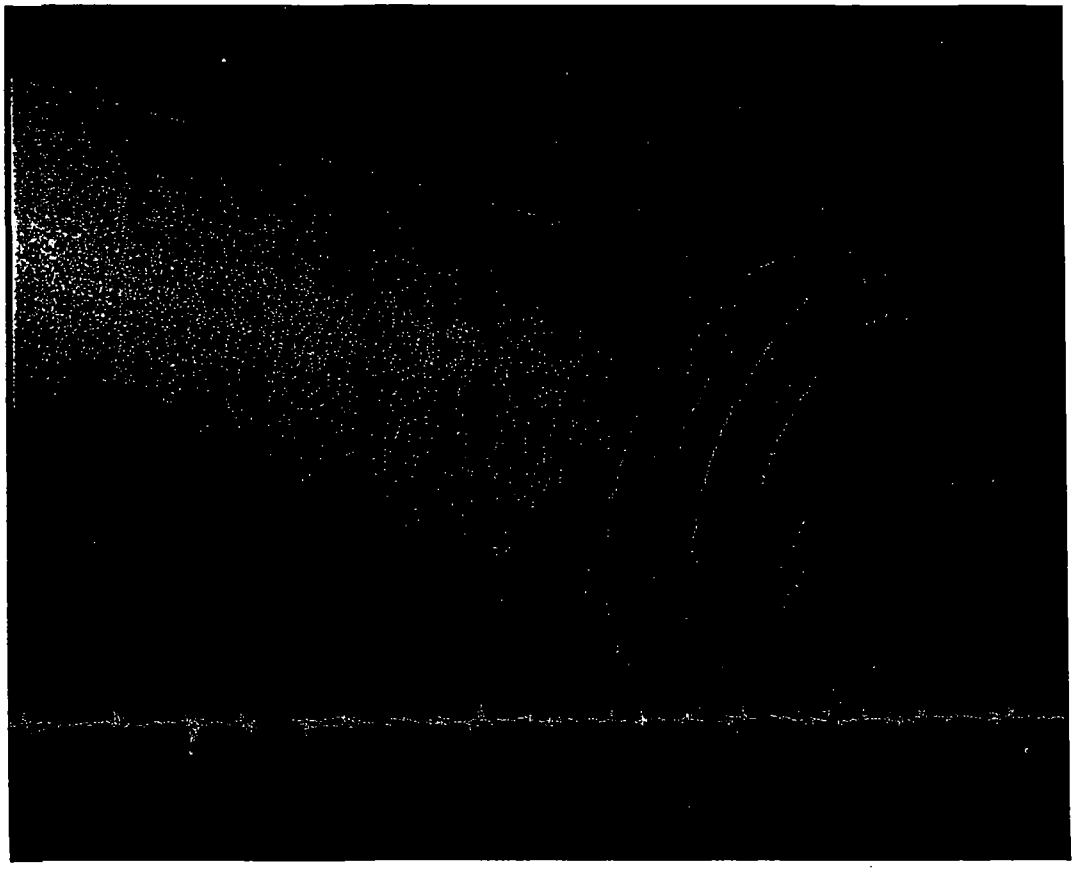
ATTACHMENT 2

Prod DATA

UNITED CONVEYOR CORPORATION

SURE SEAL™ FILTER BAG IMPROVES FIT AND REDUCES LEAKAGE



United Conveyor Corporation has designed a filter bag with an attachment cuff to assure a "pop-in" fit. The SURE SEAL filter bag is designed to work as part of a system with the UCC bag cage. SURE SEAL filter bags have been designed for use with walk-in plenum filter/separators, bag filters, and bin vent filters. The bag is a top removal type, designed to function as part of a system with the UCC bag cage. SURE SEAL filter bags are initially available in polyester and Nomex® materials.

Steel band in cuff
The SURE SEAL filter bags have a steel band sewn into the cuff to create the tight, "pop-in" fit. The steel band snaps out into a round position when inserted into the tubesheet. This allows for quick and easy installation and replacement of the SURE SEAL bag.

Ridged fit groove
There are two ridges sewn into the outside of the SURE SEAL cuff to form a tight seal with the tubesheet. The groove formed by these ridges provides a visible location for the snap action fit.

Filter media in cuff area
The filter media is sewn into the cuff area of the SURE SEAL filter bag to allow the cuff and bag to be the same material, ensuring consistent durability of the bag and cuff. The SURE SEAL bags are initially available in polyester and Nomex materials with different surface treatments for use in various temperature ranges.

Direct replacement of existing bags
No modifications are required to replace existing filter bags, making installation of the SURE SEAL bags fast and easy.

Bag and cage system
When used with the UCC cage, the SURE SEAL bag completes a "system" of filter bag and cage, designed to work together for superb performance. The inside diameter of the SURE SEAL bag is sized to fit the UCC cage and tubesheet to prevent failure from improper fit, and to ensure ease of assembly.

Cages manufactured of stainless steel
Stainless steel provides outstanding corrosion resistance. Corrosion of the cage can create sharp edges and lead to excessive or premature wear of the filter bag.

Smooth, burrless wires
Bag cages meet demanding UCC quality standards for smooth, straight, burrless wire surfaces, preventing puncture of bags during installation and operation.

More wires in cages
UCC cages contain many vertical wires to prevent premature bag failure from excessive flexing. The UCC cages also contain many horizontal wire rings to support the cage at maximum vacuum, protecting against premature cage collapse due to blinding of the bags.

SPECIFICATIONS

Length (in.)	Filter area (sq. ft.)	Max. Temperature
72	8.65	Polyester: 275°F Nomex: 425°F
84	10.16	
96	11.67	
120	14.68	

For more information on filter bags and cages, contact UCC or your local UCC Sales Representative.

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Division of Air Resource Management

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DARM-PER/GEN-25

TO: District Air Program Administrators County Air Program Administrators Bureau of Air Regulation Engineers

FROM: Howard L. Rhodes, Director Division of Air Resources Management

DATE: June 8, 1995

SUBJECT: Guidance on the Replacement or Addition of Air Pollution Control Equipment on Existing Sources

This memo is to provide guidance to district, local program, and headquarters staff on the permitting action required when a source owner replaces or adds an air pollution control device to an existing source.

If the pollution control equipment is for a unit with uncontrolled emissions of less than 100 tons per year, and the equipment is "off the shelf", then no permitting action is required.

If the pollution control equipment is custom designed for any source, or is "off the shelf" to control a unit with uncontrolled emissions greater than or equal to 100 tons per year, the source owner will need to apply for an amendment to the permit. The request would need to be signed and sealed by a P.E. The Department or local program, if it finds the replacement air pollution equipment to be satisfactory, shall issue a letter amendment to the operation permit. No public notice shall be required for such an action.

HLR/chf/cd