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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

IN THE MATTER OF:)	
)	
PLYMOUTH AVENUE LANDFILL)	Proceeding under Sections 104,
SITE)	122(a) and 122(d)(3) of the
)	Comprehensive Environmental
COUNTY OF VOLUSIA, FLORIDA)	Response, Compensation
and BRUNSWICK CORPORATION,)	and Liability Act of 1980,
)	as amended, 42 U.S.C.
Respondents.)	§§ 9604 and 9622.
)	
)	EPA Docket No.:

ADMINISTRATIVE ORDER BY CONSENT
FOR ENGINEERING EVALUATION/COST ANALYSIS

I. JURISDICTION

This Administrative Order by Consent (Consent Order) is entered into by the United States Environmental Protection Agency (EPA) with COUNTY OF VOLUSIA, FLORIDA and BRUNSWICK CORPORATION (Respondents), pursuant to the authority vested in the President of the United States by Sections 104, 122(a) and 122(d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. §§ 9604, 9622(a) and 9622(d)(3). This authority was delegated by the President to the Administrator of the EPA by Exec. Order No. 12580, dated January 23, 1987, 52 Fed. Reg. 2923 (Jan. 29, 1987), and was further delegated to the Regional Administrator of Region IV EPA and redelegated to the Director, Waste Management Division.

Respondents agree to undertake all actions required by the terms and conditions of this Consent Order for the conduct and implementation of the Engineering Evaluation and Cost Analysis (EE/CA) for the Plymouth Avenue Landfill. The Respondents consent to and will not contest EPA jurisdiction regarding this Order.

II. PARTIES BOUND

This Consent Order shall apply to and be binding upon EPA and the Respondents, their agents, successors, assigns, officers, directors, and principals. Respondents are jointly and severally responsible for carrying out all actions required of them by this Consent Order. The signatories to this Consent Order certify that they are authorized to execute and legally bind the parties they represent to this Consent Order. No change in the ownership

or corporate status or the composition of the Board of County Commissioners of the Respondents shall alter their responsibilities under this Consent Order.

The Respondents shall provide a copy of this Consent Order to any subsequent owners or successors before ownership rights are transferred. The Respondents shall provide a copy of this Consent Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Consent Order, within fourteen (14) days after the effective date of this Consent Order or the date of retaining their services, whichever is later. Respondents shall condition any such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Consent Order and for ensuring that their subsidiaries, employees, contractors, consultants, subcontractors and agents comply with this Consent Order.

III. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objectives of EPA and Respondents are: (A) with respect to the Engineering Evaluation (EE), to determine fully the nature and extent of the threat if any to the public health or welfare or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site into the environment; and (B) with respect to the Cost Analysis (CA), to develop and evaluate alternatives for non-time critical removal action to prevent, mitigate or otherwise respond to the migration or the release or threatened release of hazardous substances, pollutants, or contaminants from the Site and evaluate and compare the cost of each alternative; and (C) to recover response and oversight costs incurred by EPA with respect to this consent order.

The activities conducted pursuant to this Consent Order will be consistent with the National Contingency Plan (NCP), 40 C.F.R. Part 300, et seq., and will be subject to the express EPA approvals as set forth below.

IV. EPA'S FINDING OF FACTS

The following constitutes an outline of the facts upon which this Consent Order is based:

A. The Plymouth Avenue Landfill Site, located on Plymouth Avenue, Deland, Volusia County, Florida consists of an area encompassing three sludge cells located on the southeastern section of the Plymouth Avenue Landfill approximately three miles northwest of downtown Deland, Florida.

B. High levels of nitrate were first detected at Plymouth Avenue Landfill in October 1983 in monitoring wells (Floridan well, MO5 and shallow well, M11) constructed on the Site. The highest concentration level detected was 963 mg/l in well M11 in March 1984.

C. The Respondents hereunder are the County of Volusia, Florida and Brunswick Corporation. Volusia County is now, and was the owner/operator of the Site during the period in which hazardous waste disposal occurred. Brunswick Corporation generated and arranged for the disposal of certain wastes on the Site.

D. Brunswick Corporation utilized nitric acid and sulfuric acid in its metal finishing operation, and disposed of high-nitrate and high-sulfate sludges in the sludge cell disposal area of the Plymouth Avenue Landfill from 1978 until 1988.

E. A sampling investigation composed of 21 samples, including surface soil, subsurface soil, and groundwater and sediment samples was conducted in January 1990. Nitrates were detected in two monitoring wells east of the sludge cell area, at concentration levels of 97 ppm and 120 ppm.

F. In 1992, Volusia County documented the hydrology of the Site and the existence of a plume of nitrate contamination in the Contamination Assessment Report (CAR) submitted to the Florida Department of Environmental Regulation (FDER). The CAR was completed per the terms of a consent order entered into with FDER. Contamination exists in both the surficial aquifer and the Floridan Aquifer, near the sludge cell area.

G. The Plymouth Avenue Landfill Site was proposed for inclusion on the National Priorities List, as defined in Section 105 of CERCLA, as amended, 42 U.S.C. § 9605, in May 1993.

H. A release, as defined under Section 101(22) of CERCLA, has occurred at the Site as a result of the excavation of pits 3-4 feet in depth in the sludge cell area; filling those pits with high-nitrate liquid waste; allowing the solids in the liquid to settle and the liquid to evaporate; and mixing the thickened sludge with the soil, and spreading it over the disposal area.

I. The area around the Plymouth Avenue Landfill is not heavily populated, but the Site is surrounded by approximately 100 residences located within one mile of the Site.

J. The Volusia County Department of Public Works completed the Contamination Assessment Report in November 1992. EPA has not conducted any response actions at the Site, but has evaluated the Site and determined that existing contamination does not pose

an immediate threat requiring immediate response action at the Site.

K. Nitrate concentration levels similar to those detected at the Site could constitute a potential human health hazard, particularly in young infants, and have been shown to cause adverse effects on warmwater fish. Some of the private homes in the area of the Site are not connected to a municipal drinking water source, and only have access to private drinking water wells. Therefore, the possibility of the continued migration of nitrate contamination to the groundwater in the area of the Site may at some time in the future, pose a health hazard as a result of the intake of nitrate-contaminated water from private drinking water wells.

V. EPA'S CONCLUSIONS OF LAW

A. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

B. The Respondents are persons as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

C. The Respondents are responsible parties under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

D. Contaminants found at the Site as described in Section IV above are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), or constitute a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1).

E. The hazardous substances described have been released into the environment and their potential migration pathways constitute both an actual release and threatened release within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

VI. EPA'S DETERMINATIONS

Based on the Findings of Fact and Conclusions of Law set out above, EPA has determined that:

A. The actual and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.

B. The actions required by this Consent Order are necessary to protect the public health and/or welfare and/or the environment.

C. In accordance with Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1), EPA has determined that the work to be performed pursuant to this Consent Order, if performed according to the terms of this Order, will be done properly and promptly by the Respondents. EPA has also determined that the Respondents are qualified to conduct such work.

VII. WORK TO BE PERFORMED

All aspects of the Work to be performed by Respondents pursuant to this Consent Order shall be under the direction and supervision of a qualified contractor who shall be a qualified professional engineer or geologist with expertise in hazardous site cleanup, the selection of which shall be subject to approval by EPA. Within fifteen (15) days after the effective date of this Consent Order, Respondents shall submit to EPA in writing the name, title, and qualifications of any supervising contractor proposed to be used in carrying out the EE/CA to be performed pursuant to this Consent Order. EPA shall notify the Respondents of its approval or disapproval in writing, within ten (10) calendar days of its receipt of this submission by the Respondents.

If EPA disapproves of the selection of any contractor, Respondents shall submit a list of alternate contractors to EPA within fifteen (15) days of receipt of EPA's disapproval of the contractor previously selected. EPA shall, within ten (10) calendar days of receipt of the list, provide written notice of the names of the contractors that it approves. The Respondents may at their election select any one from that list. Respondents shall notify EPA of the name of the contractor selected within fifteen (15) calendar days of EPA's notice of the approved contractors.

If, at any time thereafter, Respondents propose to change any contractor, Respondents shall give written notice to EPA and shall obtain approval from EPA before the new contractor performs any work under this Consent Order.

Based on the foregoing, it is hereby AGREED TO AND ORDERED that the following work will be performed:

A. Within thirty (30) calendar days of the effective date of this Consent Order, Respondents shall submit to EPA a draft plan for a complete Engineering Evaluation and Cost Analysis (EE/CA Draft Work Plan). The EE/CA Draft Work Plan shall be developed and submitted in conjunction with a Sampling and Analysis Plan and a Health and Safety Plan, although each plan may be delivered under separate cover. These plans shall be developed in accordance with the National Contingency Plan and the attached Scope of Work (SOW) (Attachment 1) which is hereby

made a part of this Consent Order as if fully set forth herein. The EE/CA Work Plan shall include a comprehensive description of the work to be performed, the medias to be investigated (i.e., air, groundwater, surface water, surface and subsurface soils and sediments, etc.), the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity required by this Consent Order and including the submission of each deliverable listed in the EE/CA Scope of Work shall also be included. Such schedule shall reflect submittal of the Draft Engineering Evaluation/Cost Analysis within 250 calendar days of the effective date of this Consent Order.

The Sampling and Analysis Plan (SAP) shall include procedures to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the Data Quality Objectives (DQOs) established. The SAP provides a mechanism for planning field activities and consists of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sample objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs.

A Health and Safety Plan shall be prepared in conformance with the Respondents' health and safety program and OSHA regulations and protocols.

B. EPA will perform the Streamlined Risk Assessment. Respondents shall support EPA in the effort by providing various information to EPA as outlined above. The major components of the Streamlined Risk Assessment include contaminant identification, exposure assessment, toxicity assessment, and human health and ecological risk characterization.

EPA will prepare a Streamlined Risk Assessment Report based on the data collected by Respondents during the Site Characterization. EPA will release this Report to the public at the same time it releases the final EE/CA Report. Both reports will be put into the administrative record for the Site.

EPA will respond to all significant comments on the Streamlined Risk Assessment that are submitted during the formal comment period.

C. Respondents will implement the EE/CA Work Plan approved by EPA. The EPA approved EE/CA Work Plan and any EPA approved amendments thereto will be attached to and incorporated in this Consent Order as Attachment 2. The EE/CA will be conducted in accordance with the schedule contained in the EE/CA Work Plan as approved by EPA.

D. Within seven (7) calendar days of the approval of the EE/CA Work Plan by EPA, Respondents will commence work on Task 1 of the EE/CA Work Plan.

E. Respondents shall submit to EPA written monthly progress reports which: (1) describe the actions which have been taken toward achieving compliance with this Consent Order during the previous month; (2) include all results of sampling and tests and all other data received by Respondents during the course of the work; (3) include all plans and procedures completed under the Work Plan during the previous month; (4) describe all actions, data, and plans which are scheduled for the next month, and provide other information relating to the progress of the work as deemed necessary by EPA; and (5) include information regarding percentage of completion, unresolved delays, encountered or anticipated, that may affect the future schedule for implementation of the Scope of Work and/or EE/CA Work Plans, and a description of efforts made to mitigate those delays or anticipated delays. These progress reports are to be submitted to EPA by the fifth day of every month following the effective date of this Consent Order.

F. Deliverables, including reports, plans or other correspondence to be submitted pursuant to this Consent Order, shall be sent by regular certified mail, express mail or overnight delivery to the following addressees or to such other addressees as the EPA hereafter may designate in writing.

Anne Marie Gillespie
Remedial Project Manager
EPA - Region IV
Waste Management Division
345 Courtland Street, N.E.
Atlanta, Georgia 30365

The number of copies to be submitted to EPA for each deliverable is identified in the EE/CA Scope of Work.

For informational purposes, documents (two copies) shall be sent to:

State of Florida Department of
Environmental Protection
St. Johns River District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

Documents to be submitted to the Respondents' Project Coordinator should be sent to:

James A. Carney, Esquire
Brunswick Corporation
1 N. Field Ct.
Lake Forest, IL 60045-4811

G. EPA may determine that other tasks, including remedial investigatory work, are necessary as part of an EE/CA in addition to EPA-approved tasks and deliverables, including reports, which have been completed pursuant to this Consent Order. The Respondents shall implement any additional tasks which EPA determines are necessary as part of the EE/CA and which are in addition to the tasks detailed in the EE/CA Work Plan. The additional work shall be completed in accordance with the standards, specifications, and schedule determined or approved by EPA.

VIII. SUBMISSIONS REQUIRING AGENCY APPROVAL

A. EPA reserves the right to comment on, modify and direct changes for all deliverables. Upon receipt of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Order, EPA shall either: (1) approve the submission; or (2) disapprove the submission, notifying Respondents of deficiencies. If such submission is disapproved, EPA shall either: (1) notify the Respondents that EPA will modify the submission to cure the deficiencies; or (2) direct the Respondents to modify the submission to cure the deficiencies.

B. Upon receipt of a notice of disapproval and notification directing modification of the submission, Respondents shall, within twenty-one (21) days, or at other such time as agreed by the parties, cure the deficiencies and resubmit the plan, report, or other item for approval. In the event additional field or laboratory work is required to correct the deficiency in such submission and such field and laboratory work was not provided for in the EE/CA work plan, EPA shall set an appropriate amount of time after communication with Respondents for such submission. Notwithstanding the notice of disapproval, Respondents shall proceed to take any action required by any nondeficient portion of the submission, which is not dependent upon approval of a

deficient portion of the submission in accordance with the EE/CA work plan.

C. In the event of approval or modification of the submittal by EPA, Respondents shall proceed to take any action required by the plan, report, or other item, as approved or modified.

D. If, upon resubmission, the plan, report, or item is not approved, Respondents shall be deemed to be in violation of this Consent Order and stipulated penalties shall begin to accrue pursuant to Section XVI of this Consent Order. EPA retains the right to seek stipulated or statutory penalties, to require the amendment of the document, to perform additional studies, to conduct a complete EE/CA pursuant to its authority under CERCLA, and to take any other action, including, but not limited to, enforcement action to recover its costs pursuant to its authority under CERCLA.

E. Neither failure of EPA to expressly approve or disapprove of Respondents' deliverables within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Respondents are responsible for preparing and submitting deliverables in compliance with this Order.

F. Respondents shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct and completion of the EE/CA. In addition to the discussion of the technical aspects of the EE/CA, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion. In the event either Respondent exerts best efforts to attend such meeting, but fails, such Respondent shall not be deemed in noncompliance with this Consent Order.

G. The provisions of this Consent Order shall govern all proceedings regarding the EE/CA work conducted pursuant to this Consent Order. In the event of any inconsistency between this Consent Order and any required deliverable submitted by Respondent, the inconsistency will be resolved in favor of this Consent Order, unless EPA requires Respondent to submit a deliverable with such inconsistency.

IX. DESIGNATED PROJECT COORDINATORS

A. On or before the effective date of this Consent Order, EPA will designate a Project Coordinator and an Alternate Project Coordinator, and Respondents shall designate a Project Coordinator and an Alternate Project Coordinator. The "Project Coordinator" for EPA will be the Remedial Project Manager (RPM) or the On-Scene Coordinator (OSC) responsible for this Site. Each Project Coordinator will be responsible for overseeing the

implementation of this Consent Order. The EPA Project Coordinator will be EPA's designated representative at the Site. To the maximum extent possible, communications between Respondents and EPA, including all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Order, will be directed through the Project Coordinators.

B. EPA and Respondents each have the right to change their respective Project Coordinator. Such a change will be accomplished by notifying the other party in writing at least five (5) calendar days prior to the change.

C. The EPA designated Project Coordinator will have the authority vested in an RPM or OSC by the National Contingency Plan, 40 C.F.R. Part 300, as amended. This includes the authority to halt, conduct, or direct any work required by this Consent Order, or any response actions or portions thereof when he or she determines that conditions may present an immediate risk to public health or welfare or the environment.

D. The absence of the EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of work.

E. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). The oversight assistant may observe work and make inquiries in the absence of EPA, but is not authorized to modify the work plan.

X. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

A. Respondents shall use quality assurance, quality control, and chain of custody procedures in accordance with EPA's "Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans" (QAMS-005/80) and the "EPA Region IV Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual (U.S. EPA Region IV, Environmental Services Division, February 1, 1991), and subsequent amendments to such guidelines. Prior to the commencement of any monitoring project under this Consent Order, Respondents shall submit for review, modification and/or approval by EPA, a Quality Assurance Project Plan ("QAPP") that is consistent with applicable guidelines. Sampling data generated consistent with the QAPP(s) shall be admissible as evidence, without objection, in any proceeding under Section XIV of this Consent Order. Respondents shall assure that EPA personnel or authorized representatives are allowed access to any laboratory utilized by Respondents in implementing this Consent Order.

B. Respondents shall make available to EPA the results of all sampling and/or tests or other data generated by Respondents with respect to the implementation of this Consent Order and shall submit these results in monthly progress reports as described in Section VII.E. of this Consent Order.

C. At the request of EPA, Respondents shall allow split or duplicate samples to be taken by EPA, and/or their authorized representative, of any samples collected by Respondents pursuant to the implementation of this Consent Order. Respondents shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. The RPM shall have the authority to waive or shorten such notice period upon request. In addition, EPA shall have the right to collect any additional samples that EPA deems necessary. EPA will allow split or duplicate samples to be taken by Respondents if they so desire. EPA will provide Respondents with seven (7) days notice of any sampling activity. EPA shall make available to Respondent a copy of the results of any analysis made of such samples.

D. Respondents shall ensure that the laboratory utilized by Respondents for analyses participates in an EPA quality assurance/quality control program equivalent to that which is followed by EPA and which is consistent with EPA document QAMS-005/80. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory.

E. Notwithstanding any provision of this Consent Order, the EPA hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA, and any other applicable statute or regulation.

XI. ACCESS

A. From the date of execution of this Consent Order until EPA provides written notice of satisfaction of the terms of the Order, the EPA and its authorized representatives and agents shall have access at all times to the Site and any property to which access is required for the implementation of this Consent Order, to the extent access to the property is controlled by or available to Respondents, for the purposes of conducting any activity authorized by or related to this Consent Order. EPA shall use best efforts to notify Respondents in advance of any site visit. The purposes for which EPA access rights apply include, but are not limited to:

1. Monitoring the EE/CA work or any other activities taking place on the property;

2. Verifying any data or information submitted to the United States;
3. Conducting investigations relating to contamination at or near the Site;
4. Obtaining samples;
5. Evaluating the need for or planning and implementing additional remedial or response actions at or near the Site; and
6. Inspecting and copying records, operating logs, contracts, or other documents required to assess Respondents' compliance with this Consent Order. Respondents retain their rights to assert any applicable privilege, including the attorney-client privilege or attorney work product doctrine or other recognized privilege.

B. To the extent that the Site or any other area where work is to be performed under this Consent Order is owned or controlled by persons other than Respondents, Respondents shall secure from such persons access for Respondents, as well as for EPA and authorized representatives or agents of EPA, as necessary to effectuate this Consent Order. Copies of such access agreements will be provided to EPA prior to Respondents' initiation of field activities. If access is not obtained within thirty (30) days of the effective date of this Consent Order, or within thirty (30) days of the date need for access becomes known to Respondents, Respondents shall promptly notify the EPA. The United States may thereafter assist Respondents in obtaining access. In the event access is not obtained within thirty (30) days of such dates, all dates specified in the SOW for work that is dependent upon access shall be extended one day for each day access is not obtained. Respondents shall, in accordance with Section XVII herein, reimburse the United States for all costs incurred by it in obtaining access, including but not limited to, attorneys' fees and the amount of just compensation and costs incurred by the United States in obtaining access.

C. Notwithstanding any provision of this Consent Order, the EPA retains all of its access authorities and rights under CERCLA, RCRA and any other applicable statute or regulations.

XII. CONFIDENTIALITY OF SUBMISSIONS

A. Respondents may assert a confidentiality claim, if appropriate, covering part or all of the information requested by this Consent Order pursuant to 40 C.F.R. § 2.203(b). Such an assertion will be adequately substantiated when the assertion is made. Analytical data will not be claimed as confidential by

Respondents. Information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to Respondents.

B. Respondents waive any objection to the admissibility into evidence (without waiving any objection as to weight) of the results of any analyses of sampling conducted by or for them at the Site or of other data gathered pursuant to this Consent Order that has been verified by the quality assurance/quality control procedures established pursuant to Section X.

XIII. RECORD PRESERVATION

EPA and Respondents agree that each will preserve, during the pendency of this Consent Order and for a minimum of six (6) years after its termination, all records and documents in their possession or in the possession of their divisions, employees, agents, accountants, contractors, or attorneys which relate in any way to the Site, despite any document retention policy to the contrary. After this six (6) year period, Respondents will notify EPA within ninety (90) calendar days prior to the destruction of any such documents. Upon request by EPA, Respondents will make available to EPA such records or copies of any such records. Additionally, if EPA requests that documents be preserved for a longer period of time, Respondents will comply with that request.

XIV. DISPUTE RESOLUTION

Any disputes arising under this Consent Order shall be resolved as follows: If the Respondents object to any EPA notice of disapproval or decision made pursuant to this Consent Order, the Respondents shall notify EPA's Project Coordinator in writing of their objections within fourteen (14) calendar days after receipt of the decision. Respondents' written objections shall define the dispute, state the basis of Respondents' objections, and be sent certified mail, return receipt requested. EPA and the Respondents then have an additional fourteen (14) calendar days to reach agreement. If agreement cannot be reached within fourteen (14) calendar day period, the EPA Waste Management Division Director shall provide a written statement of the decision and the reasons supporting that decision to Respondents. The Division Director's determination is EPA's final decision. If Respondents do not agree to perform or do not actually perform the task in dispute as determined by EPA's Division Director, EPA reserves the right to conduct the work itself, to seek reimbursement from the Respondents, and/or to seek other appropriate relief.

Respondents are not relieved of their obligations to perform and conduct any work required by this Consent Order while a matter is pending in dispute resolution.

XV. FORCE MAJEURE

A. "Force Majeure" is defined for the purposes of this Consent Order as an event arising from causes entirely beyond the control of Respondents and of any entity controlled by Respondents including their contractors and subcontractors, which could not have been overcome by due diligence which delays or prevents the performance of any obligation under this Consent Order. Examples of events which may constitute force majeure events include extraordinary weather events, natural disasters, and national emergencies. Examples of events that are not force majeure events include, but are not limited to, normal inclement weather, increased costs or expenses of the Work to be performed under this Consent Order, the financial difficulty of Respondents to perform such tasks, the failure of one of Respondents to satisfy its obligation under this Consent Order, acts or omissions not otherwise force majeure attributable to Respondents' contractors or representatives, and the failure of Respondents or Respondents' contractors or representatives to make complete and timely application for any required approval or permit.

B. When circumstances occur which may delay or prevent the completion of any phase of the Work Plan or access to the Site or to any property on which part of the Work Plan is to be performed, whether or not caused by a force majeure event, Respondents shall notify the EPA Project Coordinator orally of the circumstances within forty-eight (48) hours of when Respondents first knew or should have known that the event might cause delay. If the EPA Project Coordinator is unavailable, Respondents shall notify the designated alternate or the Director of the Waste Management Division, EPA Region IV. Within seven (7) calendar days after Respondents first became aware of such circumstances, Respondents shall supply to EPA in writing: (1) the reasons for the delay; (2) the anticipated duration of the delay; (3) all actions taken or to be taken to prevent or minimize the delay; (4) a schedule for implementation of any measures to be taken to mitigate the effect of the delay; and (5) a statement as to whether, in the opinion of the Respondents, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Respondents shall exercise best efforts to avoid or minimize any delay and any effects of a delay. Failure to comply with the above requirements shall preclude Respondents from asserting any claim of force majeure.

C. If EPA agrees that a delay is or was caused by a force majeure event, the time for performance of the obligations under

this Consent Order that are directly affected by the force majeure event shall be extended by agreement of the parties, pursuant to Section XXIII, for a period at least equal to the actual duration of the delay caused by the force majeure event. An extension of the time for performance of the obligation directly affected by the force majeure event shall not necessarily justify an extension of time for performance of any subsequent obligation.

D. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, or does not agree with Respondents on the length of the extension, the issue shall be subject to the dispute resolution procedures set forth in Section XIV of the Consent Order. In any such proceedings, to qualify for a force majeure defense, Respondents shall have the burden of proof that the delay or anticipated delay was or will be caused by a force majeure event, that the duration of the delay was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondents complied with the requirements of paragraph B of this Section. Should Respondents carry this burden, the delay at issue shall be deemed not to be a violation by Respondents of the affected obligation of the Consent Order.

XVI. STIPULATED PENALTIES

Unless excused under the provisions of Sections XIV or XV, the Respondents shall pay into the Hazardous Substance Superfund administered by EPA, the sums set forth below as stipulated penalties.

Unless waived or reduced by EPA in its discretion, stipulated penalties shall accrue as follows:

A. For each day during which Respondents fail to perform, in accordance with the schedules contained in this Consent Order and in the various plans and reports required under this Consent Order incorporated by reference herein, any of the following activities:

1. for failure to timely submit the EE/CA Work Plan, Sampling and Analysis Plan, and draft and final EE/CA Reports required under this Consent Order;

2. for failure to timely submit any modifications requested by EPA or its representatives to the EE/CA Work Plan, Sampling and Analysis Plan, and draft EE/CA Report as required under this Consent Order; and

3. for failure to timely submit payment of EPA's past costs and/or oversight costs as provided in Section XVII.

Respondents shall be liable to EPA for stipulated penalties in the following amounts:

<u>Period of Failure to Comply</u>	<u>Penalty Per Violation Per Day</u>
1st through 14th day	\$1,250
15th through 44th day	\$2,500
45th day and beyond	\$5,000

B. If Respondents fail to submit a monthly progress report by its due date, Respondents shall be liable to EPA for stipulated penalties in the amount of \$500 per violation for each day during which Respondents fail to submit and, if necessary, modify monthly reports.

C. Respondents shall be liable to EPA for stipulated penalties in the amount of \$500 per violation for each day during which Respondents fail to comply with all other requirements of this Consent Order including, but not limited to, any implementation schedule, payment requirement, notification requirement or completion deadline.

All stipulated penalties begin to accrue on the day the violation occurs or on the day following Respondents' failure to comply with any schedule or deadline or the terms, conditions, or requirements contained in this Consent Order and/or Work Plan. Stipulated penalties shall continue to accrue until Respondents' violation ends or until Respondents comply with the particular schedule or deadline.

Payment of stipulated penalties shall be due and owing within fifteen (15) days from the receipt of a written notice from EPA notifying Respondents that penalties have been assessed. Interest shall accrue on any unpaid amounts, beginning at the end of the fifteen-day period, at the rate established by the Department of Treasury under 31 U.S.C. § 3717. Respondents shall pay a handling charge of one percent to be assessed at the end of each 31 day period, and a six percent per annum penalty charge, to be assessed if the penalty is not paid in full within 90 days after it is due. The check and transmittal letter shall identify the Name of the Site, the Site identification number and the title of this Order. A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

Payment shall be made to:

U. S. Environmental Protection Agency
Region IV
Superfund Accounting
P. O. Box 100142
Atlanta, Georgia 30384
ATTENTION: Collection Officer for Superfund

Respondents may dispute EPA's right to the stated amount of penalties by invoking the Dispute Resolution procedures under Section XIV of this Order. Penalties shall accrue but need not be paid during the dispute resolution period. If Respondents do not prevail upon resolution, all penalties shall be due to EPA within 30 days of resolution of the dispute. If Respondents prevail upon resolution, no penalties shall be paid.

In the event that EPA provides for corrections to be reflected in the next deliverable and does not require resubmission of that deliverable, stipulated penalties for that interim deliverable shall not accrue.

Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Order, provided, however, that a single act or omission shall not be the basis for more than one violation or penalty under this Consent Order.

The stipulated penalties set forth in this Section do not preclude EPA from electing to pursue any other remedies or sanctions which may be available to EPA by reason of the Respondents' failure to comply with any of the requirements of this Consent Order. Such remedies and sanctions may include a suit for statutory penalties up to the amount authorized by law, a federally-funded response action, and a suit for reimbursement of costs incurred by the United States.

XVII. REIMBURSEMENT OF OVERSIGHT AND RESPONSE COSTS

In accordance with Section 104(a)(1) of CERCLA, as amended, 42 U.S.C. § 9604(a)(1), Respondents agree to reimburse the Hazardous Substance Superfund for all response and oversight costs incurred by EPA or its authorized representatives in oversight of Respondents' performance of work under the Consent Order.

At the end of each fiscal year, EPA will submit to Respondents an accounting of all response and oversight costs incurred by the U.S. Government with respect to this Consent Order. Oversight costs shall include all direct and indirect costs of EPA's oversight arrangement for the EE/CA, including, but not limited

to, time and travel costs of EPA personnel and associated indirect costs, contractor costs, compliance monitoring, including the collection and analysis of split samples, inspection of EE/CA activities, site visits, interpretation of Consent Order provisions, discussions regarding disputes that may arise as a result of this Consent Order, review and approval or disapproval of reports, the costs of redoing any of Respondents' tasks, and any assessed interest.

EPA's certified Agency Financial Management System Summary data (SPUR Reports) and any other necessary documents, shall serve as the basis for payment demands.

Failure to submit an accounting in one fiscal year does not prevent EPA from submitting an accounting for that year in a subsequent fiscal year. Respondents shall, within thirty (30) calendar days of receipt of each accounting, remit a certified or cashiers check for the amount of those costs made payable to the Hazardous Substance Superfund. Interest shall begin to accrue on the unpaid balance from that date. Checks should specifically reference the identity of the Site and should be sent to:

U. S. Environmental Protection Agency
Region IV
Superfund Accounting
P. O. Box 100142
Atlanta, Georgia 30384
ATTENTION: Collection Officer for Superfund

A copy of the transmittal letter should be sent simultaneously to the EPA Project Coordinator.

Respondents agree to limit any disputes concerning costs to accounting errors and the inclusion of costs outside the scope of this Consent Order. Respondents shall identify any contested costs and the basis of the objection. All undisputed costs shall be remitted by Respondents in accordance with the schedule set out above. Disputed costs shall be paid by Respondents into an escrow account while the dispute is pending. Respondents bear the burden of establishing an EPA accounting error and the inclusion of costs outside the scope of this Consent Order.

EPA reserves the right to bring an action against the Respondents pursuant to Section 107 of CERCLA to enforce the response and oversight cost reimbursement requirements of this Consent Order and to collect stipulated penalties assessed pursuant to section XVI of this Consent Order.

XVIII. RESERVATION OF RIGHTS

Notwithstanding compliance with the terms of this Consent Order, the Respondents are not released from liability, if any, for any actions beyond the terms of this Consent Order taken by EPA regarding this Site. EPA reserves the right to take any enforcement action pursuant to CERCLA or any other available legal authority, including the right to seek injunctive relief, monetary penalties, and punitive damages for any violation of law or this Consent Order.

Except as otherwise provided herein, EPA and Respondents expressly reserve all rights and defenses that they may have, including EPA's right both to disapprove of work performed by Respondents and to require that Respondents perform tasks in addition to those detailed in the EE/CA Work Plan, as provided in this Consent Order. In the event that Respondents decline to perform any additional or modified tasks, EPA will have the right to undertake any EE/CA work. In addition, EPA reserves the right to undertake removal actions and/or remedial actions at any time. In either event, EPA reserves the right to seek reimbursement from Respondents thereafter for such costs which are incurred by the United States and Respondents reserve all rights to contest or defend against such claims or actions.

Following satisfaction of the requirements of this Consent Order, Respondents shall have resolved their liability to EPA for the performance of the EE/CA that is the subject of this Order. The Respondents are not released from liability, if any, for any actions taken beyond the terms of this Order regarding removals, other operable units, remedial design/remedial action (RD/RA), or activities arising pursuant to section 121(c) of CERCLA.

XIX. OTHER CLAIMS

Nothing in this Consent Order constitutes a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.

EPA reserves the right to bring an action against the Respondents pursuant to Section 107 of CERCLA for recovery of all response and oversight costs incurred by the United States related to this Consent Order and not reimbursed by Respondents, as well as any other past and future costs incurred by the United States in connection with response activities conducted pursuant to CERCLA at this Site.

This Consent Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).

In entering into this Consent Order, Respondents waive any right to seek reimbursement under Section 106(b)(2) of CERCLA, 42 U.S.C. § 9606(b)(2), for any past costs associated with this Site, or any costs incurred in complying with this Order.

Respondents shall bear their own costs and attorney fees. Nothing herein is intended to benefit any persons not signatories hereto, and EPA and Respondents expressly disclaim any intent to create third party beneficiary rights in or for any third party.

XX. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to this Consent Order will be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations unless an exemption from such requirements is specifically provided in this Consent Order, or made a part of this Consent Order by being incorporated herein at some later date.

XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondents agree to indemnify and save and hold harmless the United States, its agencies, departments, officials, agents, employees, contractors, or representatives, from any and all claims or causes of action arising from or on account of acts or omissions of Respondents, their officers, employees, receivers, trustees, agents, or assigns, in carrying out the activities pursuant to this Consent Order. The United States Government or any agency or authorized representative thereof shall not be held to be a party to any contract involving Respondents at or relating to the Site.

Nothing in this Consent Order constitutes or shall be construed or interpreted to constitute an admission of any kind by Respondents, including any admission of any liability under any federal, state or local law, ordinance or regulation, or any admission of any fact.

XXII. CONTRIBUTION PROTECTION

The Respondents shall be entitled to contribution protection to the maximum extent provided for under Section 113(f) of CERCLA.

XXIII. PUBLIC COMMENT

Upon submittal to EPA of the EE/CA Final Report, EPA will make the Report and EPA's Proposed Plan available to the public for review and comment for, at a minimum, a thirty (30) day period, pursuant to EPA's Community Relations Plan and the NCP. Following the public review and comment period, EPA will notify Respondents of the removal action alternative selected for the Site.

XXIV. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

In consideration of the communications between Respondents and EPA prior to the issuance of this Consent Order concerning its terms, Respondents agree that there is no need for a settlement conference prior to the effective date of this Consent Order. Therefore, the effective date of this Consent Order will be the date on which it is signed by EPA. This Consent Order may be amended by mutual agreement of EPA and Respondents. Such amendments will be in writing and will have, as the effective date, that date on which such amendments are signed by EPA. EPA Project Coordinators do not have the authority to sign amendments to the Consent Order.

Any reports, plans, specifications, schedules, and attachments required by this Consent Order are, upon approval by EPA, incorporated into this Consent Order. Any noncompliance with such EPA approved reports, plans, specifications, schedules, and attachments will be considered a failure to achieve the requirements of this Consent Order and will subject the Respondents to the provisions included in the "Force Majeure" and "Stipulated Penalties" sections (Sections XV and XVI) of this Consent Order.

No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondents will be construed as relieving Respondents of their obligation to obtain such formal approval of EPA as may be required by this Consent Order.

XXV. NOTICE TO THE STATE

EPA has notified the State of Florida regarding the requirements of this Consent Order.

Upon completion of the EE/CA, pursuant to the requirements of Section 104(c)(2) of CERCLA, 42 U.S.C. § 9604(c)(2), EPA will notify the State of Florida before determining the appropriate removal action to be taken at the Site.

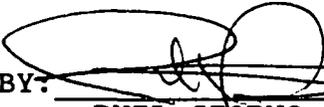
XXVI. TERMINATION AND SATISFACTION

This Consent Order shall terminate when the Respondents demonstrate in writing and certify to the satisfaction of EPA that all activities required under this Consent Order, including any additional work, payment of past costs, response and oversight costs, and any stipulated penalties demanded by EPA, have been performed and EPA has approved the certification. This notice shall not, however, terminate Respondents' obligation to comply with Sections XIII, XVII, and XVIII of this Consent Order.

The certification shall be signed by a responsible official representing each Respondent. Each representative shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete." For purposes of this Consent Order, a responsible official is a corporate official who is in charge of a principal business function.

23
JUN 23 1994
BRUNSWICK COUNTY

IT IS SO AGREED:

BY: 
PHIL GIORNO
Chairman
Volusia County Council

6/23/94
Date

ATTEST:

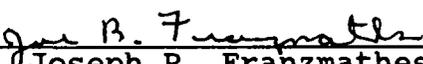
BY: 
THOMAS C. KELLY
County Manager
Volusia County, Florida

6/23/94
Date

BY: _____
JAMES A. CARNEY
Attorney for
BRUNSWICK CORPORATION

Date

IT IS SO AGREED AND ORDERED:

BY: 
Joseph R. Franzmathes
Director
Waste Management Division
Region IV
U.S. Environmental Protection Agency

7/1/94
Date

SCOPE OF WORK FOR THE
ENGINEERING EVALUATION AND COST ANALYSIS
AT THE PLYMOUTH AVENUE LANDFILL SITE

INTRODUCTION

The purpose of this Engineering Evaluation/Cost Analysis (EE/CA) is to investigate the nature and extent of contamination at the Plymouth Avenue Landfill Site (the "Site"), assess the current and potential risk to public health, welfare, and the environment, and to develop and evaluate potential Non-Time Critical Removal Action Alternatives.

The Respondents shall conduct the EE/CA (except for the Streamlined Risk Assessment component) and produce an EE/CA Report that is in accordance with this Scope of Work, The Guidance for Conducting Non-time Critical Removal Actions Under CERCLA, (Interim final) (U.S. EPA Office of Emergency and Remedial Response, August 1993) (the "EE/CA Guidance"), The National Oil and Hazardous Substances Pollution Contingency Plan (March 8, 1990) and other guidances used by EPA in conducting an EE/CA (the primary guidances are listed in Attachment A), as well as any additional requirements in the Administrative Order. The EE/CA Guidance describes the report format and the required report content. Pertinent EE/CA Guidance section numbers are denoted in parenthesis throughout this Scope of Work. The Respondents shall furnish all necessary personnel, materials, and services needed or incidental to performing the EE/CA, except as otherwise specified in the Administrative Order.

At the completion of the EE/CA, EPA shall be responsible for the selection of a remedy to be implemented for the Site. EPA will document this selection of a removal action in the Action Memorandum. The Non-time Critical Removal Action Alternative selected by EPA will meet the cleanup standards specified in Section 121 of SARA. That is, the selected removal action will be protective of human health and the environment, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws or regulations, and will address the statutory preference for on-site treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element. The Final Engineering Evaluation/Cost Analysis as adopted by EPA, and EPA's Streamlined Risk Assessment will, with the remainder of the Administrative Record, form the basis for the selection of the remedy to be implemented for the Site and will provide the information necessary to support the development

of the Action Memorandum.

As specified in 104(a)(1) of CERCLA, as amended by SARA, EPA must provide oversight of the Respondents' activities throughout the EE/CA. The Respondents shall support EPA's initiation and conduct of activities related to the implementation of oversight activities. However, the primary responsibility for conducting an adequate EE/CA to enable and support the selection of a remedy shall lie with the Respondents. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA approval of a task or deliverable shall not be a guarantee as to the ultimate adequacy of such task or deliverable. A summary of the major deliverables that Respondents shall submit for the EE/CA is attached (Attachment B). In addition, a general schedule of EE/CA activities is also attached (Attachment C).

TASK 1 - SCOPING

Scoping is the initial planning process of the EE/CA and has been initiated by EPA to determine the site-specific objectives of the EE/CA prior to negotiations between the Respondents and EPA. Scoping is continued, repeated as necessary, and refined throughout the EE/CA process. In addition to developing the Site Objectives of the EE/CA, EPA has developed a Site Management Strategy. Consistent with the Site Management Strategy, the specific project scope shall be planned by the Respondents and EPA. The Respondents shall document the specific project scope in a Work Plan. Because the work required to perform an EE/CA is not fully known at the onset, and is phased in accordance with a Site's complexity and the amount of available information, it may be necessary to modify the Work Plan during the EE/CA to satisfy the objectives of the study.

The Site Objectives for the Plymouth Avenue Landfill Site have been determined preliminarily, based on available information, to be the following:

1. Review of existing information pertaining to the Site. This review includes EPA Site Inspection Reports, the EPA Hazardous Ranking System Scoring package, reports from local, State and Federal agencies, the Contamination Assessment Plan and Report, court records, information from local businesses such as local well drillers and waste haulers and generators, facility records, and information from facility owners and employees and nearby citizens.
2. Review of relevant guidance (see attached references) to understand the non-time critical removal process. This information shall be used in performing the EE/CA and preparing all deliverables under this SOW.

3. Identification of all Federal and State applicable or relevant and appropriate requirements (ARARs).
4. Determination of the nature and lateral and vertical extent of contamination (waste types, concentrations and distributions) for all affected media including air, ground water, soil, surface water, and sediment, etc.
5. Assembly of technologies into and screening of alternatives.
6. Detailed analysis of Non-Time Critical Removal Action Alternatives.

The Site Management Strategy for the Plymouth Avenue Landfill Site includes the following:

1. A complete investigation of the Site, including any and all off-site contamination which may have been caused by contaminants originating from the Site.
2. Evaluation of the Site as a whole, i.e., it is not anticipated at this time that the Site will be partitioned into separate operable units.
3. EPA oversight of the Respondents' conduct of the work (i.e., the EE/CA and any response action) to ensure compliance with applicable laws, regulations and guidances and to ensure that the work proceeds in a timely fashion.
4. EPA preparation of the Streamlined Risk Assessment.
5. EPA management of the Removal Action Selection phase with input from State Agencies, Natural Resource Trustees and the Public (including the Respondents).

When scoping the specific aspects of a project, the Respondents must meet with EPA to discuss all project planning decisions and special concerns associated with the Site. The following activities shall be performed by the Respondents.

- a. Site Background (EE/CA Guidance 2.4)

The Respondents shall gather and analyze the existing background information regarding the Site to assist in planning the scope of the EE/CA.

Collect and Analyze Existing Data and Document the Need for Additional Data

Before planning EE/CA activities, all existing Site data shall be

thoroughly compiled and reviewed by the Respondents. Specifically, this compilation and review shall include currently available data relating to the varieties and quantities of hazardous substances at the Site and past disposal practices (what type of contaminants were dumped where, when, and by whom). This compilation and review shall also include results from any previous sampling or other investigations that may have been conducted. The Respondents shall refer to the EE/CA Guidance for a comprehensive list of data collection information sources. This compilation will be critical in developing the Work Plan, and most of the information is available in the Contamination Assessment Report for Plymouth Avenue Landfill, November 1992.

b. Scoping Deliverables

At the conclusion of the project planning phase, the Respondents shall submit an EE/CA Work Plan, a Sampling and Analysis Plan, and a Health and Safety Plan. The EE/CA Work Plan and Sampling and Analysis Plan must be reviewed and approved and the Health and Safety Plan reviewed by EPA prior to the initiation of field activities.

EE/CA Work Plan

A Work Plan documenting the decisions and evaluations completed during the scoping process shall be submitted to EPA for review and approval. The Work Plan shall be developed in conjunction with the Sampling and Analysis Plan and the Health and Safety Plan, although each plan may be delivered under separate cover. The Work Plan shall include a comprehensive description of the work to be performed, the media to be investigated (i.e., Air, Ground Water, Surface Water, Surface and Subsurface Soils, and Sediments, etc.), the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity and submission of each deliverable shall also be included. This schedule shall be consistent with Attachment C.

Specifically, the Work Plan shall present the following:

- A statement of the problem and potential problems posed by the Site and the objectives of the EE/CA.
- A background summary setting forth the following:
 - a description of the Site including the geographic location, and, to the extent possible, a description of the physiography, hydrology, geology, demographics, and the ecological, cultural, and natural resource features of the Site;

- a synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties at the Site;
- a summary of the existing data in terms of physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the Site.
- A description of the Site Management Strategy developed by EPA during scoping as discussed previously in this SOW and as may be modified with EPA's approval;
- A preliminary identification of Removal Action Alternatives and data needs for evaluation of Removal Action Alternatives.
- A process for identifying Federal and State ARARs (chemical, location, and action-specific).
- A statement recognizing EPA's preparation of the Streamlined Risk Assessment.
- A detailed description of the tasks to be performed, information needed for each task and for EPA's Streamlined Risk Assessment, information to be produced during and at the conclusion of each task, and a description of the work products that shall be submitted to EPA, including the deliverables set forth in this Scope of Work.
- A schedule for each of the required activities which is consistent with Attachment C.
- A project management plan, including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, data format, and backup data management), monthly reports to EPA, and meetings and presentations to EPA at the conclusion of each major phase of the EE/CA.

The Respondents shall refer to Appendix B of the RI/FS Guidance for a comprehensive description of the contents of the Work Plan.

Because of the unknown nature of the Site and iterative nature of the EE/CA, additional data requirements may be identified throughout the EE/CA process. The Respondents shall submit a technical memorandum documenting any need for additional data along with the proposed DQOs whenever such requirements are identified. In any event, the Respondents are responsible for fulfilling additional data and analysis needs identified by EPA consistent with the general scope and objectives of this EE/CA

and the Administrative Order.

Sampling and Analysis Plan (RI/FS guidance 2.3.2)

The Respondents shall prepare a Sampling and Analysis Plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs established. The SAP provides a mechanism for planning field activities and consists of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs will, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan, (March 8, 1990). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region IV Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (February 1, 1991). Field personnel shall be available for EPA QA/QC training and orientation, as required.

The Respondents shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This demonstration must include use of methods and analytical protocols for the chemicals of concern (typically the Target Compound List (TCL) and the Target Analyte List (TAL)) in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved by EPA in the QAPP for the Site. The laboratory must have and follow an EPA-approved QA program. The Respondents shall provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis. EPA may require that the Respondents submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory. If a

laboratory not currently participating in the CLP is selected, methods consistent with CLP methods that would be used at this Site for the purposes proposed and QA/QC procedures approved by EPA shall be used. In addition, if the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval granted prior to the shipment of Site samples to that laboratory for analysis.

Health and Safety Plan (RI/FS guidance 2.3.3)

A Health and Safety Plan shall be prepared in conformance with the Respondents' health and safety program, and in compliance with OSHA regulations and protocols. The Health and Safety Plan shall include the eleven elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. It should be noted that EPA does not "approve" the Respondents' Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

TASK 2 - COMMUNITY RELATIONS (EE/CA Guidance 1.6)

The development and implementation of community relations activities are the responsibility of EPA. The critical community relations planning steps performed by EPA include conducting community interviews and developing a community relations plan. Although implementation of the community relations plan is the responsibility of EPA, the Respondents may be requested to assist by providing information regarding the history of the Site and participating in public meetings. The extent of the Respondents' involvement in community relations activities is left to the discretion of EPA. The Respondents' community relations responsibilities, if any, shall be specified in the community relations plan. All community relations activities conducted by Respondents shall be subject to oversight by EPA.

The Respondants shall adhere to State of Florida law which requires the posting of Warning Signs at National Priority List Sites (Proposed or Final) by Potentially Responsible Parties (see Florida Administrative Code Chapter 17-736).

TASK 3 - SITE CHARACTERIZATION (EE/CA Guidance (2.4))

The overall objective of Site Characterization is to describe areas of the Site that may pose a threat to human health or the environment. This objective is accomplished by first determining physiography, geology, and hydrology of the Site. Surface and subsurface pathways of migration shall also be defined. The Respondents shall identify the sources of contamination and define the nature, extent, and volume of the sources of

contamination, including their physical and chemical constituents as well as their concentrations at incremental locations in the affected media. The Respondents shall also investigate the extent of migration of this contamination as well as its volume and any changes in its physical or chemical characteristics. This investigation will provide for a comprehensive understanding of the nature and extent of contamination at the Site. Using this information, contaminant fate and transport shall be determined and projected.

During this phase of the EE/CA, the Work Plan, SAP, and Health and Safety Plan shall be implemented. Field data shall be collected and analyzed to provide the information required to accomplish the objectives of the study. The Respondents shall notify EPA at least two weeks in advance of the field work regarding the planned dates for field activities, including installation of monitoring wells, installation and calibration of equipment, pump tests, field lay out of any sampling grid, excavation, sampling and analysis activities, and other field investigation activities. The Respondents shall demonstrate that the laboratory and type of laboratory analyses that will be utilized during Site Characterization meets the specific QA/QC requirements and the DQOs as specified in the SAP. In view of the unknown conditions at the Site, activities are often iterative and, to satisfy the objectives of the EE/CA, it may be necessary for the Respondents to supplement the work specified in the initial Work Plan. In addition to the deliverables below, the Respondents shall provide a monthly progress report and participate in meetings with EPA at major points in the EE/CA.

a. Field Investigation

The field investigation includes the gathering of data to define physical characteristics, sources of contamination, and the nature and extent of contamination at the Site. These activities shall be performed by the Respondents in accordance with the Work Plan and SAP. At a minimum, this investigation shall include the following activities:

Implementing and Documenting Field Support Activities

The Respondents shall initiate field support activities following approval of the Work Plan and SAP. Field support activities may include obtaining access to the Site, property surveys, scheduling, and procuring equipment, office space, laboratory services, utility services and/or contractors. The Respondents shall notify EPA at least two weeks prior to initiating field support activities so that EPA may adequately schedule oversight tasks. The Respondents shall also notify EPA in writing upon completion of field support activities.

Investigation and Defining Site Physical and Biological Characteristics

The Respondents shall collect data on the physical and biological characteristics of the Site and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics identified in the Work Plan. This information shall be ascertained through a combination of physical measurements, observations, and sampling efforts and shall be utilized to define potential transport pathways and receptor populations. In defining the physical characteristics of the Site, the Respondents shall also obtain sufficient engineering data (such as pumping characteristics, soil particle size, permeability, etc.) for the projection of contaminant fate and transport and the development and screening of Non-time Critical Removal Action Alternatives. The majority of this information may be taken from the Contamination Assessment Report for Plymouth Avenue Landfill, November 1992.

Defining Sources of Contamination

The Respondents shall locate each source of contamination. For each location, the lateral and vertical extent of contamination shall be determined by sampling at incremental depths on a sampling grid or in another organized fashion approved by EPA. The physical characteristics and chemical constituents and their concentrations shall be determined for all known and discovered sources of contamination. The Respondents shall conduct sufficient sampling to define the boundaries of the contaminant sources to the level established in the QA/QC plan and DQOs. Sources of contamination shall be analyzed for the potential of contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating non-time critical removal actions, including information necessary to evaluate treatment technologies.

Describing the Nature and Extent of Contamination

The Respondents shall gather information to describe the nature and extent of contamination as a final step during the field investigation. To describe the nature and extent of contamination, the Respondents shall utilize the information on Site physical characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. The Respondents shall then implement an iterative monitoring program and any study program identified in the Work Plan or SAP such that, by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at the Site can be determined. In addition, the Respondents shall gather data for calculations of contaminant fate and transport. This

process is continued until the lateral and vertical extent of contamination has been determined to the contaminant concentrations consistent with the established DQOs set forth in the QAAP. EPA shall use the information on the nature and extent of contamination to determine the level of risk presented by the Site. Respondents shall use this information to help to determine aspects of the appropriate Non-time Critical Removal Action Alternatives to be evaluated.

b. Data Analyses

Evaluate Site Characteristics

The Respondents shall analyze and evaluate the data to describe: (1) physical and biological characteristics of the Site; (2) contaminant source characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. The information on physical and biological characteristics, source characteristics, and nature and extent of contamination shall be used in the analysis of contaminant fate and transport. The evaluation shall include the actual and potential magnitude of releases from the sources and lateral and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use. Respondents shall then collect any data identified by EPA as necessary to fill data gaps that EPA determines are present during preparation of the Streamlined Risk Assessment (see "Guidance for Data Useability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, October 1990, OSWER Directive No. 9285.7-05). Also, this evaluation shall provide any information relevant to characteristics of the Site necessary for evaluation of the need for Non-time Critical Removal Action in EPA's Streamlined Risk Assessment, the development and evaluation of Non-time Critical Removal Action Alternatives, and the refinement and identification of ARARs. Analyses of data collected for Site Characterization shall meet the DQOs developed in the QAAP.

c. Data Management Procedures

The Respondents shall consistently document the quality and validity of field and laboratory data. At a minimum, this documentation shall include the following activities:

Documenting Field Activities

Information gathered during characterization of the Site shall be consistently documented and adequately recorded by the

Respondents in well maintained field logs and laboratory reports. The methods of documentation must be specified in the Work Plan and/or the SAP. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies. Supporting documentation described as the "CLP Data Package" must be provided with the sample analysis for at least 10% of all samples.

Maintaining Sample Management and Tracking

The Respondents shall maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of the Streamlined Risk Assessment and Non-time Critical Removal Action Alternatives. Analytical results developed under the Work Plan shall not be included in any characterization reports for the Site unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the Respondents shall establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation.

d. Site Characterization Deliverables

The Respondents shall prepare the Site Characterization Summary.

Site Characterization Summary

After completing field sampling and analysis, the Respondents shall prepare a concise Site Characterization Summary. This summary shall review the investigative field activities that have taken place and describe and display data for the Site documenting the location and characteristics of surface and subsurface features and contamination at the Site including the affected medium, location, types, physical state, and quantity and concentrations of contaminants. In addition, the location, dimensions, physical condition, and varying concentrations of each contaminant throughout each source and the extent of contaminant migration through each of the affected media shall be documented.

TASK 4 - IDENTIFICATION AND ANALYSIS OF NON-TIME CRITICAL REMOVAL ACTION ALTERNATIVES (EE/CA Guidance, 2.6)

The identification and analysis of Non-time Critical Removal Action Alternatives is performed to select an appropriate range of waste management options to be evaluated, only the most qualified alternatives should be included in the EE/CA. The

range of options shall include several different removal alternatives and a no-action alternative.

a. Identification of Non-time Critical Removal Action Alternatives

The Respondents shall begin to develop and evaluate, concurrent with the Site Characterization task, a range of appropriate waste management options that, at a minimum, ensure protection of human health and the environment and comply with all ARARs.

Refine and Document Non-time Critical Removal Action Objectives (EE/CA Guidance 2.5)

The Respondents shall review and, if necessary, propose refinement to the Site Objectives and preliminary Non-time Critical Removal Action objectives that were established during the Scoping phase (Task 1). Any revised Site Objectives or revised Non-time Critical Removal Action objectives shall be documented in a technical memorandum. These objectives shall specify the contaminants and media of interest, exposure pathways and receptors, and an acceptable contaminant level or range of levels (at particular locations for each exposure route).

Develop General Response Actions

The Respondents shall develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the Non-time Critical Removal Action objectives.

Identify Areas and Volumes of Media

The Respondents shall identify areas and volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the Non-time Critical Removal Action objectives. The chemical and physical characterization of the Site and the Streamlined Risk Assessment and remediation goals shall also be taken into account.

Assemble and Document Alternatives

The Respondents shall assemble selected representative technologies into alternatives for each affected medium or operable unit. A summary of the assembled alternatives and their related action-specific ARARs shall be prepared by the Respondents for inclusion in a technical memorandum. A detailed analysis will be included in the EE/CA based upon the evaluation criteria set forth in Section 2.6 of the EE/CA Guidance.

b. Alternatives Identification Deliverables

The Respondents shall prepare a technical memorandum summarizing the work performed and the results of each task above, including an alternatives array summary. This deliverable shall document the methods, rationale, and results of the alternatives development process.

TASK 5 - COMPARATIVE ANALYSIS OF NON-TIME CRITICAL REMOVAL ACTION ALTERNATIVES

The comparative analysis shall be conducted by the Respondents to provide EPA with the information needed to allow for the selection of a remedy for the Site.

a. Comparative Analysis of Alternatives

The Respondents shall conduct a comparative analysis of the alternatives, using the same criteria as a basis for comparison.

Compare Alternatives Against Each Other and Document the Comparison of Alternatives

The Respondents shall perform a comparative analysis among the Non-time Critical Removal Action Alternatives. That is, each alternative shall be compared against the others using the evaluation criteria as a basis of comparison. No alternative shall be identified by Respondents as the preferred alternative. Identification and selection of the preferred alternative is conducted by EPA.

b. Comparative Analysis Deliverables

The Respondents shall prepare a Draft EE/CA for EPA review and comment. This report, as ultimately adopted or amended by EPA, provides a basis for remedy selection by EPA and documents the development and analysis of Non-time Critical Removal Action Alternatives. The Respondents shall refer to the EE/CA Guidance for an outline of the report format and the required report content. The Respondents shall prepare a Final EE/CA Report which satisfactorily addresses EPA's comments.

ATTACHMENT A
REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the EE/CA process:

1. The National Oil and Hazardous Substances Pollution Contingency Plan, March 8, 1990.
2. "Guidance for Conducting Non-Time Critical Removal Actions under CERCLA, Final" U.S. EPA, Office of Emergency and Remedial Response, August 1993, OSWER Directive No. 9360.0-32.
3. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final" U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.
4. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
5. "EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984, EPA-330/9-78-001-R.
6. "Data Quality Objectives for Remedial Response Activities," U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
7. "Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.
8. "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.
9. "Users Guide to the EPA Contract Laboratory Program," U.S. EPA, Sample Management Office, December 1986.
10. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.

11. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and -02.
12. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part A," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002A, December 1989, OSWER Directive No. 9285.7-01a.
13. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part B," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002B, OSWER Directive No. 9285.7-01b.
14. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part C," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002C, OSWER Directive No. 9285.7-01c.
15. "Interim Final Risk Assessment Guidance for Superfund - Volume II - Environmental Evaluation Manual," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/001, March 1989, OSWER Directive No. 9285.7-01.
16. "Superfund Exposure Assessment Manual," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-88/001, April 1988, OSWER Directive No. 9285.5-1.
17. "Guidance for Data Useability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/G-90/008, October 1990, OSWER Directive No. 9285.7-05.
18. "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," April 22, 1991, OSWER Directive No. 9355.0-30.
19. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.
20. OSHA Regulations in 29 CFR 1910.120 (Federal Register 45654, December 19, 1986).
21. "Community Relations in Superfund: A Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0-3B.
22. "Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual", U.S. EPA Region

IV, Environmental Services Division, February 1, 1991.

23. "USEPA Contract Laboratory Program Statement of Work for Organics Analysis", U.S. EPA, Office of Emergency and Remedial Response, February 1988.
24. "USEPA Contract Laboratory Program Statement of Work for Inorganics Analysis", U.S. EPA, Office of Emergency and Remedial Response, July 1988.

ATTACHMENT B
SUMMARY OF MAJOR DELIVERABLES

TASK	DELIVERABLE	EPA RESPONSE
TASK 1	SCOPING	
	- EE/CA Work Plan (13)	Review and Approve
	- Field Sampling and Analysis Plan (13)	Review and Approve
	- Quality Assurance Project Plan (5)	Review and Approve
	- Site Health and Safety Plan (5)	Review and Comment
TASK 3	SITE CHARACTERIZATION	
	- Technical Memorandum on Contaminant Fate and Transport Modeling (where appropriate) (5)	Review and Approve
	- Preliminary Site Characterization Summary (13)	Review and Comment
TASK 4	DEVELOPMENT AND SCREENING OF NON-TIME CRITICAL REMOVAL ACTION ALTERNATIVES	
	- Technical Memorandum Documenting Revised Non-time Critical Removal Action Objectives (5)	Review and Approve
	- Technical Memorandum on Removal Alternatives (5)	Review and Comment

TASK 5 COMPARATIVE ANALYSIS OF NON-TIME CRITICAL REMOVAL
ACTION ALTERNATIVES

- Engineering Evaluation/ Cost Analysis (EE/CA) Report (13) Review and Approve

Note: The number in parenthesis indicates the number of copies to be submitted by Respondents. One copy shall be unbound, the remainder shall be bound, and all copies should be double-sided. A copy of all draft and final documents should be submitted on 3 1/2" diskette in WordPerfect 5.1. Two copies of all deliverables should be sent directly to the State of Florida. Also, see the Administrative Order on Consent for additional reporting requirements and further instructions on submittal and dispositions of deliverables.

ATTACHMENT C
SCHEDULE OF MAJOR ACTIVITIES

ACTIVITY	SCHEDULE DATE (DAYS)
Effective Date of AOC	X
Supervising Contractor Selected	X+15
Draft EE/CA Workplan and Associated Documents Submitted	X+30
Final EE/CA Workplan and Associated Documents Submitted	X+90
Initiate Fieldwork	X+105
Fieldwork Complete	X+130
Site Characterization Summary Submitted	X+175
Draft EE/CA Submitted	X+200
Final EE/CA Submitted	X+250

Note: Other deliverables listed in Attachment B shall also be incorporated into the schedule to be submitted as part of the EE/CA Work Plan.