

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

M420649642

FACILITY: Great Lakes Hybrids Co-op, Inc.	SRN / ID: M4206
LOCATION: 9915 W M-21, OVID	DISTRICT: Lansing
CITY: OVID	COUNTY: SHIAWASSEE
CONTACT: Paul Slowinski , Plant Manager	ACTIVITY DATE: 06/06/2019
STAFF: Julie Brunner	COMPLIANCE STATUS: Compliance
SUBJECT: Compliance inspection, PTI 194-84B	SOURCE CLASS: MINOR
RESOLVED COMPLAINTS:	

On June 6, 2019, I conducted an unannounced, scheduled inspection of Great Lakes Hybrids, Inc. (M4206) now part of AgReliant Genetics LLC in Ovid. It does not appear that this facility has been inspected in greater than 10 years if ever.

Contacts:

Mr. Paul Slowinski, Plant Manager, AgReliant Genetics LLC, 989-834-5046 ext. 1051,
paul.slowinski@agreliantgenetics.com

Facility Description:

Great Lakes Hybrids, Inc. (GLH) sells corn, soybean and alfalfa seeds in several states. They receive grain from grain elevators that has been dried, which they treat and formulate into hybrid seed packages. They have been part of AgReliant Genetics LLC since 2000.

GLH is located off of M-21 just southeast of downtown Ovid. The facility is in a mixed rural area with residential, farmland, and commercial establishments to the east and west.

Active Permits to Install (PTI) -

PTI 194-84B was issued January 25, 1989 for the addition of a fractioning aspirator to the seed conditioning tower which receives, cleans, sizes, sorts, treats, and packages hybrid seed corn, soybeans, and other field seeds. The system has cyclones, and baghouse(s) for control.

Commencement of Operations: 1983

Facility Capacity: Average of 300 bushels/hour of corn and soybeans processing capacity and 100,000 bushels storage capacity.

Number of Staff: 15 full time, 5 – 10 temps

Shifts/Day: 1 shift during off-season and 2 shifts during harvest season (September to November), first shift works 6:00 am to 2:30 pm and second shift works 2:00 pm to 10:30 pm.

Days/week of Operation: 7 days per week during harvest (but try for 6 days per week)

Boilers? No.

Emergency Generators? No

Cold Cleaners? Yes

Small solvent-based parts-washer (exempt per Rule 281(2)(h)) located in the shop. Lid was closed.

Michigan Air Emissions Reporting System (MAERS):

The facility is not required to report emission information to MAERS.

Inspection:

Arrived: 9:12 am

Departed: 11:47 am

Weather: 58°F, wind NNE 3 mph, UV Index 0

No visible emissions were observed from any of the facility exhaust stacks upon arrival. No odors were identified surrounding the facility.

A pre-inspection meeting was conducted with Mr. Paul Slowinski, Plant Manager. I gave a brief overview of the inspection process which was the purpose of my visit, and the facility operations were discussed. This inspection was conducted off-season, and the process was not operating.

PTI 194-84B –

Much of the equipment that is on PTI 194-84B has been removed or replaced. The seed aspirator has been removed. The seed treater has been replaced (May 2016) with a new system and baghouse(s) that vent indoors. Many of the cyclones are still in place – 3-cyclones are for recirculation in the process and 3-cyclones vent outside. The basic process is to clean seeds, sort, treat, and bag.

Seed sorting > color sorting for soybeans > corn and soybean de-stoner > seed treater > dryer > packaging > shipping

Bees wings are collected for compost. A red wagon sits outside the processing plant for collection of the bees wings and is emptied about 3-times a year. A small filter dust collector is used to collect untreated particles from the process. Treated seed dust from the process is sent to a licensed landfill for disposal.

A new seed treater and tumbler has been installed that vents to a new baghouse system. The baghouse exhaust is routed back into the building. A new electric bed dryer for treated seed also vents to the new baghouse system. The baghouse exhaust from the bed dryer is routed back into the building and goes through a charcoal filter before venting into the general in-plant atmosphere. The seed is treated with fungicides. Fungicides used include the following compounds: Fluoxastrobin (CAS No. 361377-29-9), 1,2-Propanedial (CAS No. 57-55-6), Prothioconazole (CAS 178928-70-6), glycerol (CAS No. 56-81-5), Metalaxyl (CAS No. 57837-19-1). Dust from the treated seed is handled separately from the dust from untreated seed. General in-plant air is also cycled through the baghouse to remove dust and particulate that is generated during handling of grain.

The new baghouse system is a 5-sectioned baghouse with 2-sections for the bed dryer and 3-sections for general housekeeping. The 2-sections for the bed dryer process 18,000 cfm of exhaust gases, and the 3-sections for general housekeeping process 17,500 cfm of exhaust gases. It is a pulse-jet with particulate from the baghouse collected in 55-gal drums (1 drum for each section). The drums are emptied about 3 – 4 times per year with the first drum in the series pretty full and the rest are generally about half full. The baghouse has pressure gauges that monitor when the bags need to be changed. No bags have needed to be replaced since the system was installed in 2016. The bags are DuraPleat® in the 2-sections for the bed dryer, and HemiPleat® eXtreme filters in the 3-sections for general housekeeping. Both of these options are rated at 99.99% on 0.5 micron and larger particles by weight. Attached are the data sheets. Also, the carbon filters in the safety monitoring filtration system are as follows: the system holds 9 of the 30/30 filters, 059413001, 108 of the carbon filters, M29000014, and 9 of the rigaflo filters, 402994003.

PTI 194-84B has limits on particulate emissions from the seed conditioning tower of 0.10 pounds per 1,000 pounds of exhaust gases in Special Condition (SC) 14. The existing cyclones are designed to meet this limit. And, according to the information in the application for PTI 194-84 particulate emissions from the cyclones are estimated at 11.3 tons per year (tpy) at worst-case.

The new baghouse system has the potential to emit (PTE) particulates well below the limit of 0.10 pounds per 1,000 pounds. As a conservative estimate, the PTE for fine particulate (<0.5 microns) emissions from the baghouse system is estimated to be less than 0.01 pounds per 1,000 pounds. The PTE is as follows:

$(0.01 \text{ lb} / 1,000 \text{ lb}) \times (0.075 \text{ lb} / \text{ft}^3) \times (18,000 \text{ ft}^3 / \text{min} + 17,500 \text{ ft}^3 / \text{min}) \times (60 \text{ min} / \text{hr}) = 1.6 \text{ lb/hr}$
Maximum PTE for fine particulate = $(1.6 \text{ lb} / 1 \text{ hr}) \times (8760 \text{ hr} / 1 \text{ yr}) \times (1 \text{ ton} / 2000 \text{ lb}) = 7.0 \text{ tpy}$

The PTE of fine particulate is estimated by AQD staff to be below the significant level of 10 tpy for fine particulate (PM_{2.5}).

Per PTI 194-84B, SC 15, visible emissions from the seed conditions tower is not to exceed a 6-minute average of 20% opacity. Paul stated that they never see dust from the side vents to the cyclones.

SC 16 is a particulate testing condition. Particulate emissions from the seed conditioning tower were not required to be tested.

SC 17 requires that the cyclones and baghouse be installed and operating properly on the seed conditioning tower. All control is properly installed and operated. The baghouse has been replaced which is considered an upgrade in efficiency.

SC 18 requires disposal of collected air contaminants to be performed in a manner which minimizes re-introduction to the outside air. The handling methods in place at GLH meet the requirements of this condition.

SC 19 requires an uncontrolled drop distance of 18 inches in loading or unloading all grains. All loading and unloading is done in a covered bay. Duct work is closed and drop distances are minimized.

Much of the process equipment and the baghouse covered by PTI 194-84B has been replaced. This process could be operated under permit exemption Rule 285(2)(dd):

Rule 285(2)(dd) - Equipment for handling, conveying, cleaning, milling, mixing, cooking, drying, coating, and packaging grain-based food products and ingredients which meet any of the following:

(i) Equipment is used on a nonproduction basis.

(ii) Equipment has emissions that are released only into the general in-plant environment.

(iii) Equipment has externally vented emissions controlled by baghouse, cyclone, rotoclone, or scrubber which is installed, maintained, and operated in accordance with the manufacturer's specifications or the owner or operator shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. The air cleaning device shall be equipped with a device to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate.

Paul agree with operating under permit exemption Rule 285(2)(dd) and to voiding PTI 194-84B.

In another building is bulk storage of grain with 21 – 4,000 bushel (beans) silos and just outside of this building is 4 – 4,500 bushel silos for grain storage.

Summary:

GLH is a minor source of any regulated air pollutants. The facility appeared to be in compliance with all applicable rules and regulations. PTI 194-84B for the seed conditioning tower was voided on July 18, 2019.

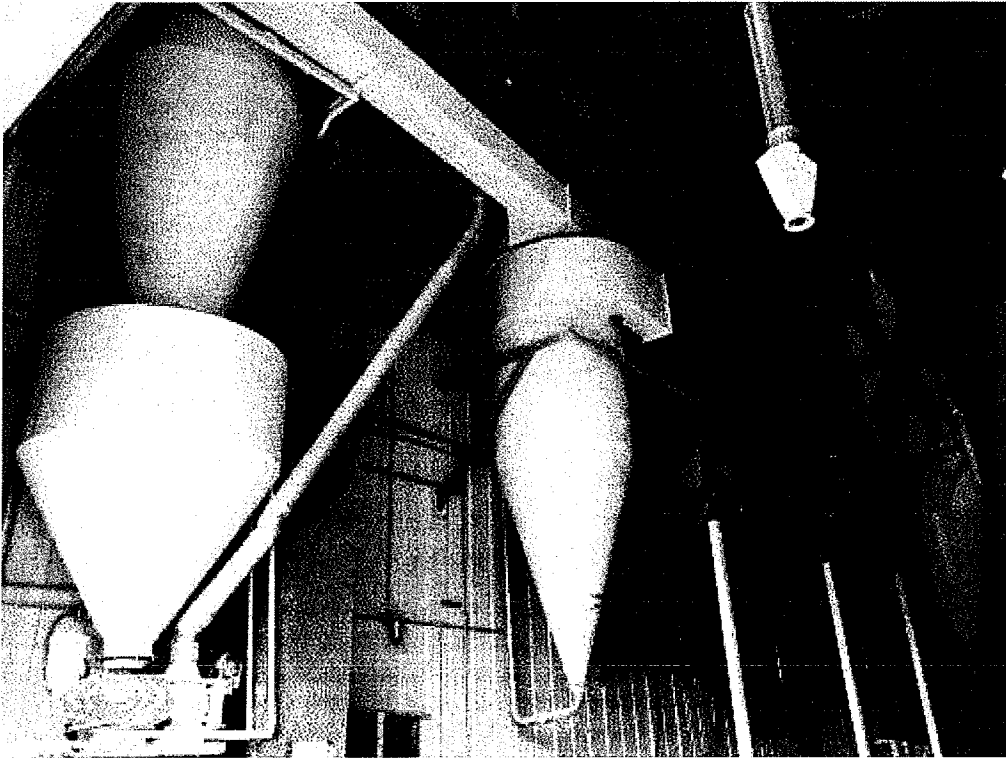


Image 1(1) : Cyclones for dust control and process cyclones.

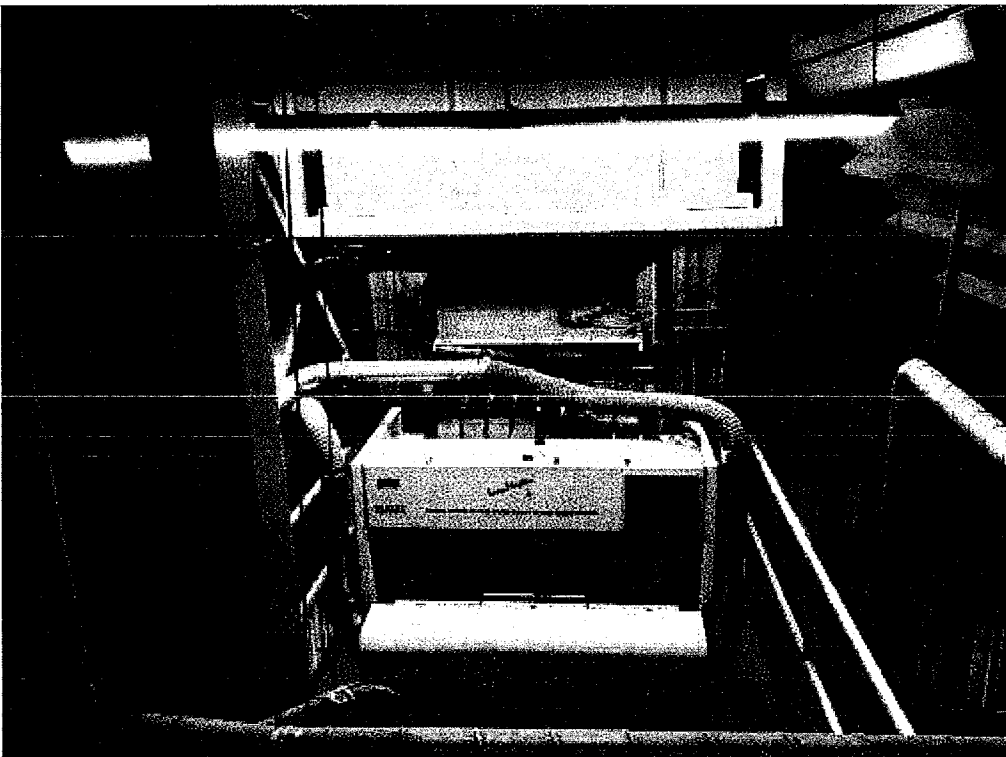


Image 2(5) : Color sorter



Image 3(6) : De-stoner

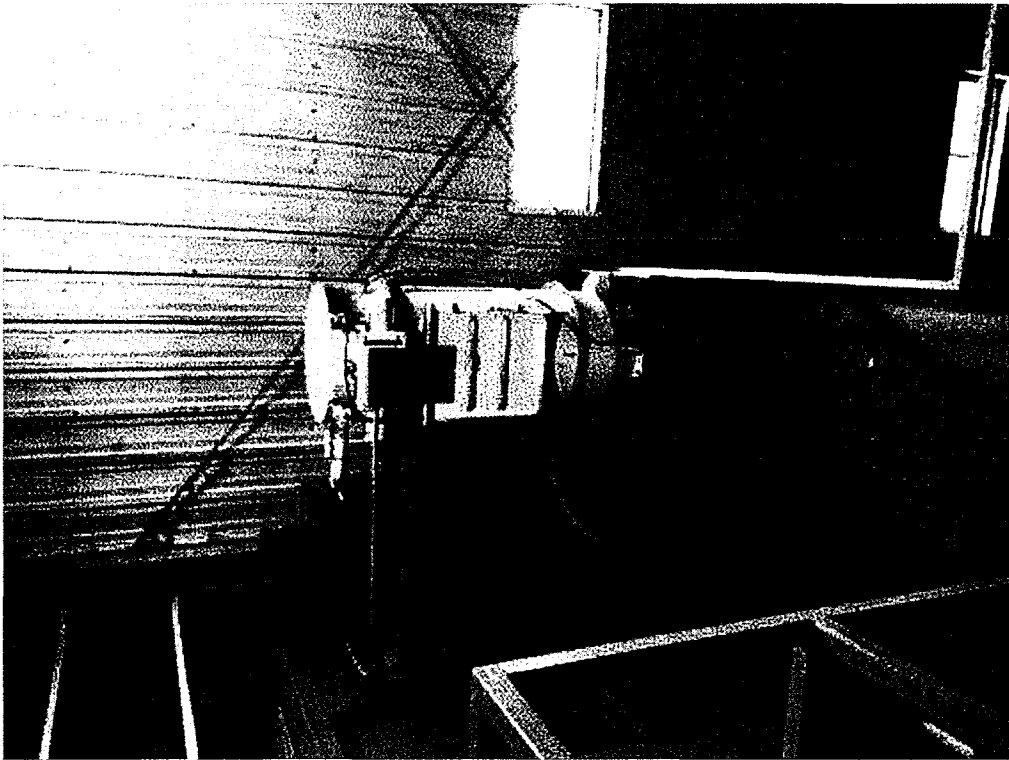


Image 4(7) : Small baghouse for collection of untreated particles from seed.

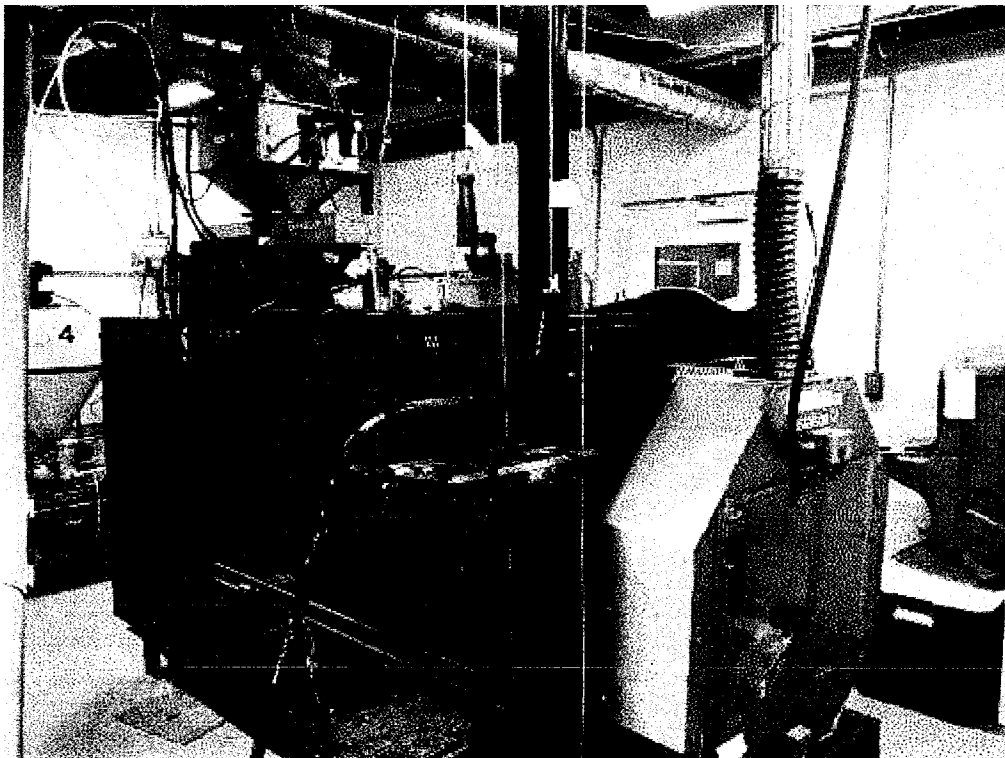


Image 5(10) : New seed treater

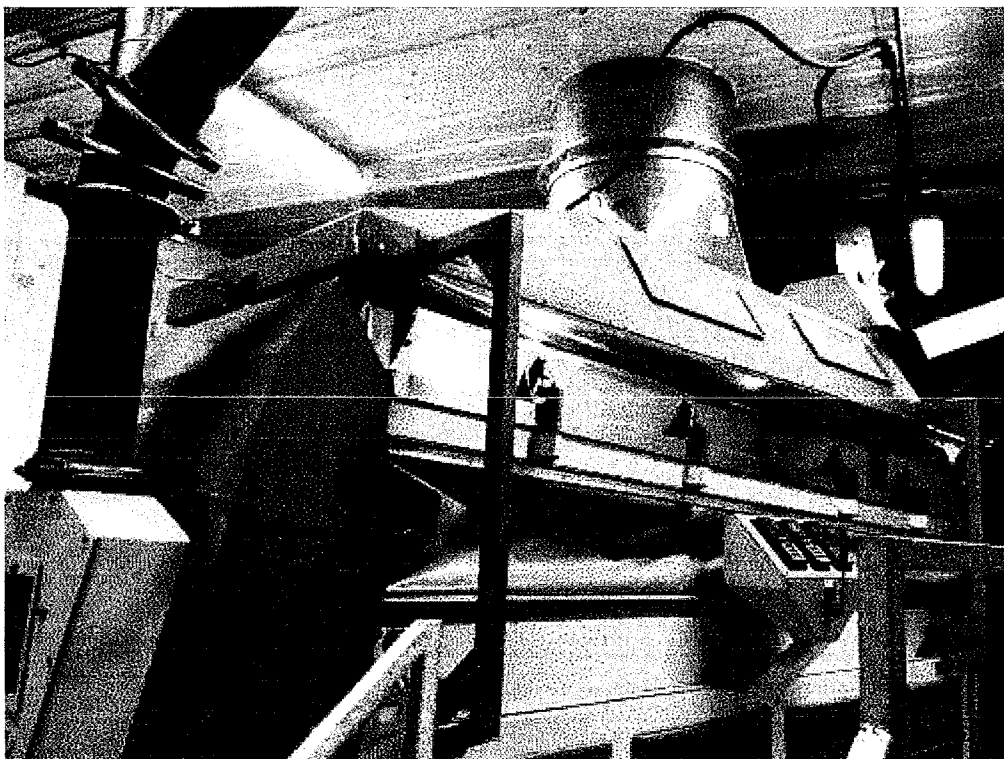


Image 6(11) : New bed dryer

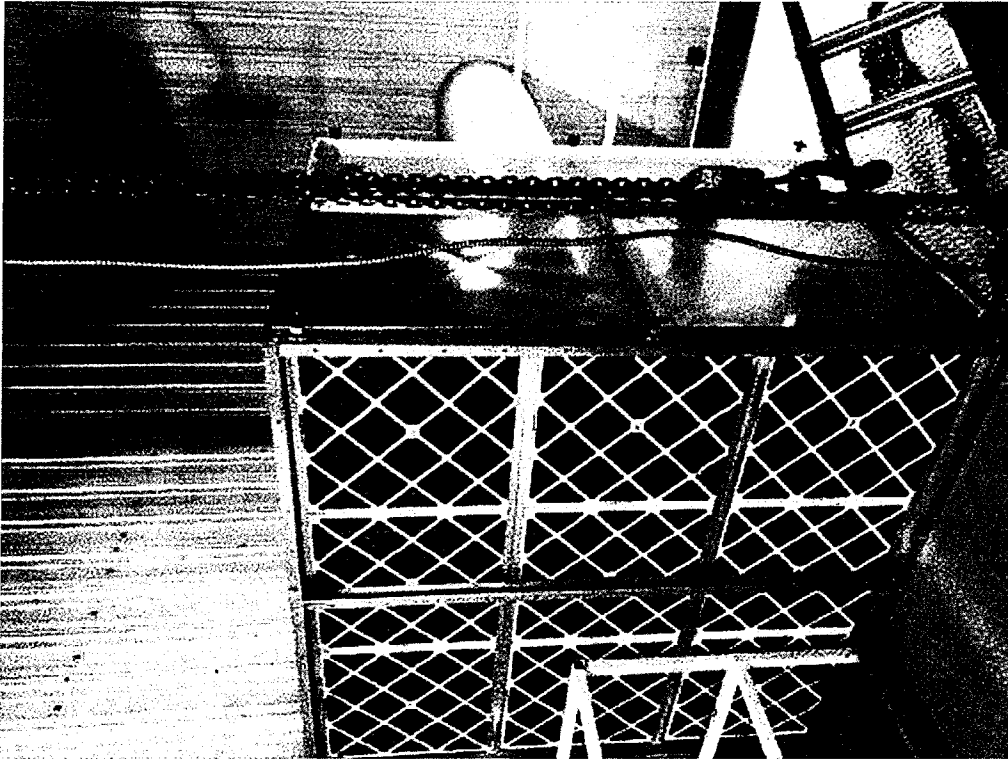


Image 7(13) : Return air carbon filter from the bed dryer



Image 8(16) : 5 - stage baghouse

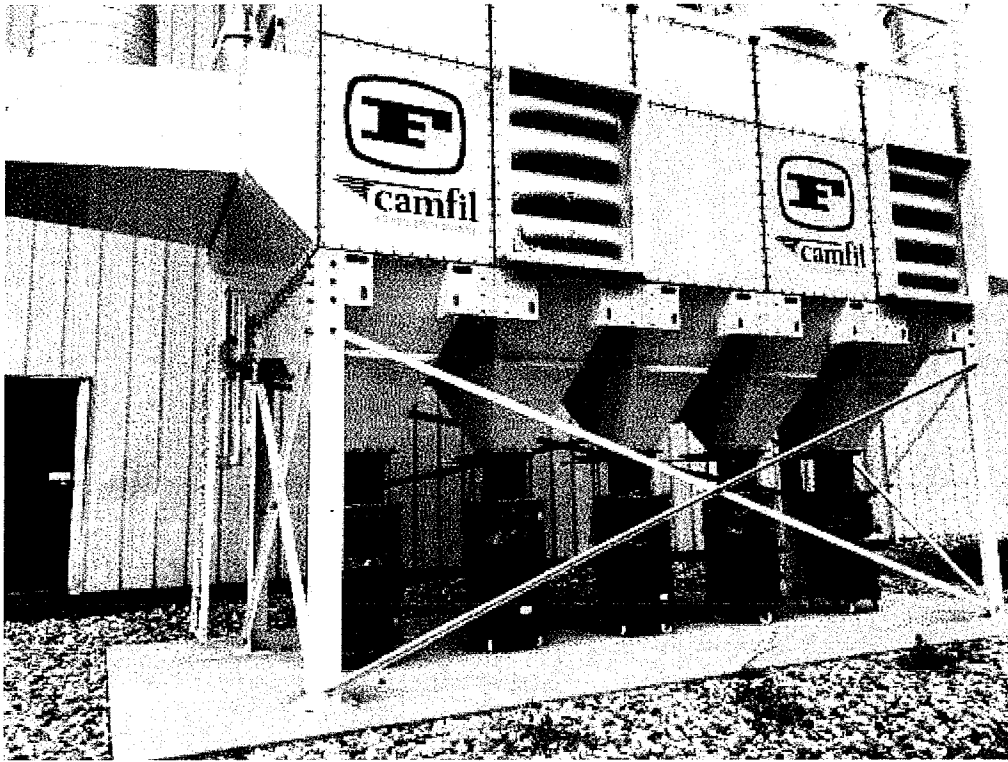


Image 9(17) : Bottom of 5 - stage baghouse

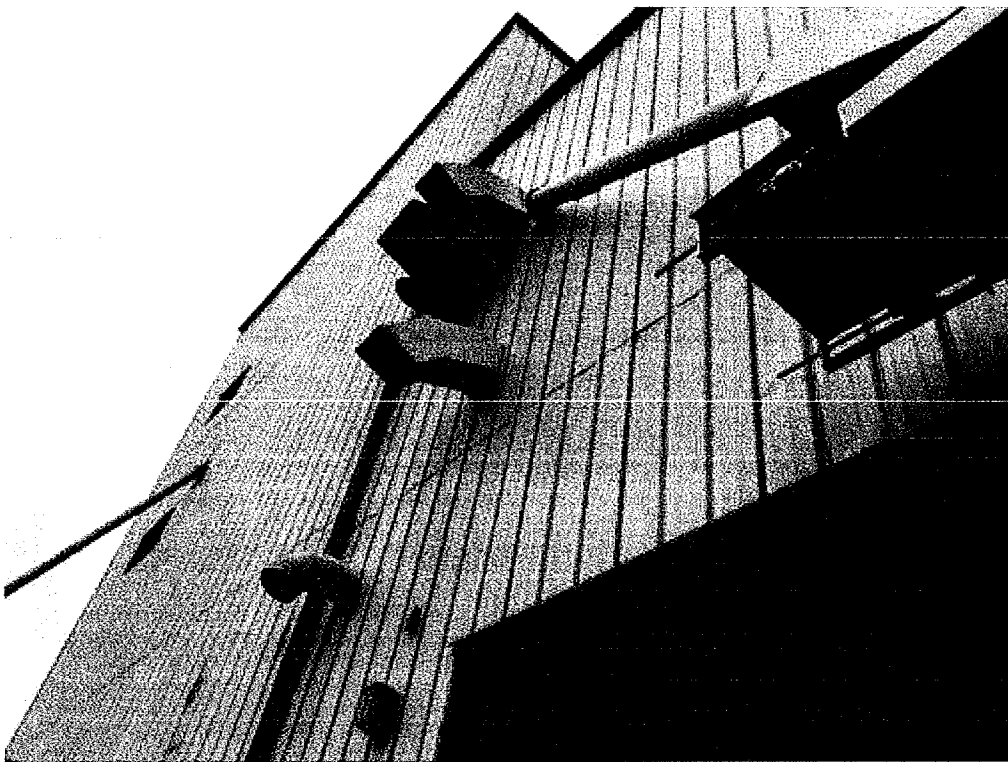


Image 10(18) : Exhaust vents from cyclones



Image 11(21) : Small solvent-based parts washer

NAME *Cyber* DATE *1/1/19* SUPERVISOR *B. M.*

