KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

KA 521-95-09

February 22, 1996

Mr. Cleve Holladay
Florida Department of
Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Class I Area AQRV Analysis
Southdown, Inc., Brooksville Plant
PSD Permit Application
Hernando County, Florida

Dear Mr. Holladay:

This is in response to your request today, during your meeting with representatives from Southdown, Inc. and Pradeep Raval, for a Class I Area Air Quality Related Values (AQRV) Analysis.

The requested analysis is attached.

If you have any questions, please call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:par

Enc.

cc: J. Gill, Southdown
D. Kelly, Southdown

cc: J. Heron
A. Linero
EPA
NPS
SWD
Hernando Co.

IMPACTS ON AIR QUALITY RELATED VALUES FOR CLASS I AREA SOUTHDOWN, INC., BROOKSVILLE PLANT

The impact of the air emission increases on air quality related values in the vicinity of the proposed Southdown project was addressed in the PSD permit application previously submitted. The discussion presented in this submittal extends the review of the impact of increased emissions on air quality related values to the Chassahowitzka Class I PSD area; an area around 14 kilometers from the Southdown facility.

Impact on Vegetation

The response of vegetation to air pollutants is influenced by the concentration of the pollutant, the duration of the exposure and the frequency of the exposure. The pattern of exposure expected from a single facility is that of a few episodes of relatively high concentrations interdispersed with long periods of no exposure or extremely low concentrations. This is the pattern of exposure that would be expected from carbon monoxide and particulate matter emissions from the proposed project at Chassahowitzka.

The vegetation in the Chassahowitzka area is characterized by flatwoods, brackish-water, marine and halothytic terrestrial species. Predominant tree species are slash pine, laurel oak, sweet gum and palm. Other plants in the area include needlegrass rush, seashore saltgrass, marsh hay and red mangrove.

Vegetation responds to a dose of an air pollutant with a dose being defined as the product of the concentration of the pollutant and the duration of the exposure. The maximum predicted concentrations of carbon monoxide in the Chassahowitzka area resulting from the increased emissions from the Southdown facility are less than significant. Consequently, no adverse impacts are expected on the vegetation.

The maximum predicted concentrations of particulate matter at Chassahowitzka area resulting from the increased emissions from the Southdown facility are less than significant for the annual period, and just over the significant level for the 24-hour period, at 1.02 micrograms per cubic meter. This impact is less than one percent of the ambient air quality standard. Further, it should be noted that particulate matter concentration in the form of salt deposition in coastal areas are in the range of 25-300 pounds per acre per year and may be as high as 4000 pounds per acre per year on exposed shorelines. Consequently, no adverse impacts on vegetation are expected from the increased particulate matter emissions from the proposed project.

Impact on Soils

The major soil classification in the Chassahowitzka area is Weeki Wachee-Durbin muck. This is an euic, hyderthermic typic sufihemist that is characterized by high levels of sulfur and organic matter. This soil is flooded daily with the advent of high tide and the pH ranges between 6.1 and 7.8. The upper level of this soil may contain as much as four percent sulfur (USDA, 1991).

Based upon the maximum predicted carbon monoxide and particulate matter concentrations in the Chassahowitzka area resulting from the increased emissions from the Southdown facility, it is not expected that there will be any adverse impact on the native soils.

Impacts on Wildlife

As the predicted carbon monoxide and particulate matter levels are below those known to affect vegetation, the proposed project is not expected to have any adverse impact on the wildlife in the Chassahowitzka area.

Visibility Impairment Analysis

Visibility impairment analysis was performed to determine potential visibility effects of the proposed project in the Chassahowitzka area. The VISCREEN - Level 1 modeling results (attached) indicate that no adverse visibility impacts are expected within the Class I area as a result of the proposed project.

REFERENCES

Curtis, C.R., L.R. Krusbert, T.L. Lauver, and B.A. Francis. 1975. Chalk Point Cooling Tower Project: Field Research on Native Vegetation. Maryland Water Resources Research Center. Maryland Department of Natural Resources - Power Plant Siting Program. p.107.

McLaughlin, S.B. and N.T. Lee. 1974 Botanical Studies in the Vicinity of the Widows Creek Steam Plant. Review of Air Pollution Effects Studies, 1952-1972, and Results of 1973 Surveys. Internal Report I-EB-74-1. TVA.

United States Environmental Protection Agency, 1988. Workbook for Plume Visual Impact Screen and Analysis. EPA-450/4-88-015, September 1988.

United States Department of Agriculture, 1991. Surveys of Hernando and Citrus Counties, Florida. USDA Soil Conservation Service in cooperation with University of Florida, Institute of Food and Agricultural Sciences, Agricultural Experiment Stations and Soil Science Department.

Woltz, S.S. and T.K. Howe, 1981. Effects of Coal Burning Emissions on Florida Agriculture. In: The Impact of Increased Coal Use in Florida. Interdisciplinary Center for Aeronomy and (other) Atmospheric Sciences. University of Florida, Gainesville, Florida.

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KA 521-95-09

February 22, 1996

Mr. A. A. Linero
Florida Department of
Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: PSD Permit Application
Southdown, Inc., Brooksville Plant
Hernando County, Florida

Dear Mr. Linero:

Enclosed are eight copies of an application for a PSD permit along with 2 disks, and a check in the amount of $7500.00 (application processing fee).

If you have any questions, please call me.

Very truly yours,

KOOGLER & ASSOCIATES

Pradeep Raval

par
Enc.

c: J. Gill, Southdown
D. Kelly, Southdown

Heron, Teresa

From: Fancy, Clair
Sent: Thursday, February 22, 2001 10:40 AM
To: Ellison, Tom
Cc: Linero, Alvaro; Heron, Teresa
Subject: Southdown

Tom, We appreciate your attendance at the meeting with Southdown on February 2. We could not have made the progress we did without your participation.
The condition about testing within 60 days of achieving maximum production or 180 days after startup is the first issue. Southdown sent us work orders as requested about when the construction was completed. Kiln 1 was completed on June 28, 2000 and kiln 2 on July 31,1999. In both cases the annual stack tests were done in August of each year. As this was a modification rather than construction of a new source, it seems that the maximum production date is not as important as just testing within 180 days, which they did. This condition is really intended for a newly constructed source. Whether the maximum production is based on a 165 ton hourly number or a 150 ton 30-day average becomes unimportant if you don't consider the 60 days after achieving maximum production.
The metals testing is the second issue. They should have tested for metals and the did in August 2000. This was late by any criterion, however the quantity of metals emitted was very low. The only reason for testing was to provide reasonable assurance that the values were in fact low. Due to the very low emission rates, the potential for harm should probably be considered low. Due to the long delay in the testing the extent of deviation should be high. This would give a penalty range of $600-1200. To call this one violation would be appropriate, but you could call it three as there were 3 metals.
I hope this helps the District in settling this enforcement case. Clair Fancy

VENDOR NO.	INVOICE DATE	DOCUMENT NO.	REMARKS	GROSS	DISCOUNT	NET AMOUNT
33659	2 10 97	97041				
	AT	PERMIT #0530010001AC		7,500.00	.00	7,500.00
	2 14 97	336633	** TOTAL	7,500.00	.00	7,500.00

DETACH BEFORE DEPOSITING

SOUTHDOWN, INC.
1200 SMITH STREET
HOUSTON, TEXAS 77002

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SOUTHDOWN, INC.
1200 SMITH STREET, SUITE 2400
HOUSTON, TEXAS 77002

60-162 / 433

No. 336633

DATE OF CHECK	CHECK NO	AMOUNT OF CHECK
2 14 97	336633	******7,500.00

VOID AFTER 90 DAYS
SOUTHDOWN, INC.

PAY TO THE ORDER OF

FLORIDA DEPT OF ENVIRONMENTAL
BUREAU OF AIR REGULATION
TWIN TOWERS OFFICE BLDG
2600 BLAIR STONE ROAD
TALLAHASSEE FL 32399-2400

Agnes L. Cudley
Thomas E. Damm

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