

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION IV

*Fairbanks DOT  
Waste Disposal*

*ACOI 12/13/93*

*25467*

IN THE MATTER OF:

Florida Department of  
Transportation-Fairbanks  
Borrow Pit Site  
Gainesville, Alachua County,  
Florida

Florida Department of  
Transportation,

Respondent.

ADMINISTRATIVE ORDER ON  
CONSENT FOR REMOVAL ACTION

U.S. EPA Region  
CERCLA  
Docket No. 94-05-C

Proceeding Under Sections 104,  
106(a), 107 and 122 of the  
Comprehensive Environmental  
Response, Compensation, and  
Liability Act, as amended,  
42 U.S.C. §§ 9604, 9606(a),  
9607 and 9622

**I. JURISDICTION AND GENERAL PROVISIONS**

This Administrative Order on Consent ("Order") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and the Florida Department of Transportation ("DOT" or the "Respondent"). This Order provides for the performance of the removal action by Respondent and the reimbursement of response costs incurred by the United States in connection with the property located at 8000 N.E. 51st Street, Gainesville, Alachua County, Florida (known as the "Fairbanks Borrow Pit" or the "Site"). This Order requires the Respondent to conduct the removal action described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances, pollutants, or contaminants at or from the Site.

This Order is issued pursuant to the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended ("CERCLA"), and delegated to the Administrator of the EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923, and further delegated to the EPA Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-C (and 14-14-D: Cost Recovery) and to the Director, Waste Management Division by EPA Region IV Delegation No. 8-14-13.

EPA has notified the State of Florida of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

Respondent's participation in this Order shall not constitute or be construed as an admission of liability or of EPA's findings or determinations contained in this Order except in a proceeding to enforce the terms of this Order. Respondent agrees to comply with and be bound by the terms of this Order. Respondent further agrees that it will not contest the basis or validity of this Order or its terms.

## II. PARTIES BOUND

This Order applies to and is binding upon Respondent and Respondent's heirs, directors, officers, employees, agents, receivers, trustees, successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall in no way alter Respondent's responsibilities under this Order.

Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Order and comply with this Order. Respondent shall be responsible for any noncompliance with this Order.

## III. FINDINGS OF FACT

For the purposes of this Order, EPA finds that:

- A. The Florida Department of Transportation, Respondent, is the owner and operator of a facility which is located at 8000 N.E. 51st Street in Fairbanks, Alachua County, Florida which is known as the Florida Department of Transportation Fairbanks Disposal Pit (the "Site" or the "Facility").
- B. Respondent utilized the Site as a landfill for the disposal of solid and hazardous wastes including over one thousand drums of spent solvents, laboratory chemical wastes, paint wastes, road building waste (asphalt and tar), in addition to other non-containerized waste and debris between the approximate dates of 1956 and 1983.
- C. The following hazardous substances were used by the Respondent's Bureau of Materials and Research Laboratory. Some of these, if not all of these, were disposed at the Site:

Acetone	Isopropyl Alcohol
Benzene	Isopropylamine
Butyl Alcohol	Methyl Alcohol
Carbon Disulfide	Methyl Ethyl Ketone
Carbon Tetrachloride	Methyl Isobutyl Ketone
Chloroform	Nitrobenzene
Cyclohexane	

Denatured Alcohol  
Dichlorobenzene  
Dichloromethane

Ethyl Acetate  
Ethyl Ether  
Hexane

Tetrabromoethane  
1,1,1-Trichloroethane  
Trichloroethylene  
(Trichloroethene)  
Trifluorotrichloroethane  
Toluene  
Xylene

During disposal activities, liquid wastes which were not placed in 55 gallon drums reportedly were poured directly into trenches by Respondent.

- D. In the fall of 1982, Respondent informed FDEP of the disposal of hazardous wastes at the Site which had been discovered by an industrial safety engineer employed by Respondent. The threat of groundwater contamination near the Site prompted Respondent to conduct residential well sampling within a 1/3 mile radius of the Site.
- E. Respondent conducted excavation of buried wastes in the spring of 1983. Approximately 1,046 drums were excavated, removed and disposed. Approximately 514 of these drums contained hazardous and non-hazardous wastes, and the remainder were empty. An indeterminate quantity of waste remained buried at the Site at the conclusion of excavation activities.
- F. In June of 1983, the Respondent conducted an inventory of residential drinking water wells within a 1 mile radius of the Site. Analysis of samples collected from these wells indicated that ground water from 45 of the 244 wells contained varying concentrations of volatile organic compounds. Respondent provided alternate water supplies to neighboring residents.
- G. 1. Samples collected in 1983 from some of the monitoring wells completed in the surficial aquifer indicated the presence of one or more hazardous substances up to the following concentrations:

<u>Compound</u>		<u>Concentration</u>	<u>Present MCL<sup>1</sup></u>
Benzene	up to	28 ug/L	5 ug/L
Chloroethane	up to	25 ug/L	NE <sup>2</sup>
1,1-Dichloroethane	up to	240 ug/L	NE
1,1-Dichloroethene	up to	1,000 ug/L	7 ug/L

<sup>1</sup>MCL-Maximum Contaminant Level as mandated by the Safe Drinking Water Act, as amended in 1986, and located in Part 141 of the National Primary Drinking Water Regulations, defined in 40 C.F.R.

<sup>2</sup>NE-None Established

Trans-1,2-Dichloroethene	up to	25 ug/L	100 ug/L
Ethylbenzene	up to	34 ug/L	700 ug/L
Tetrachloroethene	up to	190 ug/L	5 ug/L
1,1,1-Trichloroethane	up to	2,400 ug/L	200 ug/L
Trichloroethene	up to	1,900 ug/L	5 ug/L
Toluene	up to	8 ug/L	1,000 ug/L
Vinyl chloride	up to	15 ug/L	2 ug/L

2. Samples collected between 1990 and 1992 from some of the monitoring wells completed in the surficial aquifer indicated the presence of one or more hazardous substances up to the following concentrations:

<u>Compound</u>		<u>Concentration</u>	<u>Present MCL</u>
Benzene	up to	8.1 ug/L	5 ug/L
Chloroethane	up to	49.5 ug/L	NE
Chloroform	up to	2.7 ug/L	100 ug/L
1,1-Dichloroethane	up to	154 ug/L	NE
1,2-Dichloroethane	up to	1.3 ug/L	5 ug/L
1,1-Dichloroethene	up to	213 ug/L	7 ug/L
Methylene Chloride	up to	19.5 ug/L	5 ug/L
Tetrachloroethene	up to	3.1 ug/L	5 ug/L
1,1,1-Trichloroethane	up to	64.9 ug/L	200 ug/L
Trichloroethene	up to	40.7 ug/L	5 ug/L
Toluene	up to	3.1 ug/L	1,000 ug/L
Vinyl chloride	up to	3.2 ug/L	2 ug/L
Xylene	up to	10 ug/L	10,000 ug/L

3. Samples collected between 1990 and March of 1992 from some of the monitoring wells completed in the Upper Hawthorn Aquifer indicated the presence of one or more hazardous substances up to the following concentrations:

<u>Compound</u>		<u>Concentration</u>	<u>Present MCL</u>
1,1-Dichloroethane	up to	66 ug/L	NE
1,1-Dichloroethene	up to	172 ug/L	7 ug/L
Methylene Chloride	up to	2.7 ug/L	5 ug/L
Tetrachloroethene	up to	1.8 ug/L	5 ug/L
1,1,1-Trichloroethane	up to	8.2 ug/L	200 ug/L
Trichloroethene	up to	14.5 ug/L	5 ug/L
Toluene	up to	3.1 ug/L	1,000 ug/L
Xylene	up to	1.6 ug/L	10,000 ug/L

4. Ground water sampling in October of 1991 from a monitoring well completed in the Upper Hawthorn Aquifer, well # H1-16, located approximately 1 1/2 miles to the southwest of the Site indicated that hazardous substances were detected in, at least, one sample, at the following concentrations:

<u>Compound</u>		<u>Concentration</u>	<u>Present MCL</u>
Trichloroethene		3.0 ug/L	200 ug/l
1,1-Dichloroethane		5.4 ug/L	NE
1,1-Dichloroethene		19.2 ug/L	7 ug/l

5. Ground water sampling between June of 1992 and June of 1993 from a monitoring well completed in the Floridan Aquifer, well # FL-16, located approximately 1 1/2 miles to the southwest of the Site indicated that hazardous substances were detected in, at least, one sample, at the following concentrations:

<u>Compound</u>	<u>Date</u>	<u>Concentration</u>	<u>Present MCL</u>
1,1-Dichloroethene	June 29, 1992	1.8 ug/L	7 ug/l
1,1-Dichloroethene	August 12, 1992	2.0 ug/L	"
1,1-Dichloroethene	August 13, 1992	2.0 ug/L	"
1,1-Dichloroethene	February 11, 1993	1.9 ug/L	"
1,1-Dichloroethene	March 26, 1993	2.2 ug/L	"
1,1-Dichloroethene	June 25, 1993	1.0 ug/L	"
1,1-Dichloroethene	June 30, 1993	3.3 ug/L	"

1,1-Dichloroethene is a degradation product of one or more of the hazardous substances known to have been disposed of at the Site.

H. The following compounds detected in ground water at the Site have the following EPA carcinogenic classifications and characteristics:

1. Benzene is listed by EPA as a human carcinogen<sup>3</sup>.
2. Chloroform is listed by EPA as a B2 probable human carcinogen<sup>4</sup> and is a DNAPL<sup>5</sup>.
3. 1,1-Dichloroethane is a DNAPL.
4. 1,2-Dichloroethane is listed by EPA as a B2 probable human carcinogen and is a DNAPL.
5. 1,1-Dichloroethene is listed by EPA as a possible human carcinogen<sup>6</sup> and is a DNAPL.

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<sup>3</sup>A human carcinogen is defined by EPA as a substance for which there is sufficient evidence from epidemiological studies to support a causal association between exposure to the agents and cancer.

<sup>4</sup>A B2 probable human carcinogen is defined by EPA as a substance for which there is sufficient evidence of carcinogenicity in animals and insufficient evidence in humans.

<sup>5</sup>DNAPL-Dense Non-Aqueous Phase Liquid (DNAPL) is a substance with a specific gravity which is greater than that of water promoting vertical migration downward.

<sup>6</sup>A possible human carcinogen is defined by EPA as a substance for which there is limited evidence of carcinogenicity in animals in the absence of human data.

6. Methylene Chloride is listed by EPA as a B2 probable human carcinogen and is a DNAPL.
  7. Tetrachloroethene is a DNAPL.
  8. 1,1,1-Trichloroethane is a DNAPL.
  9. Trichloroethene is listed by EPA as a B2 probable human carcinogen and is a DNAPL.
  10. Vinyl Chloride is listed by EPA as a human carcinogen.
- I. On December 18, 1987 the Respondent entered into a Consent Order with FDEP to address the ground water contamination at the Site. This Order required the Respondent to submit a complete Closure/Post-Closure Permit Application for the Site.
- J. As of August 1, 1992, Respondent had not submitted an adequate and complete closure/post-closure permit application for legal closure of the Site as required by the December 1987 FDEP Order.
- K. On August 20, 1992, EPA issued a Complaint and Compliance Order against the Respondent Pursuant to Section 3008 of the Resource Conservation and Recovery Act (RCRA). The violations cited in this Complaint include among other things: Failure to Obtain a Closure/Post-Closure Permit. The Order required Respondent to submit an adequate Closure/Post-Closure Permit Application. Respondent answered the complaint denying the violations cited in the Complaint. The pre-hearing exchange for the case was filed on June 16, 1993. The case is currently pending before an EPA Administrative Law Judge.
- L. To date, Respondent has not submitted an adequate and complete Closure/Post-Closure Permit Application for legal closure of the Site, and a Closure/Post-Closure Permit has not been issued by FDEP.
- M. On August 12, 1993, EPA was informed by the Gainesville Regional Utilities (GRU) that a pump test conducted by GRU in October of 1992 revealed that there is interconnection between the Hawthorn Aquifers (known to be contaminated by the Site) and the underlying Floridan Aquifer. The Floridan Aquifer is the primary drinking water source (the Murphree well field) for the city of Gainesville, Florida. The ground water within the Floridan aquifer near the Site flows in a southern direction towards the Murphree well field. GRU advised EPA that samples collected by Respondent from a Floridan Aquifer well (Monitoring well # FL-16) located between the Site and the well field is contaminated with some of the same compounds which are contaminating the Hawthorn Aquifers as a result of releases from the Site. The contamination in the Floridan well may or may not have originated from the Site. The contaminated Floridan well is located approximately 1.5 miles upgradient of the Murphree well field. Additionally, the clay layer between the

Hawthorn and Floridan Aquifers may not be continuous in certain areas in the vicinity of the Site; thereby, allowing contaminants to migrate from the Hawthorn Aquifers to the Floridan Aquifer.

- N. Well Number FL-16 is located approximately one and one-half miles to the southwest of the Site and approximately one and one-half miles to the north of the Murphree Well Field which is owned and operated by GRU. The Murphree well field induces a cone of influence in the Floridan aquifer with a minimum radius of approximately one mile. Ground water flow rates toward the well field increase as it moves toward the well field. Correspondingly, dissolved contaminant migration rates increase toward the drinking water source.
- O. According to a report prepared by GRU, sampling data from 1983 indicates that residential well numbers 17, 20, 51, 105, and 127 were contaminated with hazardous substances from the Site and are uncased between the Floridan aquifer, the Lower Hawthorn aquifer and possibly, the Upper Hawthorn aquifer. There is no current data indicating whether or not the wells remain contaminated. The data for these wells is based on either the driller's recollection or information from the resident. Some of these residential wells may provide a conduit for contamination of the Floridan aquifer. EPA has determined that additional wells may be uncased between all three aquifers, but these wells have never been sampled or have not been found to be contaminated and they are also a potential conduit for contamination of the Floridan aquifer.
- P. The Upper Hawthorn aquifer is depressed in the vicinity of well # H1-6. The depressed potentiometric surface of the Upper Hawthorn aquifer at this location is unexplained. This depression may indicate that contaminated groundwater is migrating from the Upper Hawthorn aquifer into the Lower Hawthorn aquifer.
- Q. The Floridan Aquifer in Alachua County has been designated by EPA as Class I-Special Ground Waters of the United States. Class I ground waters are defined by EPA as ground water that is highly vulnerable to contamination and an irreplaceable source of drinking water and/or is ecologically vital. The Murphree Well Field is the primary source of drinking water for approximately 145,000 residents in Alachua County, Florida.
- R. The Floridan and Hawthorn Aquifers are designated by the Florida DEP as Class G-II ground water. This classification designates ground water within these aquifers as a potential drinking water source. Waters classified as Class G-II ground water shall meet the primary and secondary drinking water quality standards for public water systems established pursuant to the Florida Safe Drinking Water Act.

S. Limited soil analytical data exists for the Site. However, sample data from some of the drums excavated by Respondent during 1990 excavation activities contained the following concentrations of hazardous substances:

Sample from "Drum #2" collected by Respondent on 8/15/90

Acenaphthene	1,769	mg/kg
Anthracene	889	mg/kg
Benzo (a) anthracene	3,989	mg/kg
Benzo (b) fluoranthene	4,128	mg/kg
Benzo (k) fluoranthene	2,653	mg/kg
Benzo (a) pyrene	3,078	mg/kg
Chrysene	4,368	mg/kg
Dibenzo (ah) anthracene	819	mg/kg
Fluoranthene	7,940	mg/kg
Fluorene	1,542	mg/kg
Naphthalene	22,264	mg/kg
Phenanthrene	9,080	mg/kg
Pyrene	6,404	mg/kg

Sample from "Drum #8" collected by Respondent on 8/15/90

Acenaphthene	1,264	mg/kg
Acenaphthylene	7,648	mg/kg
Anthracene	2,364	mg/kg
Fluoranthene	2,653	mg/kg
Fluorene	5,115	mg/kg
Naphthalene	32,214	mg/kg
Phenanthrene	13,387	mg/kg
Pyrene	4,357	mg/kg

These hazardous substances are typically found in asphaltic tars.

An indeterminate quantity of drums are suspected to remain buried at the Site along with an undetermined amount of contaminated soil.

#### IV. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA has determined that:

1. The Fairbanks Borrow Pit Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).



2. The contaminants found at the Site, as identified in the Findings of Fact above, include "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
3. Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
4. Respondent is liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).
  - a. Respondent (Florida Department of Transportation) is the "owner" and "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).
  - b. Respondent was the "owner" and "operator" of the facility at the time of disposal of any hazardous substance described in this section at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. Section 107(a)(2).
  - c. Respondent arranged for the disposal of hazardous substances at the facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).
5. The conditions described in the Findings of Fact above, Paragraphs B, C, E, F, G, M, N, O, P, Q, R, and S, constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Sections 101(22) of CERCLA, 42 U.S.C. § 9601(22).
6. The conditions present at the Site and the release and threatened release of hazardous substances from the Site constitute an imminent and substantial endangerment to public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9607(a).

These factors include, but are not limited to, the following:

- a. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; this factor is present at the Site due to the

existence of surface soils contaminated with hazardous substances which threatens nearby residents with exposure to the contaminants due to dermal contact or inhalation of any hazardous substance released at the Site.

- b. Actual or potential contamination of drinking water supplies or sensitive ecosystems; this factor is present at the Site due to the interconnection between the contaminated Hawthorn aquifer and the Floridan aquifer in the vicinity of the Site; the contamination of the Floridan aquifer upgradient of the Murphree well field; and the potential presence of DNAPLs in the Hawthorn and Floridan aquifers.
  - c. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release; this factor is present at the Site due to the existence of buried drums and containers containing hazardous substances at the Site.
7. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment, and are not inconsistent with the NCP and CERCLA.

#### V. ORDER

Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, it is hereby ordered and agreed that Respondent shall comply with the following provisions, including but not limited to all attachments to this Order, and all documents incorporated by reference into this Order, and perform the following actions:

1. Designation of Contractor, Project Contact, and On-Scene Coordinator

Respondent shall retain a contractor(s) to perform the removal action. Respondent shall notify EPA of the name(s) and qualification(s) of such contractor(s) within (14) business days of the effective date of this Order. Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the removal action under this Order at least (7) days prior to commencement of such removal action. EPA retains the right to disapprove of any, or all, of the contractors and/or subcontractors retained by the Respondent, to do the removal action. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor within (10) business days following EPA's disapproval and shall notify EPA of that contractor's name and qualifications within (10) business days of EPA's disapproval.

All remediation activities undertaken pursuant to this Order shall be under the direction and supervision of a qualified professional engineer or other qualified professional with expertise and experience in hazardous waste site cleanup. Within (14) days of the effective date of this Order, the Respondent shall designate a contract Project Manager meeting this requirement who shall be responsible for undertaking the remediation activities pursuant to this Order. Respondent shall submit the designated Project Manager's name, address, telephone number, and qualifications to EPA. To the greatest extent possible, the Project Manager shall be present on site or readily available during site work. EPA retains the right to disapprove of any Project Manager named by the Respondent. If EPA disapproves of a selected Project Manager, Respondent shall retain a different Project Manager and shall notify EPA of that person's name and qualifications within (5) business days following EPA's disapproval.

Within (14) days after the effective date of this Order, the Respondent shall designate a Florida Department of Transportation Project Contact who shall be responsible for all the Respondent's administrative requirements required by the Order. Respondent shall submit the designated contact's name, address, and telephone number. To the greatest extent possible, the Project Contact shall be present on site or readily available during site work. EPA retains the right to disapprove of any Project Contact named by the Respondent. If EPA disapproves of a selected Project Contact, Respondent shall retain a different Project Contact and shall notify EPA of that person's name, address, and telephone number within (5) business days following EPA's disapproval. Receipt by Respondent's Project Contact of any notice or communication from EPA relating to this Order shall constitute receipt by all Respondents.

The EPA has designated Steve Spurlin of the Emergency Response & Removal Branch (ERRB), as its On-Scene Coordinator (OSC). Respondent shall direct all submissions required by this Order to the OSC at the U. S. Environmental Protection Agency, 345 Courtland Street NE, Atlanta, Georgia 30365. All submissions will be delivered by express mail.

## 2.0 Work to Be Performed

Respondent shall perform, at a minimum, the following removal actions which have been separated into the following three (3) phases:

<u>Phase I</u>	<u>Phase II</u>	<u>Phase III</u>
Geophysical Survey	Subsurface Sampling	Disposal
Surface Soil Sampling	Anomaly Excavation	Ground water
Well Plugging	Soil Excavation	Treatment
Soil Studies	Excavation Sampling	Operation &
Soil Cleanup Level	Ground Water Treatment	Maintenance
Calculation	Design	

Phase I: The following actions are work to be performed under Phase I of the removal actions required under this Order.

- a. Respondent will conduct a geophysical survey utilizing, at a minimum, an EM-34 and proton magnetometer to identify the presence of buried waste for the entire area within the present Site fence. Grid node spacing for these surveys will not exceed twenty-five feet in all directions. The geophysical survey shall be performed in accordance with the operating manuals for the individual instruments including the establishment of baseline readings prior to the initiation of the survey. All data generated by the survey shall be logged in the field using electronic data storage instrumentation and written documentation.
- b. Within (5) days of completing the geophysical survey, Respondent will submit to EPA a 3.5" computer disk containing the data generated during the survey. This data will be summarized in an ASCII file which is readable by an IBM computer system. The database will consist of a series of corresponding coordinates designated "X", "Y", and "Z". The "X" and "Y" coordinates will correspond to the horizontal and vertical numeric designation for each grid node point, and the "Z" coordinate will be the actual instrument reading for the corresponding node point. Respondent will submit with the disk, copies of the field logs from which the disk data was generated including all baseline readings.
- c. Respondent shall produce a contour map for each instrument based on the data generated by the geophysical survey. Contour maps for each instrument will be combined by the Respondent to produce an "Anomalous Areas" map which will be used to delineate excavation areas to be addressed under Phase II removal actions. The Respondent will submit the map to EPA for approval, and EPA reserves the right to disapprove of the Respondent's map and replace it with an EPA generated map.

- d. Prior to conducting the geophysical survey, Respondent will drain the two ponds on-site and remove any liner (clay or synthetic) from the ponds. Respondent will adequately sample, and dispose of the water in accordance with all applicable environmental laws and regulations. Any materials (i.e. air stripping towers, spray field piping, non-hazardous debris, structures, etc..) which may hinder the effectiveness of the geophysical survey will be moved off-site after appropriate sampling has been conducted on the materials to make a hazardous waste determination.
- e. Respondent will conduct surface soil (1"-4" depth) sampling for the entire area within the present Site fence. The area will be separated into sample grids not to exceed 100 feet. At a minimum each sample will be analyzed for the following constituents: volatiles and semi-volatiles as identified in the Target Compound List (TCL); and Priority Pollutant metals identified in the Priority Pollutants List. These constituents are identified in Attachment "A". The data generated by these analyses will be reported as a total concentration for each individual compound.
- f. Respondent will develop and submit to EPA for approval a detailed plan and description of the methodologies and procedures to be utilized for the plugging and abandoning of the nearly 300 private wells identified in the August 31, 1993 report titled "Well Field Protection Recommendations: Multiple Aquifer Well Plugging and Contamination Source Excavation" prepared by the Gainesville Regional Utilities (the GRU Report). The plan will include, but is not limited, the criteria specified in Attachment "B", Paragraph #1.
- g. A complete survey, including a door-to-door survey, of properties within the radius of known contamination or radius of one mile from the Site, whichever is greater, shall be conducted to determine if additional wells exist which were not previously identified in the GRU report. Additional wells identified by Respondent will be field verified, sampled to detect hazardous substances associated with the Site, and investigated for possible plugging.
- h. Respondent will perform field tests on the Site soils to determine the percent (%) of organic carbon, the soil water partitioning coefficients, and the bulk density of the soil. This data will be submitted to EPA for review and approval.
- i. Respondent will calculate and submit soil clean-up levels which are protective of ground water for all hazardous substances. These levels shall be calculated based on the predicted leaching of constituents to the ground water in concentrations which do not exceed State and Federal drinking water standards and/or health based protection levels. This calculation will be based on data generated pursuant to paragraph "h" above. The methods and model used in calculating the clean-up levels is subject to EPA approval.

- j. Respondent will include in the Phase I Work Plan required in Section 2.1 of this Order a comprehensive Ground Water Assessment Plan which will be sufficient to determine the horizontal and vertical extent and direction(s) of contaminant migration in all aquifers.

However, Respondent will prioritize the assessment activities in such a manner that the initial assessment activities focus on the groundwater contamination in the surficial and intermediate aquifers at and near the Site. The Ground Water Assessment Plan will include, but is not limited to, the criteria specified in Attachment "B", paragraph #2.

- k. Within (14) days of completing the ground water assessment, Respondent will submit a Ground Water Assessment Results Report to EPA detailing all the information generated during the implementation of the ground water assessment plan.
- l. For all actions required by this Order, Respondent will clearly identify any data or information generated prior to the effective date of this Order which is used to make assumptions, conclusions, decisions, etc. regarding the removal actions required by this Order. EPA reserves the right to review and approve this data and information.
- m. Respondent shall provide the OSC with copies of all analytical data, maps and diagrams, reports, and any other information pursuant to activities addressed in this Order. Additionally, all analytical results for surface water and groundwater sampling will be correlated with the MCL value for each substance. These documents shall be provided to the OSC within seven (7) days after they are received or generated by Respondent during the duration of the removal activities.

Phase II: The following actions are work to be conducted under Phase II of the removal actions required under this Order.

- a. Respondent will conduct subsurface sampling in those areas where anomalies are not identified by the geophysical survey required under Phase I. Sampling will be conducted in discreet intervals at depths of 2-3', 5-7', and 10-12' (or just above the water table) and analyzed for the parameters specified in Attachment "A". Boring spacing will not be less than one boring per 2500 square feet.
- b. Anomalous areas identified by the Respondent's "Anomalous Areas" map will be excavated and materials from the excavation areas will be sampled and characterized to determine if hazardous substances are present. Lateral and vertical extensions of the excavated trenches will continue in all directions until wastes are no longer encountered as determined by EPA. All excavated soils, debris, and other

materials containing hazardous substances at the Site shall be stored in a manner which will prevent contaminant migration until ultimate treatment/disposal occurs.

- c. Respondent will excavate those surface and subsurface soils and debris in the non-anomaly areas that contain hazardous substances in excess of the EPA approved soil clean-up criteria generated pursuant to paragraph "i" above.
- d. Respondent will include in the Phase II Work Plan required in Section 2.1 of this Order a comprehensive Excavation Sampling Plan. The plan must be sufficient to determine if the extent of excavation verifies that EPA's cleanup criteria has been met prior to backfilling the excavation areas. EPA recognizes that the Excavation Sampling Plan may need to be modified based on the ongoing excavation, but the work plan should include a sampling plan detailed enough to show that the proposed methodologies and sampling strategy for the excavation zones are sufficient to adequately determine if the cleanup goals have been achieved. The plan will include, but is not limited to, the items specified in Attachment "B", paragraph #3.
- e. Based on the report submitted to EPA detailing the results of the ground water assessment, Respondent will develop and submit a groundwater remediation design and implementation schedule which is designed to remediate ground water that exceeds State and Federal drinking water standards and/or health-based protection levels, and prevent the further migration of the known contaminant plumes in the surficial and intermediate aquifers. Include in the design a treatment system monitoring schedule and a ground water monitoring program sufficient to indicate the effectiveness of the proposed treatment system.

Phase III: The following actions are work to be conducted under Phase III of the removal actions required under this Order.

- a. Respondent shall arrange for, and complete the ultimate treatment and/or disposal of all contaminated soils and debris at an approved treatment/disposal facility in compliance with EPA's Off-site Disposal Policy. Respondent shall submit a Disposal/Treatment Plan to EPA for review and approval prior to implementing any disposal/treatment. The Disposal/Treatment Plan will include the criteria specified in Attachment "B", Paragraph #4.
- b. Respondent shall implement the approved ground water treatment design.
- c. Respondent shall insure that the actions specified in Paragraph #5 of Attachment "B" are undertaken after the source removal is completed and the ground water treatment system is operational.

## 2.1 Work Plan and Implementation

Within (30) days after the effective date of this Order, the Respondent shall submit to EPA for approval a Work Plan for performing the Phase I removal actions set forth above. The Work Plan shall provide a description of, and an expeditious schedule for, the following actions as described in "Work to be Performed":

1. Geophysical Survey and Related actions
2. Surface Soil Sampling
3. Well Plugging and Survey
4. Soil Studies
5. Soil Cleanup Level Calculation
6. Groundwater Assessment

EPA may approve, disapprove, require revisions to, or modify the Work Plan. If EPA requires revisions, Respondent shall submit a revised Work Plan within (14) days of receipt of EPA's notification of the required revisions. Respondent shall implement the Work Plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondent shall notify EPA at least four (4) days prior to performing any on-site work pursuant to the EPA approved Work Plan. Respondent shall not commence or undertake any removal actions at the Site without prior EPA approval.

Within (30) days after the completion of Phase I removal activities 1.a, b, c, d, e, f, h, and i, Respondent shall submit to EPA for approval a Work Plan for performing Phase II removal actions set forth above. The Phase II Work Plan shall provide a description of, and an expeditious schedule for, the following actions as described in "Work to be Performed":

1. Subsurface Sampling
2. Excavation of Anomalous Areas
3. Excavation of Surface/Subsurface Soils
4. Excavation Sampling

EPA may approve, disapprove, require revisions to, or modify the Work Plan. If EPA requires revisions, Respondent shall submit a revised Work Plan within (14) days of receipt of EPA's notification of the required revisions. Respondent shall implement the Work Plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondent shall notify EPA at least (4) days prior to performing any on-site work pursuant to the EPA approved Work Plan. Respondent shall not commence or undertake any removal actions at the Site without prior EPA approval.



Within (14) days of submittal of the Ground Water Assessment Results Report to EPA, Respondent shall submit to EPA for approval a Ground Water Treatment Design Plan. The Plan shall provide a description of, and an expeditious implementation schedule for, the ground water remediation design which will meet the requirements specified in Phase II Paragraph "e" set forth above.

EPA may approve, disapprove, require revisions to, or modify the design plan. If EPA requires revisions, Respondent shall submit a revised design plan within (14) days of receipt of EPA's notification of the required revisions. Respondent shall implement the plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondent shall notify EPA at least (4) days prior to performing any on-site work pursuant to the EPA approved plan. Respondent shall not commence or undertake any removal actions at the Site without prior EPA approval.

Within (30) days after the completion of the excavation of soils and debris required under Phase II set forth above, the Respondent shall submit to EPA for approval a Work Plan for performing the Phase III actions set forth above. The Phase III Work Plan shall provide a description of, and an expeditious schedule for, the following actions described in "Work to be Performed":

1. Disposal/Treatment of Soils & Debris
2. Operation and Maintenance of the Ground Water Remediation System
3. Site Maintenance, Restoration, and Security

EPA may approve, disapprove, require revisions to, or modify the Plan. If EPA requires revisions, Respondent shall submit a revised Plan within (14) days of receipt of EPA's notification of the required revisions. Respondent shall implement the Plan as finally approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Plan, the schedule, and any subsequent modifications shall be fully enforceable under this Order. Respondent shall notify EPA at least (4) days prior to performing any on-site work pursuant to the EPA approved Plan. Respondent shall not commence or undertake any removal actions at the Site without prior EPA approval.

All Work Plans required above will reflect the timeframes specified in Attachment "C" for the completion of the tasks required pursuant to the appropriate phase of the work to be performed.

## 2.2 Health and Safety Plan

Within (30) days after the effective date of this Order, the Respondent shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-site work under this Order. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide, (November 1984, updated July 1988). In addition, the plan shall comply with all current applicable Occupational Safety and Health Administration (OSHA) regulations; Hazardous Waste Operations and Emergency Response; found at 29 CFR Part 1910. Respondent shall incorporate all changes to the plan recommended by EPA, and implement the plan during the pendency of the removal action.

## 2.3 Quality Assurance and Sampling

All sampling and analyses performed pursuant to this Order shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondent shall follow the following documents as appropriate as guidance for QA/QC and sampling: "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures," OSWER Directive Number 9360.4-01; "Environmental Response Team Standard Operating Procedures," OSWER Directive Numbers 9360.4-02 through 9360.4-08, and the Representative Sampling Guidance for soil, air, ecology, waste, and water as this information becomes finalized and available.

Upon request by EPA, Respondent shall have such a laboratory analyze samples submitted by EPA for quality-assurance monitoring. Respondent shall provide to EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

Upon request by EPA, Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondent while performing actions under this Order. Respondent shall notify EPA not less than (4) days in advance of any sample collection activity. EPA shall have the right to take any additional samples that it deems necessary.

## 2.4 Post-Removal Site Control

Respondent shall submit a proposal for post-removal site control within (21) days of receiving the Notice of Completion from EPA as specified in Section XX of this Order. The proposal shall be consistent with Section 300.415(k) of the NCP and OSWER Directive 9360.2-02. Upon EPA approval, Respondent shall implement such controls and shall provide EPA with documentation of all post-removal site control arrangements.

## 2.5 Reporting

Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Order every (30th) day after the date of receipt of EPA's approval of the Work Plan until termination of this Order, unless otherwise directed by the OSC. These reports shall describe all significant developments during the preceding period, including the actions performed, any problems encountered and corrective actions taken to address these problems, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

Respondent shall, at least 30 days prior to the conveyance of any interest in real property at the site, give written notice of this Order to the transferee and written notice to EPA and FDEP of the proposed conveyance, including the name and address of the transferee. The party conveying such an interest shall require that the transferee comply with Section Four of this Order - Access to Property and Information.

## 2.6 Final Report

Within (45) days after completion of each phase of the removal actions required under this Order, Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with that phase of the actions required by this Order. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports". The final report shall include a good faith estimate of total costs or statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destinations of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

### 3.0 Access to Property and Information

Respondent shall provide and/or obtain access to the Site and off-site areas to which access is necessary to implement this order, and provide access to all records and documentation related to the conditions at the Site and the action conducted pursuant to this Order. Such access shall be provided to EPA employees, contractors, agents, consultants, designees, representatives, and FDEP representatives. These individuals shall be permitted to move freely at the Site and appropriate off-site areas in order to conduct actions which EPA determines to be necessary. Respondent shall submit to EPA, upon request, the results of all sampling or tests and all other data generated by Respondent or its contractor(s), or on the Respondent's behalf during implementation of this Order.

Where action under this Order is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within (21) days after the effective date of this Order, or as otherwise specified in writing by the OSC. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements. Respondent shall describe in writing its effort to obtain access. EPA may then assist Respondent in gaining access, to the extent necessary to effectuate the removal actions described herein, using such means as EPA deems appropriate. EPA reserves the right to seek reimbursement from Respondent for all costs and attorney's fees incurred by the United States in obtaining access for Respondent.

### 4.0 Record Retention, Documentation, Availability of Information

Respondent shall preserve all documents and information relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for ten years following completion of the removal actions required by this Order. At the end of this ten year period and 30 days before any document or information is destroyed, Respondent shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to EPA. In addition, Respondent shall provide documents and information retained under this Section at any time before expiration of the ten year period at the written request of EPA.

Respondent may assert a business confidentiality claim pursuant to 40 C.F.R. § 2.203(b) with respect to part or all of any information submitted to EPA pursuant to this Order, provided such claim is allowed by Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7). However, analytical and other data specified in Section 104(e)(7)(F) of CERCLA shall not be claimed as confidential by the Respondent. EPA shall only disclose information covered by a business confidentiality claim to the

extent permitted by, and by means of the procedures set forth at, 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is received by EPA, EPA may make it available to the public without further notice to Respondent.

Respondent shall maintain a running log of privileged documents on a document-by-document basis, containing the date, author(s), addressee(s), subject, the privilege or grounds claimed (e.g., attorney work product, attorney-client), and the factual basis for assertion of the privilege. Respondent shall keep the "privilege log" on file and available for inspection. EPA may at any time challenge claims of privilege through negotiations or otherwise as provided by law or the Federal Rules of Civil Procedure.

#### 5.0 Off-Site Shipments

All hazardous substances, pollutants or contaminants removed off-site pursuant to this Order for treatment, storage, or disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with 42 U.S.C. § 9621(d)(3) and the EPA "Revised Procedures for Implementing Off-Site Response Actions," OSWER Directive Number 9834.11, November 13, 1987. Regional Offices will provide information on the acceptability of a facility under Section 121(d)(3) of CERCLA and the above directive.

Prior notifications of out-of-state waste shipments should be given consistent with OSWER Directive 9330.2-07. These directives regarding off-site shipments can be furnished to Respondent upon request.

#### 6.0 Compliance With Other Laws

Respondent shall perform all actions required pursuant to this Order in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA Section 121(e) and 40 C.F.R. Section 300.415(i). In accordance with 40 C.F.R. § 300.415(i), all on-site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements (ARARs) under federal environmental, state environmental, or facility siting laws. Respondent shall identify ARARs in the Work Plans subject to EPA approval.

#### 7.0 Emergency Response and Notification of Releases

If any incident, or change in site conditions, during the actions conducted pursuant to this Order causes or threatens to cause an additional release of hazardous substances from the Site or an endangerment to the public health, welfare, or the environment, the Respondent shall immediately take all appropriate action. The

Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the OSC or, in the event of his unavailability, shall notify the Regional Duty Officer at telephone number (404) 347-4062 of the incident or site conditions. If Respondent fails to take action, then EPA may respond to the release or endangerment and reserve the right to pursue cost recovery.

In addition, in the event of any release of a hazardous substance, Respondent shall immediately notify EPA at telephone number (404) 347-4062 and the National Response Center at telephone number (800) 424-8802. Respondent shall submit a written report to EPA within (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, not in lieu of, reporting under CERCLA Section 103(c) and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. Sections 11001 et seq.

#### VI. AUTHORITY OF THE EPA ON-SCENE COORDINATOR

The OSC shall be responsible for overseeing the proper and complete implementation of this Order. The OSC shall have the authority vested in an OSC by the NCP, 40 CFR 300.120, including the authority to halt, conduct, or direct any action required by this Order, or to direct any other removal action undertaken by EPA or Respondent at the Site. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

EPA and Respondent shall have the right to change their designated OSC or Project Contact. EPA shall notify the Respondent, and Respondent shall notify EPA (7) days, before such a change is made. Notification may initially be made orally, but shall be followed promptly by written notice.

If EPA's OSC determines that Respondent has failed to timely and/or adequately conduct the removal action required by this Consent Order, or if EPA's OSC determines that Respondent's activities are being performed in a manner which threatens human health, welfare, or the environment, EPA, after giving written notice to Respondent, may require Respondent to cease work on all or a portion of the removal action, and EPA may perform any action at the Site as EPA deems necessary. Respondent may invoke the procedures set forth in Section VIII. of the Consent Order to dispute EPA's determination. However, if EPA determines that Respondent's activities at the Site threaten human health, welfare, or the environment, the OSC may exercise his/her authority to halt, conduct, or direct any action deemed necessary by the OSC, and Respondent's invocation of dispute resolution will

not preclude the OSC from exercising such authority. Cost incurred by EPA in performing any work pursuant to this paragraph shall be considered future response costs that Respondent shall pay pursuant to Section VII. of this Consent Order.

#### VII. REIMBURSEMENT OF COSTS

Respondent agrees to reimburse EPA for all past and future response costs incurred by EPA at the Site. Past response costs are all costs, including, but not limited to, direct and indirect costs and interest, that the United States, its employees, agents, contractors, consultants, and other authorized representatives incurred and paid with regard to the Site prior to the effective date of this Order. Respondent shall remit payment of past costs within thirty (30) days after receipt of EPA's demand for payment of past costs. Payment shall be made in the manner specified below for payment of future costs.

Future response costs are all costs, including, but not limited to, indirect and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Order, verifying the Work, or otherwise implementing, overseeing, or enforcing this Order. Future response costs shall also include all costs, including direct and indirect costs, paid by the United States in connection with the Site after the effective date of this Order and all interest occurring on unpaid past costs.

On a periodic basis, EPA shall submit to Respondent a bill for future response costs that includes cost summaries prepared by EPA, including but not limited to, EPA's Software Package Unique Reports (SPUR), and Superfund Cost Recovery Enhancement System Reports (SCORE), or such other summary deemed appropriate by EPA. If Respondent believes it needs additional documentation for any particular cost item, Respondent shall notify EPA in writing of such need, within fourteen (14) days after receipt of EPA's demand for payment. Upon such request EPA will furnish Respondent with additional supporting cost documentation as EPA deems appropriate. Respondent shall, within thirty (30) days of receipt of the bill, remit a cashier's or certified check for the amount of the bill made payable to the "Hazardous Substance Superfund," to the following address:

U.S. Environmental Protection Agency  
Superfund Accounting  
P.O. Box 100142  
Atlanta, Georgia 30384  
Attn: Superfund Collection Officer

The check should include a notation that payment is being made for response costs in connection with the Fairbanks Borrow Pit, and should also reference the docket number of this Order. A copy of your check shall be sent to:

Carolyn McCall  
U.S. Environmental Protection Agency  
Waste Programs Branch-Waste Management Division  
345 Courtland Street, N.E.  
Atlanta, Georgia 30365

In the event that payment for past or future response costs is not made within thirty (30) days of the Respondent's receipt of EPA's demand for past costs or bill for future costs, Respondent shall pay interest on the unpaid balance. In the event Respondent requests additional supporting cost documentation, Respondent shall remit payment of EPA's past costs within fifteen (15) days after receipt of the additional documentation.

Interest is established at the rate specified in Section 107(a) of CERCLA. The interest to be paid on past response costs shall begin to accrue on the date of the Respondent's receipt of EPA's demand for payment. The interest on future response costs shall begin to accrue on the date of the Respondent's receipt of the bill. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section.

Respondent may dispute all or part of a bill for past or future Response Costs submitted under this Order, if Respondent alleges that EPA has made an accounting error, or if Respondent alleges that a cost item is inconsistent with the NCP.

If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondent shall pay the full amount of the uncontested costs into the Hazardous Substance Fund as specified above on or before the due date. Within the same time period, Respondent shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondent shall simultaneously transmit a copy of both checks to the OSC. Respondent shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within fourteen (14) days after the dispute is resolved.



### VIII. DISPUTE RESOLUTION

The parties to this Order shall attempt to resolve, expeditiously and informally, any disagreements concerning this Order.

If the Respondent objects to any EPA action taken pursuant to this Order, including billings for future response costs, the Respondent shall notify EPA in writing of its objections within ten (10) days of such action, unless the objections have been informally resolved.

EPA and Respondent shall have ten (10) days from EPA's receipt of the Respondent's written objections to attempt to resolve the dispute through formal negotiations (Negotiation Period). The negotiation period may be extended at the sole discretion of EPA. EPA's decision regarding an extension of the Negotiation Period shall not constitute an EPA action subject to dispute resolution or a final agency action giving rise to judicial review.

Any agreement reached by the parties pursuant to this section shall be in writing, signed by both parties, and shall upon the signature by both parties be incorporated into and become an enforceable element of this Order. If the parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Director, Waste Management level or higher will issue a written decision on the dispute to the Respondent. The decision of EPA shall be incorporated into and become an enforceable element of this Order upon Respondent's receipt of the EPA decision regarding the dispute. Respondent's obligations under this Order shall not be tolled by submission of any objection for dispute resolution under this Section.

Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs. No EPA decision made pursuant to this Section shall constitute a final agency action giving rise to judicial review.

### IX. FORCE MAJEURE

Respondent agrees to perform all requirements under this Order within the time limits established under this Order, unless the performance is delayed by a force majeure. For purposes of this Order, a force majeure is defined as any event arising from causes beyond the control of Respondent or of any entity controlled by Respondent(s), including but not limited to its contractors and subcontractors, that delays or prevents performance of any obligation under this Order despite Respondent's best efforts to fulfill the obligation. Force majeure does not include financial inability to complete the work or increased cost of performance.

Respondent shall notify EPA orally within twenty-four (24) hours after the event, and in writing within two (2) days after Respondent becomes or should have become aware of events which constitute a force majeure. Such notice shall: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay, including necessary demobilization and re-mobilization; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures. Respondent shall take all reasonable measures to avoid and minimize the delay. Failure to comply with the notice provision of this Section shall waive any claim of force majeure by the Respondent.

If EPA determines a delay in performance of a requirement under this Order is or was attributable to a force majeure, the time period for performance of that requirement shall be extended as deemed necessary by EPA. Such an extension shall not alter Respondent's obligation to perform or complete other tasks required by the Order which are not directly affected by the force majeure.

#### X. STIPULATED AND STATUTORY PENALTIES

For each day, or portion thereof, that Respondent fails to perform, fully, any requirement of this Order in accordance with the schedule established pursuant to this Order, Respondent shall be liable as follows:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 2,500	1st through 14th day
\$ 5,000	15th through 30th day
\$ 10,000	31st day and beyond

Upon receipt of written demand by EPA, Respondent shall make payment to EPA within fifteen (15) days. Interest shall accrue on late payments as of the date the payment is due which is the date of the violation or act of non-compliance triggering the stipulated penalties.

Even if violations are simultaneous, separate penalties shall accrue for separate violations of this Order. Penalties accrue and are assessed per violation per day. Penalties shall accrue regardless of whether EPA has notified Respondent of a violation or act of noncompliance. The payment of penalties shall not alter in any way Respondent's obligations to complete the performance of the work required under this Order.

Violation of any provision of this Order may subject Respondent to civil penalties of up to twenty-five thousand dollars (\$25,000) per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. Section 9606(b)(1). Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation,

as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. Section 9607(c)(3). Should Respondent violate this Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. Section 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. Section 9606.

#### XI. RESERVATION OF RIGHTS

Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring the Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. Section 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not reimbursed by Respondent.

#### XII. OTHER CLAIMS

By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by the Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

Except as expressly provided in Section XIV - Covenant Not To Sue, nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against the Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. Sections 9606(a) and 9607(a).

This Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). The Respondent waives any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Order.

No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

### XIII. COVENANT NOT TO SUE

Except as otherwise specifically provided in this Order, upon issuance of the EPA notice referred to in Section XX - Notice of Completion, EPA covenants not to sue Respondent for judicial imposition of damages or civil penalties or to take administrative action against Respondent for any failure to perform removal actions agreed to in this Order except as otherwise reserved herein. However, nothing in this Order shall preclude EPA from taking action against Respondent under the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. § 6901 et. seq., after the effective date of this Order, or from prosecuting any RCRA action pending against Respondent as of the effective date of this Order.

Except as otherwise specifically provided in this Order, in consideration and upon Respondent's payment of the response costs specified in Section VIII of this Order, EPA covenants not to sue or to take administrative action against Respondent under Section 107(a) of CERCLA for recovery of past and future response costs incurred by the United States in connection with this removal action or this Order. This covenant not to sue shall take effect upon the receipt by EPA of the payments required by Section VIII - Reimbursement of Costs.

These covenants not to sue are conditioned upon the complete and satisfactory performance by Respondent of its obligations under this Order. These covenants not to sue extend only to the Respondent and do not extend to any other person.

### XIV. CONTRIBUTION PROTECTION

With regard to claims for contribution against Respondent for matters addressed in this Order, the Parties hereto agree that the Respondent is entitled to protection from contribution actions or claims to the extent provided by Section 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. Sections 9613(f)(2) and 9622(h)(4).

Nothing in this Order precludes the United States or the Respondent from asserting any claims, causes of action or demands against any persons not parties to this Order for indemnification, contribution, or cost recovery.

### XV. INDEMNIFICATION

Respondent agrees to indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action: (A) arising from, or on account of, acts or omissions of Respondent, Respondent's officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to this Order; and (B) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent, and any persons for performance of work on or relating to the Site, including claims on account of construction delays.

In addition, Respondent agrees to pay the United States all costs incurred by the United States, including litigation costs arising from or on account of claims made against the United States based on any of the acts or omissions referred to in the preceding paragraph.

Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

#### XVI. INSURANCE

At least (7) days prior to commencing any on-site work under this Order, the Respondent shall ensure that its contractor secure, and maintain for the duration of this Order, comprehensive general liability insurance and automobile insurance with limits of (5) million dollars, combined single limit. Within the same time period, the Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy carried by its contractor. If the Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then the Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

#### XVIII. MODIFICATIONS

Modifications to any work plan or schedule may be made in writing by the OSC or at the OSC's oral direction. If the OSC makes an oral modification, it will be memorialized in writing within (7) days; provided, however, that the effective date of the modification shall be the date of the OSC's oral direction. The rest of the Order, or any other portion of the Order may only be modified in writing by signature of the EPA Waste Management Division Director.

If Respondent seeks permission to deviate from any approved plan or schedule, Respondent's Project Contact shall submit a written request to EPA for approval outlining the proposed modification and its basis.

No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondent shall relieve the Respondent of its obligation to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless it is formally modified.

### **XIX. ADDITIONAL REMOVAL ACTIONS**

If EPA determines that additional removal actions not included in an approved plan are necessary to protect public health, welfare, or the environment, EPA will notify Respondent of that determination. Unless otherwise stated by EPA, within (30) days of receipt of notice from EPA that additional removal actions are necessary to protect public health, welfare, or the environment, Respondent shall submit for approval by EPA a Work Plan for the additional removal actions. The plan shall conform to the applicable requirements of Sections VI of this Order. Upon EPA's approval of the plan pursuant to Section VI.3.1-Work Plan and Implementation, Respondent shall implement the plan for additional removal actions in accordance with the provisions and schedule contained therein. This Section does not alter or diminish the OSC's authority to make oral modifications to any plan or schedule pursuant to Section XII.

### **XX. NOTICE OF COMPLETION**

When EPA determines, after EPA's review of a Final Report for each phase, that all removal actions required in that phase have been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, EPA will provide notice to the Respondent. If EPA determines that any removal actions have not been completed in accordance with this Order, EPA will notify the Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan to correct such deficiencies. The Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Order.

### **XXII. SEVERABILITY**

If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

XXIII. EFFECTIVE DATE

This Order shall be effective five (5) days after the Order is signed by the Waste Management Division Director.

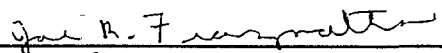
The undersigned representative of Respondent certifies that it is fully authorized to enter into the terms and conditions of this Order and to bind the party it represents to this document.

Agreed this 3<sup>rd</sup> day of December, 1993.

By 

Title District Secretary

It is so ORDERED and Agreed this 6th day of December, 1993.

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

DATE: 12/6/93

EFFECTIVE DATE: 12/13/93

**ATTACHMENT A**

**TARGET COMPOUND LIST**

**VOLATILES**

Chloromethane  
Vinyl Chloride  
Methylene Chloride  
Carbendisulfide  
1,1-Dichloroethane  
Chloroform  
2-Butanone  
Carbon tetrachloride  
Bromodichloromethane  
1,2-Dichloropropane  
Trichloroethene  
1,1,2-Trichloroethane  
cis-1,3-Dichloropropene  
4-Methyl-2-pentanone  
Tetrachlorethene  
Cholorobenzene  
Styrene

Bromomethane  
Chloroethane  
Acetone  
1,1-Dichloroethene  
1,2-Dichloroethene (total)  
1,2-Dichloroethane  
1,1,1-Trichloroethane  
Vinyl acetate  
1,1,2,2,-Tetrachloroethane  
trans-1,3-Dichloropropene  
Dibromochloromethane  
Benzene  
Bronioform  
2-Hexanone  
Toluene  
Ethylbenzene  
Xylene (total)

**PRIORITY POLLUTANTS**

**METALS**

Arsenic  
Cadmium  
Chromium  
Lead  
Mercury  
Selenium  
Silver  
Antimony  
Beryllium  
Copper  
Zinc  
Nickel  
Thallium



ATTACHMENT A (page 2)

TARGET COMPOUND LIST

SEMIVOLATILES (acid and base neutral extractables)

Phenol	bis(2-Chloroethyl)ether
2-Chlorophenol	1,3-Dichlorobenzene
1,4-Dichlorobenzene	Benzyl alcohol
1,2-Dichlorobenzene	2-Methylphenol
bis(2-chloroisopropyl)ether	4-Methylphenol
N-Nitroso-di-n-propylamine	Hexachloroethane
Nitrobenzene	Isophorone
2-Nitrophenol	2,4-Dimethylphenol
Benzoic acid	bis(2-Chloroethoxy)methane)
2,4-Dichlorophenol	1,2,4-Trichlorobenzene
Naphthalene	4-Chloraniline
Hexachlorobutadiene	4-Chlor-3-methylphenol
2-Methylnaphthalene	Hexachlorocyclopentadiene
2,4,6-Trichlorophenol	2,4,5-Trichlorophenol
2-Chloronaphthalene	2-Nitroaniline
Dimethylphthalate	Acenaphthene
2,4-Dinitrophenol	4-Nitrophenol
Dibenzofuran	2,4-Dinitrotoluene
Diethylphthalate	4-Chlorophenyl-phenylether
Fluorene	4-Nitroaniline
4,6-Dinitro-2-methylphenol	N-Nitrosodiphenylamine
4-Bromophenyl-phenylether	Hexachlorobenzene
Pentachlorophenol	Phenanthrene
Anthracene	Di-n-butylphthalate
Fluoranthene	Pyrene
Butylbenzylphthalate	3,3-Dichlorbenzidienne
Benzo(a)anthracene	Chrysene
bis(2-Ethylhexyl)phthalate	Di-n-octylphthalate
Benzo(b)fluoranthrene	Benzo(k)fluoranthrene
Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene	Benzo(g,h,i)perylene

## ATTACHMENT B

### Work To Be Performed Criteria

The following items identify information and work required by EPA under certain portions of the Order. Specifically, portions of Part V, Section 2.0 "Work to Be Performed", and Section 2.1 "Work Plan and Implementation" reference this attachment. The items listed below do not represent a comprehensive summary of all the information and work required by EPA to adequately address the work specified under the referenced portions of the Order. However, these items are criteria that the Respondent will include as part of the required removal actions and appropriately reflect these requirements in any required work plan. Failure to include these criteria will result in EPA's disapproval of the work plan.

In addition to a comprehensive description of, and an expeditious schedule for, the actions and submissions required by this Order, Respondent will include the following information and actions when developing and implementing the appropriate work plans:

1. The Well Plugging Plan referenced in Part V, Section 2.0, Phase I, Paragraph "f", will include, but is not limited to, the following items:
  - a. Technical requirements imposed by the St. Johns River Water Management District.
  - b. Procedures for geophysical logging of wells which penetrate the Lower Hawthorne Formation.
  - c. A prioritized list of wells to be plugged. Priority will be given to those wells known or suspected of being drilled through multiple aquifers. Further prioritization of these wells will be based on their proximity to the Site (i.e. closest first) and/or wells located within identified contaminant plumes.
  - d. A schedule for plugging of wells based on the prioritized list.
  - e. The prioritized list will include the following information for each well:
    1. residents name, address, and phone number.
    2. number of occupants
    3. sample date(s) and time(s)
    4. purging start and end time(s)
    5. sampler's name, sample number, and preservation used

ATTACHMENT B (page 2)

6. depth of well
  7. water level depth (normalized to MSL)
  8. well casing data (i.e. material, depth, height, etc.)
  9. inside diameter of well
  10. sample collection point description
  11. age of well
  12. well use
  13. volume and rate of water usage
2. The Ground Water Assessment Plan referenced in Part V, Section 2.0, Phase I, Paragraph "k", will include, but is not limited to, the following items:
- a. Installation of one or more downgradient wells, adequately screened and cased, to determine if contamination detected in the H1-16 and FL-16 wells represents the downgradient limit of a contaminant plume. This well or wells will be installed within 7 days of approval of the ground water assessment plan.
  - b. Based on contaminant concentrations and flow velocities determine the nature of the threat to the Murphree Well Field and develop a containment plan, if warranted.
  - c. Review and analysis of existing data, or the generation of additional data to determine the following:
    1. ground water recharge rate
    2. aquifer and unsaturated zone porosities
    3. aquifer thicknesses
    4. hydraulic gradients
    5. ground water mixing zone depths
    6. areal dimensions of contamination
    7. biological decay coefficients
    8. ground water velocities for each aquifer
    9. Henry Law Constant
  - d. Review and evaluate the distribution of values of ground water quality standards.
  - e. Evaluate known and observed lineaments and sinkholes for the purpose of identifying preferential pathways for ground water movement.
  - f. Conduct a Dye-Tracer Study which focuses on the rate and extent of the migration of hazardous waste constituents in the ground water in all karst aquifers. The Study will be submitted to EPA for approval prior to implementation. The Study must be conducted by a qualified karst hydrologist.

ATTACHMENT B (page 3)

g. Provide a detailed description of possible considerations for evaluation of Dense Non-Aqueous Phase Liquids (DNAPLs) and justification of proposed methodology for investigation of DNAPLs.

h. Discussion for using a cone penetrometer or similar device for evaluation of the surface of the top of the confining unit below the Surficial aquifer and the distribution of DNAPLs.

i. A provision for generating the following maps shall be included in the Ground Water Assessment Plan\*:

1. Ground surface contour map (CI=5') of the Site vicinity, indicating the accurate locations and elevations of all monitoring wells.
2. Isopach map of the Surficial aquifer.
3. Structure contour map of the top of the confining/semi-confining unit underlying the Surficial aquifer.
4. Isopach map of the confining/semi-confining unit underlying the surficial aquifer.
5. Structure contour map of the top of the Upper Hawthorn (H-1) aquifer.
6. Isopach map of the Upper Hawthorn (H-1) aquifer.
7. Structure contour map of the top of the confining/semi-confining unit underlying the Upper Hawthorn (H-1) aquifer.
8. Isopach map of the confining/semi-confining unit underlying the Upper Hawthorn (H-1).
9. Structure contour map of the top of the Lower Hawthorn (H-2) aquifer.
10. Isopach map of the Lower Hawthorn (H-2) aquifer.
11. Structure contour map of the top of the confining/semi-confining unit underlying the Lower Hawthorn (H-2) aquifer.
12. Isopach map of the confining/semi-confining unit underlying the Lower Hawthorn (H-2) aquifer.

ATTACHMENT B (page 4)

13. Structure contour map of the top of the Floridan aquifer.

\* Elevations of contour lines on all structure contour maps shall be given in terms of mean sea level (MSL). The maps will be drawn by utilizing all available data from boring logs, deep well logs, monitoring well logs, and, if available, any reliable electric log data from domestic wells in the Site vicinity. Each map will include the accurate locations of the wells/boreholes that were utilized to draw the contour lines and isopachs. The total area to be covered by each map will be the area for which there is sufficient well control data. Where sufficient stratigraphic/well control data are not available or do not exist, contour lines and isopach lines will be dashed, so as to indicate inferred elevations of contacts or inferred thickness of strata.

j. A provision for generating the following maps will be included in the Ground Water Assessment Plan and will be constructed using water level measurements taken during sampling events including most recent measurements, quarterly measurements, significant historical changes, etc.

1. Water table contour maps of the Surficial aquifer. (Identify seasonal high and seasonal low water table maps.)
2. Potentiometric surface maps of the H-1 aquifer.
3. Potentiometric surface maps of the H-2 aquifer.
4. Potentiometric surface maps of the Floridan aquifer.

3. The Excavation Sampling Plan referenced in Part V, Section 2.0, Phase II, Paragraph "d", will include, but is not limited to, the following:

- a. Sampling methods and procedures
- b. Areas to be sampled
- c. Types and number of samples to be collected
- d. Sample collection schedule
- e. Analysis methods and procedures including QA/QC procedures

ATTACHMENT B (page 5)

4. The Disposal/Treatment Plan referenced in Section 2.0, Phase III, paragraph "a" will include, but is not limited to, the following items:

- a. Quantities and types of materials to be removed
- b. Discussion of removal and disposal/treatment options
- c. Listing of proposed ultimate destinations for the materials
- d. Summary of analytical results of all sampling and analyses performed for disposal
- e. Schedule for disposal/treatment
- f. Waste code designations for all wastestreams

5. The following actions will be undertaken after the source removal is complete and the ground water treatment system is operational:

- a. Backfill with clean soil, seed, and maintain a vegetative cover on the Site.
- b. Develop and submit to EPA for approval a Ground Water Effectiveness Monitoring Plan. This plan will provide ground water monitoring to assure the effectiveness of the approved treatment system until such time as the EPA determines it is no longer necessary for the protection of human health and the environment.
- c. Provide security at the Site during ground water remediation.
- d. Supply alternate water sources to residents whose wells are determined to be contaminated with hazardous substances from the Site.

## ATTACHMENT C

### Phase I

<u>Task/Activity</u>	<u>Task Completion (Days)</u>
Geophysical Survey	7* <sup>1</sup>
Survey Data to EPA	5
Contour Map Submittal	10
Surface Soil Sampling	10*
Surface Soil Data Submittal	21
Soil Studies	7*
Soil Study Raw Data Submittal	14
Soil Clean-up Level Calculation	14
Soil Clean-up Level Submittal to EPA	3
Complete Well Survey	21*
Complete Ground Water Assessment	45*
Ground Water Assessment Results Report Submittal to EPA	14

### Phase II

<u>Task/Activity</u>	<u>Task Completion (Days)</u>
Subsurface Sampling	14*
Subsurface Data Submittal to EPA	21
Anomalous Area Excavation	45*
Subsurface/Surface Excavation	30
Ground Water Treatment Design Submittal	14 <sup>2</sup>
Installation/Start-up of Treatment System	30 <sup>3</sup>

### Phase III

<u>Task/Activity</u>	<u>Task Completion (Days)</u>
Disposal of Soil/Debris	90

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<sup>1</sup>\*-Denotes activities which run concurrently

<sup>2</sup>Begins at deadline for submittal of Ground Water Results Report

<sup>3</sup>Begins at EPA approval of Design