HRP Associates, Inc.
ENVIRONMENTAL/CIVIL ENGINEERING & HYDROGEOLOGY

September 24, 1999

Ms. Marina Crawford
Sanitary Engineer III
Waste Engineering and Enforcement Division
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

RE: EPA I.D. NO. CTD 000844365/FORMER SYNTHETIC PRODUCTS COMPANY – REVISED CLOSURE PLAN PART I (HRP #SPC-0004.RC)

Dear Ms. Crawford:

Enclosed is a copy of the revised Closure Plan Part I for the former Synthetic Products Company. Comments from your letter dated May 24, 1999 have been incorporated when applicable. A summary of each comment and corresponding response has been provided in the attached document.

If you have any questions or comments, please contact Michael Errickson or me at 860-793-6899.

Sincerely,

HRP ASSOCIATES, INC.

Richard D. McFee, P.E.
Associate

RDM/cpk
Enclosures (2)

cc: Mr. Jamie Kalanta, SPC Divestitures, Inc.

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SYNTHETIC PRODUCTS COMPANY
STRATFORD, CONNECTICUT
EPA I.D. NO. CTD000844365

RESPONSE TO CT DEP COMMENTS (MAY 24, 1999) ON CLOSURE PLAN VOLUME I

Comment 1

The information included in the Closure Plan in Section 1.3, Facility Operations, and Section 2.0, Description of Regulated Units, lists the manufacturing operations conducted on-site, generally describes the wastes generated, and identifies four regulated units that are to be addressed under the Closure Plan. (The Primary and Secondary Container Storage Areas along with two tanks were identified as regulated units to be closed in the cover letter, but three tanks instead of two were identified as regulated units requiring closure in Section 2 – two 5,000 gallon tanks and one 3,000 gallon tank.) Based on this information and the information contained in the November 14, 1980, June 22, 1984, and October 3, 1986 Part A Applications, the following potential hazardous waste management areas, which may be subject to RCRA closure requirements, were identified (the page numbers cited below are from Volume I):

a. Two container storage areas, noted as Storage Areas I and II in the November 14, 1980, Part A Permit Application, with a 10,000 gallon capacity for D001 and D002 wastes, as discussed on pages 3 and 19;

b. The septic tank and associated leach field that were used to manage the pH-adjusted floor spills and rinse waters until 1979, as discussed on page 7;

c. Two container storage areas, noted as Primary (Parcel A) and Secondary (Parcel B), were identified in the June 22, 1984 and October 3, 1986 Part A Permit Applications, and on Pages 3, 22, and 26, with a total 5,000 gallon capacity for D005 and D006 wastes;

d. Ancillary piping associated with removing the reaction water vapor (D005 and D006 waste) to the 300 gallon stainless steel intermediate storage tank, and piping associated with the secondary transfer of the water from the 300 gallon tank to the 5,000 gallon wastewater storage tank that are identified on pages 8 and 25 as being used since 1984;

   Ancillary piping associated with reaction vessel cleaning wastes transferred to the 3,000 gallon intermediate holding tank, with subsequent transfer to the 5,000 gallon "organic" waste storage tank as discussed on page 22;

e. The 300 gallon water intermediate storage tank that managed D005 and D006 wastes identified on pages 8 and 24;

f. The 5,000 gallon wastewater storage tank that managed D005 and D006 wastes identified on pages 8 and 26;

g. The 3,000 gallon intermediate holding tank for reaction tank cleaning fluids, used since 1984, as indicated on pages 9 and 22, for management of D005 and D006 wastes;

h. The 5,000 gallon organic waste storage tank identified on pages 8 and 25;

i. The 1,200 gallon former reactor vessel (R-1) that was used as intermediate hazardous waste storage tank from 1986 to 1994, when it was converted back to a reaction vessel as identified on page 24; and

j. Associated floor trenching and sumps discussed on page 27.

Each of these areas may need to be addressed by this Closure Plan, as originally stated in the Department of Environmental Protection's (DEP's) March 1998 comments (Comment No. 1). If the units identified above are RCRA-regulated, then these waste management areas/units are required to go through the closure process including submittal of a closure plan and public notice. Some of the units listed above may be duplicative units, but based on the Closure Plan and associated materials; it could not be determined where there was an overlap. Revise the Closure Plan to indicate whether or not the units identified above are subject to RCRA closure and provide a rational and/or information for each unit's classification. For the septic tank, indicate when it was emptied and taken out of service.

Additionally, the information included in Section 1.3, Section 2.0 and the Part A Permit Applications provided do not consistently refer to the same units/waste management areas. For example, the October 3, 1986 Part A Permit Application lists five units; one 5,000 gallon capacity container storage area (depicted as two areas in the accompanying figure), two 5,000 gallon tank, and two 1,500 gallon tanks. The two 1,500 gallon tanks are not discussed anywhere in this Closure Plan. Revise the Closure Plan to correlate the information in the above-listed sections such that there is consistency among the Part A Applications and the sections of the Closure Plan that discuss facility operations and the regulated units. The Closure Plan must clearly indicate which of the tanks are regulated units and which are ancillary equipment, along with the rationale for the classification of each tank.

Response 1

Section 1.3 of the Closure Plan has been modified to clearly indicate which regulated units are covered under this Closure Plan.

Comment 2

In Section 1.8, Wastewater Discharges, the Closure Plan discusses the use of a 4,300-gallon tanker for management of industrial process wastewater prior to off-site disposal from 1979 to 1984. In 1984, the 4,300-gallon tanker truck was replaced

with the two 5,000 gallon indoor storage tanks. The information provided on this tanker truck is insufficient to determine if the unit managed regulated wastes. Revise the Closure Plan to provide any manifest information on the disposition of the waste waters, any analytical information on the wastewater characteristics, or any process knowledge available that would describe the material managed in the 4,300 gallon tanker truck, as originally stated in DEP's March 1998 comments (Comment No. 2).

Response 2:

No additional information on the wash water characteristics is known to exist. Therefore, it is not known if the tanker truck managed regulated wastes.

Comment 3

Although the soil and concrete sample analytical results presented in Update I (October 7, 1997), the Follow-up Report (November 7, 1997), and Update II (June 10, 1998) support the proposed conclusions presented, several questions regarding the adequacy of the sampling approach and the development of the constituent of concern list are raised in the following specific comments. Once the comments on Part 1 of the closure process have been addressed, the adequacy of these additional submission can be determined. The information requested in the following comments is viewed as necessary to support the closure certification, as provided in 40 CFR §265.115 and the corresponding DEP regulations. This comment does not require a specific response. By responding to the following specific comments, this comment will be adequately addressed. Once the Closure Plan has been approved by DEP, revisions to the Update I (October 7, 1997), the Follow-up (November 7, 1997), and Update II (June 10, 1998) will most likely be necessary. These revisions can be made when the information is submitted along with Part II.

Response 3

Please note that Update I (October 7, 1997), the Follow-up report (November 7, 1997) were submitted for Synthetic Products' 1525 Stratford Avenue facility, not the Barnum Avenue facility addressed here. Update II (June 10, 1998) does apply to the Barnum Avenue site.

Comment 4

As originally stated in DEP's March 1998 comments (Comment No. 6), the Closure Plan does not address regulatory events at the facility. The Closure Plan must identify any enforcement actions taken at the facility that regulated from a spill or release, and describe the course of events following the enforcement action.

Response 4

Section 1.9 of the Closure Plan has been added to summarize regulatory inspections and enforcement actions as a result of spills/releases from regulated units. Copies of the inspection reports have been included as Appendix I. No enforcement action is known to have occurred as a result of spills or releases.

Comment 5

The information provided in the Closure Plan on the processes that generates hazardous waste does not correlate well with the information provided in Section 2, Description of Regulated Units or the Part A Permit Applications included in the appendices. Refer to General Comment No. 1, and revise the Closure Plan accordingly.

Response 5

Section 2 now refers the reader to the CT DEP and EPA RCRA inspection reports in Appendix I. These inspection reports are the only documentation identified by or provided to HRP regarding the raw materials used on site, manufacturing processes, wastes generated, waste storage locations, and process modifications.

Comment 6

The Closure Plan refers to Figure 1, page 9, as the topographic map. Figure 1 does not show the facility or the 1,000 feet around the facility at a scale of not more than 2 inch equal to 200 feet, as suggested in the Draft RCRA Closure Plan Guidance. Additionally, the information provided on Figure 1 of the Closure Plan does not provide sufficient detail to allow for the surface water flow patterns to be determined in the vicinity of each closing units. Revise the Closure Plan to include the items identified.

Response 6

Figure 1 has been revised as requested.

Comment 7

Figure 1 of the Closure Plan does not provide sufficient detail to depict any intermittent streams in the vicinity of the facility of the closing units, and it does not include any information on public and private withdrawal wells. Revise Figure 1 to include the required information.

Response 7

The detail of Figure 1 has been increased to depict details such as intermittent streams. No public or private wells are within 1,000 feet of the facility (see Section 1.7).

Comment 8

The Closure Plan does not identify the source of drinking water for the facility or nearby residents. Furthermore, the data used to generate the drinking water well information provided in the Closure Plan are from 1967. Revise the Closure Plan to identify the drinking water source for the facility and nearby residences, and describe the drinking water well locations in the vicinity of the facility based on current information. Additionally, the location of the public water well referred to in the text of Section 1.7 (Page 16) is not depicted on any figure. Revise the Closure Plan to show where this well is located in relation to the facility. Section 1.7 also must be revised to include the screen interval and other appropriate well construction information for all wells within 1,000 feet of the facility. to determine the potential impact releases from the facility may have on ground water usage.

Response 8

The Bridgeport Hydraulic Company supplies drinking water for the facility and surrounding residents. No public or private drinking water wells are located within 1,000 feet of the facility. The private (not public as indicated in Comment 8) well described in Section 1.7 is not depicted on any figures because it is approximately one mile from the facility. The well construction information for this private well is not provided because it is greater than 1,000 feet from the facility. Section 1.7 has been revised to indicate that the facility and surrounding areas are serviced by public water supplies.

Comment 9

The local and regional, geologic and hydrogeologic information provided in the Closure Plan does not provide the depth to bedrock, depth to and flow direction of ground water in all potentially affected aquifers, or a description of site stratigraphy. Additionally, the aquifers underlying the facility are not specifically identified. Based on the information provided, if there was a release from the facility, it is unclear what the migration pathway(s) would be. No information has been provided regarding which, if any, aquifer is used for drinking water or other purposes, or if the primary source of water in the vicinity of the facility is the underlying schist. Revise the Closure Plan to include a more detailed description of the hydrogeologic and geologic characteristics of the site, including the bedrock. Describe whether the underlying schist functions as a regional or local aquifer and how it is hydraulically connected to the surficial fill and any other stratigraphic units that exist beneath the site.

Additionally, the relationship between the ground water and the surface water is not discussed. Revise the Closure Plan to identify all of the aquifers underlying the facility and describe if the aquifers are interconnected. Also indicate the hydrogeologic relationship between the aquifers and the surrounding surface water bodies, and whether any of the surrounding surface water bodies or aquifers are influenced by the facility activities.

Response 9

The following changes have been made to clarify geologic and hydrogeologic conditions on site:

Section 1.5 – page 12

- Description of ground water use
- Relationship between overburden and bedrock
- Impact of ground water on surface water bodies surrounding the site.

Section 1.6.1 – page 12

- Description of depth to bedrock and ground water elevations
- Description of ground water flow direction.

Section 1.6.2 – page 15

- Description of overburden stratigraphy.

Comment 10

There is no discussion on the local surface water bodies and how surface water runoff is managed. Revise the Closure Plan to include information on the local topography and how it influences surface water flow in and around the facility.

Response 10

A description of local surface water bodies and local topography has been added to Section 1.4. All surface water runoff is directed to one (1) catch basin located on site. The location of this catch basin is depicted on Figure 3.

Comment 11

The Closure Plan does not provide a map, at appropriate scale, with sufficient entails to distinguish drainage patterns in the vicinity for all the regulated units. Revise the Closure Plan to include a map with sufficient detail to show the surface water

drainage patterns in the vicinity of each of the regulated units. Ensure that the map includes any storm drains that receive runoff from the areas around the regulated units. If overland flow is one of the modes of surface water discharge from these areas, provide sufficient detail to determine the site surface water discharge pathways.

Response 11

Figure 3 Site Drainage Map has been provided at a scale of 1:3000. All stormwater on site flows to one (1) catch basin located at the northeast corner of the site as depicted on Figure 3. Flow path lines are indicated on Figure 3.

Comment 12

The Closure Plan does not contain a current photograph of any of the waste management units being closed that were identified in General Comment No. 1 (listed above). Revise the Closure Plan to include current photographs of each unit. Since some of these units no longer exist, historical photographs that shown the unit as it appeared while operating should also be included. Ensure that the revised Closure Plan provides a photograph of each unit and any associated ancillary equipment depicted in its current condition.

Response 12

Photographs of the primary and secondary container storage areas, 5,000 gallon waste water tank, 5,000 organic waste tank, 3,000 gallon intermediate tank, and 300 gallon reaction water tank are provided in Appendix J. A reference to the photographs is located Section 1.3 of the Closure Plan. Historical photographs for the 1,200-gallon former reactor vessel and septic tank/leach field were not available. The units were no longer in existence at the start of closure operations.

Comment 13

The Closure Plan does not provide enough detail on the current condition of any of the above listed units. A discussion of the integrity of each unit as well as the associated secondary containment structures needs to be provided, including whether there are any gaps or cracks in the concrete or asphalt floors or berms. The condition of the unit and floor, and the condition of any berms must be described. Revise the Closure Plan accordingly. This issue was also addressed in DEP's March 1998 comments (Comment No. 5).

Response 13

The current condition of each unit has been described with more detail in each subsection of Section 2.0. Container Storage Areas I and II, the septic tank and leach field, and 1,200-gallon intermediate tank have been removed and, therefore, cannot be described in any more detail.

Comment 14

The Closure Plan does not discuss whether there are any existing units that will remain open or if all of the units discussed in General Comment No. 1 will be closed. Revise the Closure Plan to include a discussion on any other regulated units at the facility, and their status. If there are no other regulated units at the facility other than those listed in General Comment No. 1, then include this information in Section 2 of the Closure Plan, Description of Regulated Units.

Response 14

No regulated waste management units will remain open. All of the units discussed in General Comment No. 1 will be closed. This has been indicated in Section 2 of the Closure Plan.

Container Storage Areas I and II, and the Septic Tank and Associated Leach Field (Identified in the November 14, 1980, Part A Permit Application)

Comment 15

Apparently, the Closure Plan did not originally intend to address the closure of Container Storage Areas I and II, or the Septic Tank and Associated Leach Field (identified in the November 14, 1980, Part A Permit Application). As discussed in General Comment No. 1, if these units are RCRA-regulated, they must be addressed in the Closure Plan. If the units are RCRA-regulated, revise the Closure Plan to include scale drawings of each unit including secondary containment structures, cross-sections, and details such as sumps, drains, and floor pitches.

Response 15

As discussed in Section 2.1 of the Closure Plan, Kraft Foods, Inc. has assumed responsibility for remediation of the septic tank and leach field. Kraft has addressed the closure of this area with the CT DEP through their environmental consultant. Scale drawings of the former septic tank and leach field are not available. Container Storage Areas I and II, as listed in the November 14, 1980 Part A permit application, were abandoned before the 1984 Part A revision and relocated to the present locations (now referred to as the primary and secondary container storage areas). The soils underlying the original container storage areas I and II were excavated to

the water table in 1990 during remediation of the former leach field. See Figure 6 for limits of the excavation. Since the soils underlying the former areas has been excavated under closure activities conducted by Kraft, these areas will not be discussed any further in this Closure Plan.

Primary Container Storage Area; 3,000 Gallon Intermediate Holding Tank; 1,200 Gallon Former Reactor Vessel (R-1); 300 Gallon Reaction Water Intermediate Storage Tank; 5,000 Gallon Organic Waste Storage Tank; 5,000 Gallon Wastewater Storage Tank; Secondary Container Storage Area; Ancillary Piping; and Associated Floor Trenching and Sumps

Comment 16

Plan view drawings are provided for the above list of units with the exception of the 1,200 Gallon Former Reactor Vessel (R-1) and the ancillary piping for all of the tanks, which are not shown on any of the drawings. The Closure Plan must include scale drawings of each unit including secondary containment structures, cross-sections, and details such as sumps, drains, and floor pitches. Revise the Closure Plan to include scale drawing showing the above-listed items and ensure that they identify the pitch of any sloped floor(s), floor elevations, and any curbed or secondary containment wall heights for all RCRA-regulated units.

Response 16

Former Reactor Vessel (R-1) was removed prior to the closure process. No plan view drawings were available for this unit. Additionally, no scale drawings were available depicting cross-sections, floor pitches, floor elevations, or other features requested in Comment 16. The units listed above and concrete floor have since been removed, therefore, it is not possible to create scale drawings.

Container Storage Areas I and II, and the Septic Tank and Associated Leach Field (Identified in the November 14, 1980, Part A Permit Application); Primary Container Storage Area; Secondary Container Storage Area; Ancillary Piping; and Associated Floor Trenching and Sumps

Comment 17

The Closure Plan does not identify the maximum inventory for Container Storage Areas I and II, the Primary Container Storage Area, the Secondary Container Storage Area, or the maximum volume of material that could have been held in the associated floor trenching and sumps. For those RCRA-regulated units, revise the Closure Plan to identify the maximum inventory stored in each container storage area and the design capacity for the Septic Tank and the floor trenching and sumps. Additionally, provide information on the capacity of the container stored in each of the container storage areas as originally requested in DEP's March 1998 comments (Comment No. 5).

Response 17

The maximum capacity for container storage areas I and II was 170, 55-gallon drums (10,000 gallons) as previously indicated in Section 2.1 on page 19 of the Closure Plan. It is not known if Synthetic Products' inventory ever exceeded this capacity. The largest container stored in container storage areas I and II was 55 gallons in capacity. The volume of the floor trenches and associated sumps was 570 gallons as noted in Section 2.3 on page 22 of the Closure Plan. The design capacity of the septic tank system is not known since it was removed along with surrounding soils prior to closure activities.

3,000 Gallon Intermediate Holding Tank and Secondary Container Storage Area

Comment 18

The Closure Plan does not identify the material of construction for the secondary containment structures (dike/berm) for either of the above units, nor was information provided on the secondary containment prior to 1995 for the 3,000-gallon intermediate holding tank. Revise the Closure Plan to identify the secondary containment construction materials and to describe the secondary containment features of these units during their entire active life, if they are determined to be RCRA-regulated.

Response 18

Section 2.3 of the Closure Plan was modified to indicate what construction materials were used in the secondary containment berm for the intermediate holding tank. No secondary containment existed for the intermediate holding tank prior to 1995. Section 2.8 of the Closure Plan was modified to included the secondary containment berm height and material of construction.

1,200 Gallon Former Reactor Vessel (R-1) and 300 Gallon Reaction Water Intermediate Storage Tank

Comment 19

The Closure Plan does not address whether there is any secondary containment at the above listed units. If determined to be RCRA-regulated, revise the Closure Plan to describe secondary containment features at the above listed units.

Response 19

The 300-gallon reaction water intermediate storage tank was outfitted with a secondary containment berm in 1995, as noted in Section 2.5. The 1,200-gallon former reactor vessel (R-1) was not equipped with secondary containment during its service life. This comment has been added to Section 2.4.

Comment 20

The Closure Plan does not identify the material of construction for any of the ancillary piping. Revise the Closure Plan to describe in detail the ancillary piping construction materials and any secondary containment features associated with RCRA-regulated units.

Response 20

Section 2.8 has been added to the Closure Plan to specifically address ancillary piping associated with RCRA regulated units.

3,000 Gallon Intermediate Holding Tank; 1,200 Gallon Former Reactor Vessel (R-1); 300 Gallon Reaction Water Intermediate Storage Tank; 5,000 Gallon Organic Waste Storage Tank; 5,000 Gallon Wastewater Storage Tank; Secondary Container Storage Area; Ancillary Piping; and Associated Floor Trenching and Sumps

Comment 21

The Closure Plan does not indicate when the coating on the floor of the 3,000-Gallon Intermediate Holding Tank was applied. Revise the Closure Plan to indicate when the protective coating was applied to the floor of the unit, if the unit is RCRA-regulated. Additionally, there is no discussion as to whether there is a coating on the floor under the 1,200 Gallon Former Reactor Vessel (R-1) or the 300 Gallon Reaction Water Intermediate Storage Tank. Also, revise the Closure Plan to indicate whether a protection coating was applied to the floor underneath these two units, if the units are RCRA-regulated.

Response 21

An epoxy coating was applied to the floor surface beneath the 3,000-gallon intermediate holding tank, 1,200-gallon former reactor vessel, and 300-gallon reaction water intermediate storage tank. Each specific section in Section 2 of the Closure Plan has been modified to include this. The date on which the epoxy coating was applied is not known but reported to be 1988.

Comment 21

The Closure Plan does not provide the following information for the 3,000 gallon intermediate holding tank: a scale drawing of the tank system, including the process flow; all ancillary equipment directly connected to the tank or secondary containment structure, such as piping, pressure relief values, instrumentation, valves, and level sensors; the maintenance/repair/replacement history of the tank system; the age of the tank system'; or information of any spills which occurred that were associated with the tank during the life of the facility. Revise the Closure Plan to include the above listed information if the unit is RCRA-regulated.

Response 21

Additional information as requested in Comment #21 is not available due to lack of records and removal of the tanks from the facility.

Comment 22

The Closure Plan does not provide the following information for the 1,200 gallon former reactor vessel, the 300 gallon reaction water intermediate storage tank, or the 5,000 gallon wastewater storage tank: dimensions of the tank; secondary containment structure design and materials of construction; a scale drawing of the tank system, including the process flow; all ancillary equipment directly connected to the tank or secondary containment structure, such as piping, pressure relief values, instrumentation, valves, and level sensors; the maintenance/repair/replacement history of the tank system; the age of the tank system; or information of any spills which occurred that were associated with the tank during the life of the facility. Revise the Closure Plan to include the above listed information for those units that are RCRA-regulated.

Response 22

Additional information as requested in Comment #22 is not available due to lack of records and removal of the tanks from the facility.

Comment 23

The Closure Plan does not provide the following information for the 5,000 gallon organic waste storage tank: dimensions of the tank; a scale drawing of the tank system, including the process flow; all ancillary equipment directly connected to the tank or secondary containment structure, such as piping, pressure relief values, instrumentation, valves, and level sensors; the maintenance/repair/replacement history of the tank system; the age of the tank system; or information on any spills which occurred that were associated with the tank during the life of the facility. Revise the Closure Plan to include the above listed information if the unit is RCRA-regulated.

Response 23

All available information on the 5,000 gallon organic waste storage tank, which is limited, is provided in Section 2.6.

Comment 24

No discussion is provided in the Closure Plan that compares the units currently on-site or currently undergoing closure versus those that are listed in the most recent Part A Permit Application (October 3, 1986) provided in the Appendix D. Revise the Closure Plan to include a discussion on those units that are presently on-site versus those that are listed in the most recent Part A Permit Application provided in the Appendices. For example, the figures included with the October 3, 1986 Part A Permit Application include several tanks that are not discussed or described anywhere in the Closure Plan. Information on what each of these tanks was used for should be included in the Closure Plan.

Response 24

The primary and secondary container storage areas and two 5,000 gallon tanks listed on the 1986 Part A permit application were addressed in Closure Plan Volume I. The additional tanks depicted on the figure attached to the 1986 Part A permit application were reported to be associated with manufacturing processes. These additional tanks are not likely to be RCRA regulated units. This has been noted in Section 1.1 on page 3 of the Closure Plan.

Comment 25

The Part A Permit Applications are included in Appendix A, but information included in the Closure Plan does not match the information contained in the October 3, 1986 Part A Permit Application. No revised application has been submitted, although several discrepancies exist regarding the information provided in Sections 1.3 and 2 of the Closure Plan versus what is included in the Part A Permit Applications. Refer to General Comment No. 1 and revise the Closure Plan accordingly. Additionally, it appears it may be necessary to include an updated Part A Permit Application in the revised Closure Plan.

Response 25

The degree of detail provided on the Part A permit application is minimal. The CT DEP and EPA inspection reports provided as Appendix I document the size and number of hazardous waste storage tanks on site. A modified Part A permit application is unnecessary because all regulated units on site are being closed under this plan and by Kraft Foods, Inc. under a separate cover. Additionally, Sections 1.3 and 2 of the Closure Plan have been revised to clarify which units are regulated as requested earlier in General Comment 1.

Comment 26

The Closure Plan does not include any discussion on the potential for other sources of contamination to exist. Revise the Closure Plan to address this issue. If there are no other suspected sources of contamination, then include that appropriate information in the Closure Plan. An example of other sources of contamination could include spills from the additional product or reactor tanks shown in the figures provided in the June 22, 1984 Part A Permit Application.

Response 26

A paragraph explaining the potential for process (non-RCRA regulated) tanks to be a source of contamination has been added to Section 3.1.1 of the Closure Plan.

Comment 27

The development of the constituents of concern (COC's) list need to include a review of all facility records such as Material Safety Data Sheets (MSDS) for all materials stored on-site, based on both current and historic manufacturing activities and records. Other information that also needs to be reviewed includes waste analysis records at the facility, records of waste or materials sent to off-site facilities, any ground water monitoring parameters, and wastewater discharge permits. Documentation regarding all of the sources reviewed needs to be included in the Closure Plan. For example, the first bullet on page 32, Section 3.1.1, states that a comparison of the materials used on-site was conducted with the hazardous constituents listed under 40 CFR §261 Appendix VIII and 40 CFR §264 Appendix IX. The information used to conduct the comparison needs to be included in the Closure Plan. This issue was also discussed in DEP's March 1998 comments (Comment No. 3). Revise the Closure Plan to address this issue. Ensure that all of the appropriate parameters identified are included on the COC list, and modify Tables 2 and 3 accordingly.

Response 27

Historic records of materials used on site are only available through CT DEP inspection reports included as Appendix I. This reference has been added to the first bullet under Section 3.1.1 of the Closure Plan. Available waste profile sheets have been provided in Appendix E as previously noted. No additional information is known to exist to assist in the development of the constituents of concern list. One wastewater permit did exist for the non-contact cooling water permit discharge but is not relevant to the closure activities.

Comment 28

Revise the Closure Plan to discuss whether used petroleum products were managed on site in association with the activities described in the Closure Plan. Used oil is regulated by the DEP and has characteristics that would potentially expand the COC list.

Response 28

Petroleum products were not used on site in association with production activities discussed in the closure plan as noted in Section 3.1.1.

Comment 29

The Closure Plan states that, "It is not necessary to complete Appendix IX sampling of the secondary hazardous waste container storage area, because the secondary area stored the same hazardous wastes as the primary area." As the management practices and spill incidents history are not the same for both the primary and secondary container storage areas, proposing that since they both managed the same wastes, sampling of the secondary container storage area is unwarranted is unacceptable. Revise the Closure Plan to provide for sampling of the secondary container storage area.

Response 29

Appendix IX sampling will not be conducted in the secondary container storage area. The primary container storage area held the same hazardous waste as the secondary container storage area, but on a more frequent basis.. Furthermore, the secondary container storage area has been removed. Subsurface sampling of this area will be addressed in Volume II of the Closure Plan.

Comment 30

Section 3.1.2, Appendix IX Sampling states that the only areas to be considered for sampling are the primary container storage area and the organic and reaction water storage tank areas. Given the number of units that may need to be addressed by this Closure Plan as discussed in General Comment No. 1, and that the Secondary Container Storage Area should also be sampled and discussed in Specific Comment No. 29, the surface area of the concrete that may need to be sampled may need to be increased to include additional areas underlying units determined to be RCRA-regulated. Revise the proposed sampling approach to include the sumps and trenches, secondary containment surfaces, and all concrete that serves as secondary containment for any of the ancillary tanks or primary tanks used to manage hazardous wastes. The proposed sampling should include the concrete walls or building walls near where tanks are currently or were formerly located. In order to account for any spills, this may entail sampling the walls up to at least the

height of the former tank(s) that was (were) stored in that area. Ensure that a proposal is provided for sampling the secondary container storage area as well. These issues were also discussed in DEP's March 1998 comments (Comment No.8).

Response 30

Appendix IX sampling will only be conducted at the primary container storage area, and the organic and reaction water storage tank areas to develop the constituents of concern (COC) list. These areas were selected because they posed the greatest risk for releases. Further concrete sampling is unwarranted because Synthetic Products intended (and has since completed) to excavate and dispose of the concrete floor, containment berms, trenches and sumps. Subsurface sampling for COC's under each regulated unit will be presented in Volume II of the Closure Plan. Visual inspection of the walls adjacent to the storage tanks reveals that no spills have impacted the concrete block walls. Therefore, sampling of the walls is deemed unnecessary.

Comment 31

Section 3.1.2, Step 4, discusses how the samples will be collected and selected for analysis. Provide a justification for only collecting one judgmental sample. It would be prudent to set the number of judgmental samples based on the condition of the concrete to be sampled (i.e., collect one sample from each stained or degraded area of concrete observed up to some specified maximum). The details regarding the condition of the concrete need to be provided in the Closure Plan as discussed in Specific Comment No. 14, in order to allow for a determination of the number of judgmental samples necessary. Revise the Closure Plan to address these issues.

Response 31

Provisions for additional judgmental samples (maximum of three) have been added to Section 3.1.2.

Comment 32

Section 3.2, states that, "Since health based standards for the dermal contact pathways are not available for most constituents, the health and environmental based standards for ingestion and inhalation will be used to determine when the goal of clean closure is achieved for each of the hazardous waste storage areas." This is not an acceptable justification for not addressing dermal exposures for the constituents of concern. EPA's Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A), Interim Final, dated December 1989, Office of Emergency and Remedial Response, EPA/540/1-8/002, provides guidance on how to establish surrogate numbers in the event that compound specific

exposure data is unavailable. Revise the Closure Plan such that dermal exposure is included in the human health exposure pathway analysis.

Response 32

Section 3 has been revised to address three exposure pathways as follows

- Section 3.3.1 - Ingestion Closure Criteria
- Section 3.3.2 – Inhalation Pathway
- Section 3.3.3 – Dermal Closure Criteria

Comment 33

Step 3 in Section 3.4.2 refers to Section 3.5.2 for information on how soil samples will be collected. No discussion is provided in either Section 3.4.2 or 3.5.2 on how soil and/or concrete collected in augers will be transferred into sampling jars. The transfer and material holding process should be described in detail, so that DEP can ensure that the transfer process will not impose any unnecessary cross-contamination on the samples. Usually, the non-volatile organic analysis soils are homogenized prior to placement in sample containers. This level of detail is currently not included in the Closure Plan. Revise the Closure Plan to provide additional details on the procedures and equipment that will be used to transfer sample materials from the sample collection device to the sample container, and how the sample will be treated during the transfer process. This issue was also discussed in DEP's March 1998 comments (Comment No. 7). The inclusion of standard operating procedures (SOPs) that address these concerns would be considered an appropriate response.

Response 33

HRP's Standard Operating Procedures (SOPs) for environmental investigations have been provided as Appendix H to Volume I of the Closure Plan. Please refer to the following sections of the SOP's for detailed information:

1.0 Sampling Procedures;
2.0 Sample Handling Procedures; and
3.0 Decontamination Procedures.

Comment 34

Revise Section 3.4.4 to address both the Primary Container Storage Area as well as the Secondary Container Storage Area as previously discussed in Specific Comment No. 29.

Response 34

Section 3.4.4 has been revised to include both the primary and secondary container storage areas.

Comment 35

Step 6 in Section 3.4.2 states that soil sampling will only be advanced to a maximum depth of four feet below the ground surface. Additionally, Step 3 in Section 3.4.4 states that a soil sample will be collected from the 12 inch to 18-inch soil horizon. The Draft RCRA Closure Plan Guidance states that the soil should be sampled down to the mean seasonal low ground water elevation. The Closure Plan must be revised to present a sampling plan that will establish the boundaries of the vertical extent of hazardous waste that has migrated into the soil from each unit requiring soil samples. Revise the Closure Plan to include additional sampling of the soil, where necessary, down to the mean seasonal low ground water elevation, or provide the rationale for not requiring the additional sampling.

Response 35

Sections 3.4.2 and 3.4.4 have been revised to include sampling until the seasonal low ground water elevation has been reached. This is expected to occur at four (4) feet below grade based on previous hydrogeologic studies performed at the site.

Comment 36

Section 3.5.1, Step 4 does not include a rinse with deionized water. Revise the decontamination process to include a deionized water rinse in between the tap water rinse and the nitric acid rinse. Additionally, deionized water needs to be specified instead of distilled water. This comment also applies to Section 3.5.2, Step 3 and Section 3.5.3, Step 3. Revise the Closure Plan accordingly.

Response 36

The decontamination processes described in Sections 3.5.1, 3.5.2, and 3.5.3 have been modified to include a deionized water rinse between the tap water rinse and the nitric acid rinse. All references to distilled water in the decontamination sections have been changed to deionized water.

Comment 37

Section 3.5.3 does not address the concrete associated with the 300 Gallon Reaction Water Intermediate Tank, and 3,000 Gallon Intermediate Holding Tank, or the 1,200 Gallon Former Reactor Vessel (R-1). Revise the Closure Plan accordingly to include all of the tanks undergoing closure as discussed in General Comment No. 1.

Response 37

The 300-gallon reaction water intermediate storage tank, 3,000 gallon intermediate holding tank, and the 1,200 gallon former reactor vessel (R-1) have been added to Section 3.5.3.

Comment 38

Section 3.10 does not provide for the collection of trip blanks or field blanks, as well as matrix spike/matrix spike duplicate (MS/MSD) samples, which are standard analytical quality assurance samples. Revise the Closure Plan to include these additional quality control samples. The inclusion of SOPs that address these concerns would be considered an appropriate response.

Response 38

A reference to page 2-4 of HRP's SOP's for environmental investigations has been added to Section 3.10.

Comment 39

The Follow-up Report (November 7, 1997) on page 2 states that the analytical results from sample IN-LAT-4 are believed to be anomalous. Based on the lack of sufficient quality control samples are discussed in Specific Comment No. 38, stating that one elevated reading is anomalous is unsubstantiated. It is recommended that this location be resampled in order to determine whether the IN-LAT-14 data point is really anomalous. Address this issue during submission of Part 2.

Response 39

The Follow-up Report (November 7, 1997) was submitted for the Synthetic Products Facility located at 1525 Stratford Avenue, Stratford, Connecticut. Comment 39 does not apply to SPC's Barnum Avenue facility.

Comment 40

In Update II (June 10, 1998), on page 2, SPC Divestitures suggests that the arsenic contamination is not related to site activities, but is associated with site surficial fill. Soil samples from background locations unaffected by site activities need to be collected and analyzed to support this conclusion. This also applies to the arsenic issue discussed on page 4 of this report. Address this issue during submission of Part 2.

Response 40

Based on Figure 6.1 Conestoga-Rovers & Associates' (CRA) Supplemental Hydrogeologic Investigation Report dated May 1996, arsenic was detected in all 17 soil borings. Several of these borings were upgradient of the site and were in locations expected to be unaffected by site activities. This issue will be addressed in depth in Volume II of the Closure Plan.

Comment 41

In Update II (June 10, 1998), on page 2, SPC Divestitures suggest that the total petroleum hydrocarbon contamination is associated with a site scale. Additional sampling needs to be conducted that will document this premise. Address these issues during submission of Part 2.

Response 41

Additional total petroleum hydrocarbon sampling was conducted in the vicinity of the site scale to determine vertical and lateral extents of soil contamination. This issue will be discussed in Volume II of the Closure Plan.