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MEMORANDUM

TO: PARTIES TO THE SOUTHDOWN PROCEEDING

FROM: MICHAEL A. SHAPIRO, CHIEF LEGAL COUNSEL
ROBERT E. BROWN, CHIEF TECHNICAL ADVISOR

SUBJECT: REQUESTS FOR CLARIFICATIONS AND COMMENTS

DATE: February 28, 1994

In staffs review of the record in the above-captioned case, clarifications or comments from the parties regarding the following items are requested. The responses will be useful to staff in preparation for its **resentation** to the Board at the March 23rd meeting. It is to be noted that the items contained in this memorandum are from a review performed by the Board staff and should not be construed as the views of the Board or in any manner limiting the Board Members regarding subject matter during their deliberation on the application.

As these items are not new to the parties, staff would appreciate receiving the parties' responses by Thursday, March 10, 1994. Although the items are addressed to specific parties, any party to the proceeding may respond.

TO APPLICANT:

- BURN TANK:** In its Report and Recommendation ("Report"), the panel found that:

Southdown has proposed through these proceedings to install new tanks, reconfigure the relative location of the tanks Finding of Fact No. 24 at 218.

The Report, however, does not discuss in specific detail if in the reconfiguration of the new tanks, there will be a dedicated bum tank or a designated bum tank. As used in this memorandum:

"Dedicated bum tank" shall mean a specific tank to be used *exclusively* as a bum tank, were in the tank system configuration there will not be any direct piping for the transmittal of hazardous waste fuel from the other tanks to the kiln.

“Designated bum tank” shall mean a tank identified or marked as a bum tank for a specific time period or event, where the tank system configuration consists of direct piping for the transmittal of hazardous waste fuel from the other tanks to the kiln.

CLARIFICATION REQUESTED: Will the reconfiguration of the new tanks include a dedicated bum tank or designated bum tank? If yes, provide citation to its description.

2. USE OF **EXISTING** TANKS: The panel recommended the following findings of fact regarding the new tank system:

47. While the existing tank storage facility complies with all applicable rules and regulations, Southdown has proposed to go beyond the requirements in order to address concerns of local citizens and the local political subdivisions regarding potential for groundwater, surface water, and soil contamination. Southdown proposes to install a containment storage facility which contains one hundred percent of the volume of all four tanks plus the volume of precipitation from a **25-year**, 24-hour storm event. (Sadowski testimony, Tr. Vol. II, p. 102.)

48. The new proposed containment system will exceed regulatory requirements (O’Connell testimony, Tr. Vol. VI, pp. 64-67.)

Report at 223.

CLARIFICATION REQUESTED: Applicant is requested to comment regarding the following: As the new tank containment system would provide increased protection as compared with that of the existing tanks, if a permit should issue for tank storage, a condition would be inserted requiring that:

The only tanks authorized for the storage of hazardous waste shall be the new tanks. The existing tanks shall only be used for that management of hazardous waste necessary for non full scale operation of the kiln, **i.e., trial** bums, test bums, or bums required by regulatory agencies pursuant to permit or order.

It is noted that permit conditions regarding the new tank construction schedule would be deleted.

3. MONITORING WELLS: The panel stated that:

Elizabeth Anderson's testimony regarding worst-case spill scenario outside containment area resulting in some evidence of contamination only 10 feet deep; after that no contamination would be quantifiable in scientific terms.

Report at 189.

In specific, at the adjudication hearing Dr. Anderson testified:

A. ... I think the best thing for me to do is read you our conclusionary paragraph.

The maximum predicted concentrations in groundwater directly below the spill location were all orders of magnitude lower than their quantitation limits. This work indicates that there would be no measurable impact on groundwater quality immediately below the spill. Any potential effects on groundwater at locations distant from the spill would be far less than those predicted at the site of the spill.

So, if you conclude there are no measurable impacts of **groundwater** quality directly under the spill, you certainly don't expect any impacts distant from the spill site.

Q. So, there wouldn't be any impact on the drinking water aquifer located four miles from this facility?

A. No.

Q. All right. And your conclusion factors in, or uses as a factor, that sugar rock is underneath the facility and it's highly porous?

A. Yes. And, in fact, we took an extreme position on that, in that we assumed the first 10 feet of soil is all sugar rock, which we **know** it is not. The first five feet is a less porous material, according to our geotechnical experts, but we assumed that to be as porous as the next five feet.

Tr. Vol V at 71-71.

Staff notes the following exchange between Dr. Sarvis and Mr. Philip W. Sadowski (Witness), Manager, Environmental Permitting, Southdown Environmental Systems:

DR. SARVIS: ... And my final question I have at this time concerns your discussion of the minimum risk to groundwater contamination. You discussed the geology of the site. For purposes of clarifying the record, have there been -- have any studies been done or do you know of any studies that describe the sugar rock aquifer or is connected to the buried valley aquifer?

THE WITNESS: I am not aware of any studies which have demonstrated that the sugar rock is connected with the buried valley aquifer. There are some assumptions made by individuals who have knowledge of the area geology that that is, indeed, a possibility. To my knowledge, that connection has never been proven through a pump test or tracer test or some other hydrogeologic investigation tool.

I have had some personal experience at other facilities with determining connections between various hydrogeologic units and to my knowledge the tests required to demonstrate that connection have not been performed in this case.

As I believe I stated in previous testimony, Applicant felt that performing a study to prove or disprove a connection would result in one of two things occurring. If a connection could not be found, there would also be a question as to whether a connection had been missed through some error or happenstance due to location of a drilling or boring or something. And then, of course, if the connection was demonstrated, then there would be the requirement by the Applicant to address that connection by proposing the design of the secondary containment system for the tanks, which gives us that one hundred percent containment volume plus the **25-year**, 24-hour storm volume. With the additional containment capacity for the container building unloading bay, the additional capacity in the truck unloading bay, the contained truck parking areas, the Applicant has addressed the potential for groundwater contamination whether or not there is a direct connection between the sugar rock and the buried valley aquifer.

Tr. of September 2, 1992 at 107-109.

The Report, however, is silent as to the necessity of monitoring wells to determine, in a worst case spill situation which occurs outside the containment area, which direction the contamination is migrating and to assist in detection.

CLARIFICATION REQUESTED: Applicant is requested to comment regarding the necessity of the following: If a permit should issue, a permit condition would be inserted requiring that:

Prior to the management of hazardous waste at the facility pursuant to this permit, three shallow monitoring wells, two down gradient and one up gradient, in an approximate equilateral triangle arrangement, shall be installed, monitored and analyzed in a manner so as to detect the direction of migration of hazardous waste in the event of a spill situation and to assist in its detection. Permittee shall perform two sets of background (baseline) chemistry and establish the ground water directional flow.

Or, in the alternative, describe such other measures to address the concern of a spill occurring outside the contaminant area (minimum risk of ground water contamination and public health) or a rationale against requiring said monitoring wells.

4. **DITCH:** On its site visit staff observed that the piping from the bum tank to the kiln transverses an open ditch, that at the time contained accumulated surface runoff.

CLARIFICATION REQUESTED: Applicant is requested to respond to the following:

- a. If the piping from the bum tank to the kiln should break or leak, will the pumping of waste to the kiln automatically stop? If yes, describe, with citation to the record.
- b. If a permit should issue, is a condition appropriate to address the concern of hazardous waste spillage or leakage entering the above-described ditch?

5. **DO01 WASTE: The use** of the **DO01** characterization is vague, as its composition is not specified. Said waste code may contain toxic chemical constituents which would not be identified in the test for **ignitability**.

CLARIFICATION REQUESTED.- Applicant is requested to comment regarding the following: If a permit should issue, a condition would be inserted requiring that:

Hazardous waste managed pursuant to the DO01 waste code shall not contain RCRA waste chemical constituents other than those of the approved U wastes codes set forth in the permit.

Or, in the alternative, describe such established or planned management practice which will ensure the absence of toxic waste constituents in DO01 wastes, which have not been identified in the record as chemical constituents to be managed at the facility.

6. **AVERAGE VAPOR PRESSURE OF HAZARDOUS WASTE FUELS:** The tank air emissions estimates in the Siting Criteria, Attachment 22, were based upon a typical hazardous waste fuel with an average vapor pressure of 0.38 psi at ambient conditions. As the actual vapor pressure of the hazardous waste fuel increases above 0.38 psi, the emission control load on the carbon system will increase. Further, as the vapor pressure of constituents increases, the efficiency of recovery of the carbon tends to decrease.

CLARIFICATION REQUESTED: Applicant is requested to comment regarding the following: If a permit should issue, a condition would be inserted requiring that the average vapor pressure of the hazardous waste fuel not exceed 0.76 psi.

7. **DOCUMENT DEPOSITORY AT FAIRBORN:** At the public hearing, the Mayor, City of Fairbom, announced "Fairbom's desire to obtain all documentation from Ohio EPA regarding any future permit violations by the Company." Report at 29.

CLARIFICATION REQUESTED: Applicant is requested to comment regarding the following: If a permit should issue, a condition would be inserted requiring that:

Prior to the management of hazardous waste at the facility pursuant to this permit, Permittee shall establish a document depository in the City of Fairborn, at a location to be designated by the Mayor, City of Fairbom. Such depository shall consist of all documents and correspondence between the Permittee and Ohio EPA regarding violations or alleged violations of this permit. If permission to establish such a document depository is denied or the terms required for such depository are or become unreasonable, the Permittee shall document such denial and/or circumstances to the Board. note: Ohio EPA is urged to deposit in said depository all similar subject matter correspondence relating to the facility.]

8. **CLARIFICATIONS TO RECOMMENDED PERMIT CONDITIONS:** Applicant is requested to comment regarding the following: If a permit should issue, the following clarification would be inserted or provided:

- a. Approved permit application shall refer to the application filed with the Board on November, 1992, CD .1.62.
- b. In place of referencing to Section D of the approved application as to the waste authorized for management at the facility, specific reference will be made to Recommended Attachment I "Maximum Throughput Volumes." **However, the** maximum quantity of.

waste authorized for management at the facility shall be related to that authorized under the air permit (presently 24,409.74 tons per year), plus an additional specified (in the permit) limited amount to allow for the orderly operation of the facility, but an amount so restricted so as to ensure that Permittee does not become a broker of hazardous waste.

- c. Recommended Permit Conditions C.13 “Fire Suppression System” and D.7 “Fire Detection System” should be revised to be consistent with the November, 1992 application and/or statements by Applicant set forth in its pleadings or at the public hearing and adjudication hearing. The conditions are proposed to be revised as follows, with new language appearing in CAPITALS; deleted language ~~struck out~~:

C.13 Fire Suppression System

- (a) A foam/water sprinkler system shall be constructed that will be hydraulically calculated and designed as a dry pipe sprinkler system on the basis of extra hazard, group 1, using a design density of .3 Gpm/ft², with a hydraulic design area of 3900 ft² (3000 + 30%), or equivalent specifications as approved by the appropriate authorities with jurisdiction of the subject matter. All riser valves, control valves, foam tank, etc. shall be located in a protected, heated room. Pressurization ~~will~~ SHALL be by air, with pressure, valve status and system status supervised. All sprinkler heads shall ~~be of the ordinary temperature rating~~ HAVE A FUSIBLE LINK THAT WILL MELT AND ACTIVATE THE SYSTEM AT 165 DEGREES F. Actuation of any head will cause a local audible (92 DECIBELS AT 10 FEET) AND VISUAL (8,000 CANDLE-POWERED STROBE LIGHT) ALARMS ~~alarm to sound~~, LOCATED AT EACH OF THE MANUAL PULL STATIONS,

transmit a signal to the facility control room and to the Fairbom Fire Station via automatic telephone dialer, open the system valve, and activate the foam system for foam/water discharge through the open head or heads. THE SPRINKLER HEADS SHALL BE PLACED IN A 10 FEET BY 10 FEET GRID PATTERN THROUGHOUT THE CONTAINER STORAGE AREA.

- (b) A supply of foam concentrate ~~will~~ SHALL be maintained which ~~will~~ SHALL provide approximately 90 minutes of foam product to the system prior to refilling.
- (c) A manual **fire** alarm system in conformity with NFPA 72, or equivalent specifications as approved by the appropriate authorities with jurisdiction of the subject matter, shall also be installed as additional protection. MANUAL PULL STATIONS SHALL BE LOCATED AT EACH DOOR OF THE CONTAINER STORAGE BUILDING.
- (d) All design and installation shall be in conformity with the applicable NFPA standards with special attention to thermal protection of water **filled** piping, foam storage tank(s), etc.
- (e) **All** electrical systems ~~will~~ SHALL conform to NFPA 497A: Hazardous Locations for Electrical Installation **in** Chemical Process Area, or equivalent specifications as approved by the appropriate authorities with jurisdiction of the subject matter.