



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

SEP 17 2012

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Carol W. Farrell, President  
Walter Coke, Inc.  
3500 35<sup>th</sup> Avenue North  
Birmingham, AL 35207-2918

Dear Ms. Farrell:

Enclosed please find the executed RCRA Section 3008(h) Administrative Order on Consent (AOC), IN THE MATTER OF: Walter Coke, Inc., Docket No. RCRA-04-2012-4255, dated September 17, 2012. The signed and executed AOC has also been emailed to you today providing you notice that EPA has signed the AOC. Therefore, pursuant to Paragraph 109 of the AOC, the effective date of the AOC is Monday, September 24, 2012.

In addition, please note that pursuant to Section IX, INTERIM MEASURES of the enclosed AOC, Docket No. RCRA-04-2012-4255, the approved "final interim measures work plan (IWMP)" for the Former Chemical Plant, as referenced in the EPA letter to you dated April 16, 2012 (enclosed), is incorporated by reference into this AOC.

If you have any questions, feel free to contact me at (404) 562-8569. Legal inquiries should be directed to Joan Redleaf Durbin at (404) 562-9544.

Sincerely

A handwritten signature in blue ink, appearing to read "Jeffrey Pallas".

Jeffrey Pallas  
Acting Deputy Director  
RCRA Division

Enclosures: 1) AOC dated September 17, 2012  
2) April 16, 2012, EPA letter  
To Walter Coke

cc: Dan Grucza, Walter Coke  
Jarry Taylor, Esq  
Phil Davis, ADEM

RECEIVED  
EPA REGION IV

2012 SEP 17 AM 11:19

HEARING CLERK

RCRA SECTION 3008(h)

ORDER ON CONSENT

ISSUED TO

Walter Coke Inc.

Docket No. RCRA-04-2012-4255

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4**

IN THE MATTER OF:	)	Docket Number: RCRA-04-2012-4255
	)	
Walter Coke, Inc.	)	Proceeding under Section 3008(h)
	)	of the Resource Conservation and
	)	Recovery Act, 42 U.S.C. § 6928(h)
	)	
EPA ID No.: ALD 000 828 848	)	
	)	
Respondent	)	
_____	)	

**ADMINISTRATIVE ORDER ON CONSENT**

**I. JURISDICTION**

1. This Administrative Order on Consent (“Order”) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (“EPA”) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (“RCRA”), as amended by the Hazardous and Solid Waste Amendments (“HSWA”) of 1984, 42 U.S.C. § 6928(h). The authority vested in the Administrator to issue orders under Section 3008(h) of RCRA has been delegated to the Regional Administrators by EPA Delegation Nos. 8 - 31 and 8 - 32 dated April 16, 1985, and has been further delegated by the Regional Administrator for Region 4 to the Deputy Director, RCRA Division on August 18, 2010. Section 3008(h) of RCRA, 42 U.S.C. § 6928(h), authorizes the Administrator of EPA or her delegatee to issue an order requiring corrective action or such other response which she deems necessary to protect human health or the environment, if, on the basis of any information, she determines that there is or has been a release of hazardous waste or hazardous constituents into the environment from a Facility that is, was, or should have been authorized to operate under Section 3005(e) of RCRA, 42 U.S.C. § 6925(e).
2. This Order is issued to Walter Coke, Inc., (“Respondent”), Birmingham, Alabama.
3. Respondent consents to and agrees not to contest EPA’s jurisdiction to issue this Order or to enforce its terms. Accordingly, Respondent will not contest EPA’s jurisdiction to: 1. compel compliance with this Order in any subsequent enforcement proceeding, either administrative or judicial; 2. require Respondent’s full or interim compliance with the terms of this Order; and 3. impose sanctions for violations of this Order. In addition, Respondent agrees not to seek pre-enforcement review of this Order.

4. On September 29, 1989, EPA issued Respondent an Administrative Order pursuant to Section 3008(h) of RCRA. Following negotiations between EPA and Respondent, a modified Administrative Order was issued (hereinafter referred to as "the 1989 Order"). The 1989 Order required Respondent to perform a RCRA Facility Investigation (RFI) to evaluate whether any hazardous waste or hazardous constituents had escaped the identified solid waste management units in which they were, or suspected to be, located and, if so, the nature and extent of any release. The 1989 Order also required Respondent to develop, upon completion of the RFI, a Corrective Measures Study (CMS), if necessary, to identify remediation alternatives and to recommend any corrective measures to be taken at the Facility. By entry of this Order between EPA and the Respondent, EPA declares, and the Parties agree, that Respondent has completed all of the approved investigation tasks of the RFI Work Plans required by the 1989 Order. The Parties also agree that the CMS work and the selection and implementation of any remedy are best conducted and completed pursuant to this Order and that as a result, the 1989 Order is terminated and is no longer in force and effect.

## **II. PARTIES BOUND**

5. This Order shall apply to and be binding upon EPA, Respondent and its officers, directors, employees, agents, successors and assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of the Respondent.
6. No change in ownership or corporate or partnership status relating to the Facility will in any way alter Respondent's responsibility under this Order. Any conveyance of title, easement, or other interest in the Facility, or a portion of the Facility, shall not affect Respondent's obligations under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of the Respondent by the terms and conditions of the Order, regardless of the Respondent's use of employees, agents, contractors, or consultants to perform any such tasks.
7. Respondent shall provide a copy of this Order to all contractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within seven (7) days of the issuance of this Order or the retention of such person(s), whichever occurs later, and shall condition all such contracts on compliance with the terms of this Order.
8. Respondent shall provide written notice of this Order within ten (10) days to any successor-in-interest prior to transfer of ownership or operation of the Facility or a portion thereof. In addition, the Respondent shall provide written notification of said transfer of ownership and/or operation to the EPA within ten (10) days prior to such transfer.
9. Respondent agrees to undertake all actions required by the terms and conditions of this Order, including any portions of this Order incorporated by reference. Respondent waives its right to request a hearing on this matter pursuant to Section 3008(b) of RCRA and 40 C.F.R. Part 24, and consents to the issuance of this Order without a hearing pursuant to

Section 3008(b) of RCRA as a Consent Order issued pursuant to Section 3008(h) of RCRA. Any noncompliance with this Order, other than noncompliance authorized by EPA, constitutes a violation of the Order.

### **III. DEFINITIONS**

10. Unless otherwise expressly provided in Attachment A: Definitions & Terms herein, terms used in this Order which are defined in RCRA or in regulations promulgated under RCRA shall have the meaning assigned to them under RCRA or in such regulations.

### **IV. STATEMENT OF PURPOSE**

11. In entering into this Order, the mutual objectives of EPA and Respondent are: (1) to perform pursuant to this Order in lieu of the 1989 Order one or more CMSs to identify and evaluate alternatives for any corrective measures (i.e., remedies) necessary to prevent, mitigate, and/or remediate any releases of hazardous wastes or hazardous constituents at or from any Solid Waste Management Units (SWMUs), Areas of Concern (AOCs) and SWMU Management Areas (SMAs) listed in Attachments D and E or identified as “new” pursuant to Section VIII; (2) to implement the remedies approved by EPA for such SWMUs, AOCs and SMAs listed in Attachments D and E or identified as “new” pursuant to Section VIII; (3) to perform any other activities necessary consistent with this Order, including additional work and interim measures (IMs), to the extent necessary to address impacted environmental media to ensure it meets protective criteria or to evaluate actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste or hazardous constituents at or from SWMUs, AOCs and/or SMAs; 4) to implement and maintain, as appropriate, institutional controls required by Section XV. of this Order approved by EPA; and (5) to perform any activities required pursuant to Section VIII of this Order, and to the extent otherwise consistent with this Order. A list of all SMAs is provided in Attachment D, and a list of all SWMUs and AOCs is provided in Attachment E.
12. It is the mutual objective of EPA and Respondent to streamline the process for completing the work required by this Order, and to avoid potentially unnecessary delays caused by inadequate communication, particularly in advance of formal submissions required by Respondent under this Order. To accomplish this objective, the parties will frequently and in good faith communicate orally, in writing, and face-to-face to discuss progress of the Work and upcoming tasks scheduled by Respondent, to address any concern of EPA or the Respondent, to assure EPA is kept current on the Work, and to ensure the successful and timely completion of the requirements of this Order.

### **V. EPA FINDINGS OF FACT**

13. Respondent is a company doing business in the State of Alabama and is a person as defined in Section 1004(15) of RCRA, U.S.C. § 6903(15).
14. References to “Respondent” in the description of the Facility in this Order are to Walter Coke, Inc., as well as to any predecessors which owned or operated the Facility, including

Sloss Industries Corporation. References to "Respondent" in this Order insofar as the obligations to perform the work required by this Order are to Walter Coke, Inc. The Facility is shown in the maps that are attached as Attachment B: Site Map and SMAs 1-5; Figures 1-6 dated 7/24/12 and 8/16/12.

15. On November 19, 1980, the applicable date which rendered facilities subject to interim status requirements or the requirement to have a permit under Sections 3004 and 3005 of RCRA, 42 U.S.C. §§ 6924 and 6925, the Facility achieved interim status as Respondent owned and operated the Facility and certain of its operations thereon qualified as hazardous waste treatment, storage, or disposal within the meaning of RCRA. In its original Part A Hazardous Waste Permit Application, dated November 17, 1980, Respondent identified itself as operating a coke plant, a chemical plant, a blast furnace and a mineral wool plant.

#### **VI. EPA DETERMINATIONS AND CONCLUSIONS OF LAW**

16. Based on the foregoing findings of fact and after consideration of the Administrative Record, the Deputy Director of the RCRA Division of EPA Region 4 has made the following conclusions of law and determinations:
  - a. Respondent is a "person" within the meaning of Section 1004(15) of RCRA, 42 U.S.C. § 6903(15), and is a "person" as defined in 40 C.F.R. § 260.10.
  - b. Respondent is the "owner" and "operator" of an interim status Facility that is operating subject to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e).
  - c. Respondent engaged in the storage of hazardous wastes at the Facility subject to interim status requirements of 40 C.F.R. Part 265.
  - d. The Facility was subject to interim status requirements or the requirement to have a permit under Sections 3004 and 3005 of RCRA, 42 U.S.C. §§ 6924 and 6925.
  - e. Certain wastes and constituents thereof found at the Facility are hazardous waste and/or hazardous constituents thereof as defined by Section 1004(5) of RCRA, 42 U.S.C. § 6903(5). These are also hazardous wastes or hazardous constituents within the meaning of Section 3001 of RCRA, 42 U.S.C. § 6921 and 40 C.F.R. Part 261.
  - f. There is or has been a release of hazardous wastes or hazardous constituents into the environment from the Facility.
  - g. The actions required by this Order are necessary to protect human health and/or the environment.

#### **VII. WORK TO BE PERFORMED**

17. Pursuant to Section 3008(h) of RCRA, the Respondent agrees and is hereby ordered to perform the acts required by this Order. All work undertaken pursuant to this Order shall

be performed in a manner consistent with, at a minimum, RCRA and other applicable federal and state laws, and their implementing regulations, and consistent with all relevant EPA guidance documents as appropriate to the Facility and the work to be performed by Respondent under this Order.

18. To the extent necessary to meet any of the requirements of this Order, all work previously performed and reports previously submitted by Respondent to EPA pursuant to the 1989 Order may be relied upon or referred to by Respondent in submissions to EPA by Respondent. Respondent need not re-submit such completed work or reports.
19. Unless otherwise specified, two (2) complete paper copies and two (2) complete electronic copies in portable document format, of all documents submitted pursuant to this Order, or revisions thereof, shall be hand delivered, sent by certified mail, return receipt requested, or by overnight express mail to the Project Coordinator or to other addresses he/she designates. Electronic copies can be emailed if possible.

#### **VIII. NEW AREAS OF CONCERN AND NEW SWMUS**

20. Any SWMUs and/or AOCs that are not identified in Attachment D and/or E, and that otherwise are designated by EPA and discovered after the Effective Date, are "New AOCs" or "New SWMUs". New AOCs or New SWMUs designated by EPA or discovered during the course of environmental sampling, monitoring, field investigations, environmental audits, or other means, shall become part of this Order. As used in this Order, the terms "discover," "discovery," or "discovered," refer to the date on which the Respondent or EPA either: (1) visually observes evidence of a new SWMU or AOC; (2) visually observes evidence of a previously unidentified release of hazardous waste or hazardous constituents to the environment; or (3) receives information which suggests the presence of a new release of hazardous waste or hazardous constituents to the environment.
23. Respondent shall notify EPA in writing, within fifteen (15) days of discovery, of any suspected New AOC or New SWMU as discovered under this Section VIII. The notification shall include, at a minimum, the location of the New AOC or New SWMU and all available information pertaining to the nature of the release (e.g., media affected, hazardous waste or constituents released, magnitude of the release, etc.). The notification shall also include whether the New SWMU or New AOC is contained within one of the defined SMAs which previous investigations, the CMS, or the CMI may already address. To the extent necessary to satisfy the Statement of Purpose, the following steps may be undertaken: The EPA may conduct, or require the Respondent to conduct, further assessment (i.e., Confirmatory Sampling) in order to determine the status of the suspected New AOC and/or New SWMU. EPA may also require that Respondent submit an AOC or SWMU Assessment Report (ASAR) for each New AOC and/or New SWMU. Based on the results of the ASAR, the EPA shall determine the need for further investigations of the New AOCs and/or New SWMUs covered in the ASAR.

## **IX. INTERIM MEASURES**

24. The Respondent shall evaluate data as it becomes available and assess the need for interim measures.
25. The Respondent shall report any Imminent and/or Existing Hazard (IEH) from a release of hazardous waste or hazardous constituents that may endanger human health or the environment onsite or beyond the Facility property boundary. Any such information shall be reported orally to the EPA within 24 hours from the time the Respondent becomes aware of the circumstances. This IEH Report shall include, but is not limited to:
  - a. Information concerning the release of any hazardous waste or hazardous constituents that may endanger public drinking water supplies; and,
  - b. Information concerning the release or discharge of any hazardous waste or hazardous constituents, which could threaten the environment or human health outside the Facility.
26. Pursuant to Paragraph 12. of this Order, the parties may agree that Respondent can implement an Interim Measure (IM) for any IEH, SWMU, AOC, and/or SMA, as appropriate, to eliminate, prevent, or mitigate exposure to human health or the environment at or from the Facility, without the necessity of Respondent preparing and submitting to EPA for approval a Work Plan. If the parties do not agree, and/or EPA determines an IM Work Plan submission and approval process is necessary, the Respondent shall prepare an IM Work Plan and submit it to EPA, for approval, within the time frame specified by EPA. The IM Work Plan is subject to approval by EPA and shall be developed in a manner consistent with the IM Scope of Work at:

[http://www.epa.gov/reg3wcmd/ca/pdf/RCRA\\_InterimMeasuresTTA.pdf](http://www.epa.gov/reg3wcmd/ca/pdf/RCRA_InterimMeasuresTTA.pdf)

27. The Respondent shall implement the IM in accordance with the agreement of the Parties or with any EPA required IM Work Plan.
28. The Respondent shall seek approval from the EPA for any planned changes, reductions or additions to the IM and or IM Work Plan prior to implementation (unless to prevent or mitigate an IEH).

## **X. CORRECTIVE MEASURES STUDY**

29. Respondent shall perform and complete a CMS and submit the CMS Report for the SMAs listed in Attachment D according to the schedule contained therein, or as required pursuant to Section VIII or XXII. Respondent shall follow and comply with all of EPA's guidelines and requirements for the performance of a CMS, and be consistent with:

<http://www.epa.gov/reg3wcmd/pdf/chev6.pdf>

30. EPA will review the CMS Report and notify Respondent in writing of EPA's approval/disapproval, or modification in accordance with Section XIX: APPROVAL/DISAPPROVAL OF SUBMISSION.

### **XI. REMEDY SELECTION**

31. EPA may select a Remedy Decision from the remedial alternatives evaluated during the CMS and presented in the CMS Report. EPA's selection will be based at a minimum on protection of human health and/or the environment, considering specific site conditions, and existing regulations and EPA guidance. The selected remedy may include any IM implemented to date. EPA shall select the remedy and prepare a Statement of Basis to present the proposed Remedy to the public.
32. EPA will provide the public with an opportunity to review and comment on its selection of the proposed final corrective measure(s), including the detailed written description and justification for its selection in the Statement of Basis. Following the public comment period, EPA will select the final corrective measure(s), and will notify the public and Respondent of the decision and rationale in a written Final Decision and Response to Comments (RTC). The RTC will include EPA's detailed reasons for selecting the corrective measure(s) and for rejecting the other proposed corrective measure(s).
33. Should EPA determine that none of the remedial alternatives evaluated during the CMS and presented in the CMS Report is appropriate as a remedy, EPA shall notify Respondent in writing of such decision, including the reasons. Respondent and EPA shall have thirty (30) days from Respondent's receipt of EPA's written notification to reach an agreement. Subject to Section XX, if Respondent and EPA are unable to reach an agreement, Respondent must revise the CMS Report and/or perform additional corrective measures studies in accordance with EPA's request.

### **XII. FINANCIAL ASSURANCE**

34. Following RTC issuance for each Remedy, the Respondent shall provide cost estimates, and demonstrate financial assurance for completing the approved remedy in accordance with Attachment C. Thereafter, the Respondent shall review the remedy cost estimates, adjust the financial assurance instrument, and submit the revised estimate and instrument to the EPA annually for each remedy.

### **XIII. CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN**

35. Within one hundred twenty (120) days of Respondent's receipt of notification of EPA's selection of the corrective measure(s), Respondent shall submit to the EPA a Corrective Measures Implementation Work Plan (s) ("CMI Work Plan"). Each CMI Work Plan shall include a QA/QC plan as well as a schedule and date for remedy construction completion.
36. Each CMI Work Plan submission is subject to approval by EPA in accordance with Section XIX: APPROVAL/DISAPPROVAL OF SUBMISSION and shall be developed

in a manner consistent with the requirements of RCRA and its directives and implementing regulations as well as the following guidance:

[http://www.epa.gov/reg3wcmd/ca/pdf/RCRA\\_CorrectiveMeasureImpli\\_sow.pdf](http://www.epa.gov/reg3wcmd/ca/pdf/RCRA_CorrectiveMeasureImpli_sow.pdf)

#### **XIV. PUBLIC PARTICIPATION/COMMUNITY ENGAGEMENT**

37. Within thirty (30) days of the Effective Date of this Order, Respondent shall submit for approval to EPA a Public Participation/Community Engagement Plan consistent with applicable guidance in the following links:

<http://www.epa.gov/oswer/engagementinitiative/related.htm>

<http://www.epa.gov/wastes/hazard/tsd/permit/pubpart/manual.htm>

38. The administrative record supporting this Order and the administrative record in support of any remedy selected pursuant to this Order will be available for public review and maintained by the Respondent at the Facility or at a designated location (i.e., closest library to facility) near the facility, and at the U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, S.W., Atlanta, Georgia 30303.

#### **XV. INSTITUTIONAL CONTROLS**

39. Respondent must consider institutional controls and/or land use restrictions for protection of human health and the environment from contamination left in place at any SMAs, SWMUs or AOCs. Institutional controls and/or land use restrictions may also be used to protect the corrective measures if the order is terminated at the completion of corrective action.

40. A detailed listing of EPA's Institutional Controls may be found at the following EPA website:

<http://www.epa.gov/epawaste/hazard/correctiveaction/resources/guidance/ics/matrxrv3.pdf>

#### **XVI. COMPLETION OF RCRA CORRECTIVE ACTION**

41. The determination of completion of RCRA correction action at the Respondent's Facility shall be made pursuant to EPA's February 13, 2003, Guidance on Completion of Corrective Action Activities at RCRA Facilities, 68 FR 8757-8764.
42. When, upon receipt of the certification, and in consideration of public comments and any other relevant information, the EPA determines that the corrective measures have been completed in accordance with the terms and conditions of this Order and the requirements for completion, the EPA shall terminate this Order. Upon termination of the Order or modification of the Order for completion of corrective action at the entire Facility, EPA shall release the Respondent from the financial assurance requirements of this Order.

## **XVII. SCHEDULES OF COMPLIANCE**

43. Respondent is required to adhere to each of the deadlines and schedules set out in this Order. Respondent may request an extension to any deadline in this Order. Any extension request must be submitted to the EPA project manager for approval within a minimum of fourteen (14) days prior to the deadline. Failure to adhere to any deadline may be considered a violation of this Order.

## **XVIII. PROJECT COORDINATOR**

44. EPA and Respondent have each designated a Project Coordinator as set out below. Each Project Coordinator shall be responsible for overseeing the implementation of this Order and for designating a person to act in his/her absence. The EPA Project Coordinator will be EPA's designated representative for the Facility. To the maximum extent practicable, all communications between Respondent and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through the Project Coordinators.
45. The parties may change their Project Coordinators, but agree to provide at least ten (10) days written notice prior to changing a Project Coordinator.

- a. The EPA Project Coordinator is:

Meredith Anderson, Environmental Engineer  
RCRA Corrective Action Section  
RCRA and Underground Storage Tank Branch, RCRA Division  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303

- b. The Facility Project Coordinator is:

Don Wiggins  
Manager of Technical Services  
Walter Coke, Inc.  
3500 35<sup>th</sup> Avenue North  
Birmingham, Alabama 35207

46. The absence of a designated EPA Project Coordinator for overseeing the implementation of this Order shall not be cause for the stoppage of work.

## **XIX. AGENCY APPROVAL/DISAPPROVAL OF SUBMISSION.**

### **A. EPA APPROVALS**

47. EPA will provide Respondent with its written approval, approval with conditions and/or modifications, or disapproval for any submission (or resubmission) requiring such

approval required by this Order. Any disapproval or any approval with conditions and/or modifications shall be consistent with this Order and the Statement of Purpose.

48. In connection with an EPA action under paragraph 47 other than approval of a submission, Respondent shall revise any submission required by this Order in accordance with EPA's written comments within thirty (30) calendar days of Respondent's receipt of EPA's written comments, unless EPA has specified an alternative due date. Revised submittals are also subject to EPA approval, approval with conditions and/or modifications, or disapproval. Any revised submittal that is disapproved or is not approved with conditions and/or modifications is considered noncompliant with the terms of this Order. For purposes of Respondent's submissions, dispute resolution shall apply only to submissions disapproved and revised by the EPA, or that have been disapproved by the EPA, then revised and re-submitted by the Respondent, and again disapproved by the EPA.
49. Subject to Section XX, upon receipt of EPA's written approval, Respondent shall commence work and implement any approved Work Plan in accordance with the schedule and provisions contained therein. If no schedule is contained in an approved Work Plan, then Respondent shall commence work and implementation of the Work Plan within fifteen (15) calendar days of receipt of EPA's written approval of the Work Plan.
50. Subject to Section XX, any EPA-approved or EPA-approved with conditions and/or modifications to any submission required by this order shall be incorporated by reference into this Order as set forth fully herein. Prior to EPA's written approval, no submission required by this Order shall be construed as approved and final. Oral advice, suggestions, or comments given by EPA representatives will not constitute an official approval, nor shall any oral approval or oral assurance of approval be considered binding.
51. Subject to Section XX, noncompliance with any requirement of this Order shall be considered a violation of this Order and shall subject Respondent to the statutory penalty provisions and enforcement actions pursuant to Section 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h), and any other applicable sanctions, including the stipulated penalties provisions agreed to in Section XXVIII Delay in Performance/Stipulated Penalties of this Order.
52. Any changes or modifications proposed by Respondent to the EPA-approved Documents and schedules submitted pursuant to and required by this Order must be approved by EPA prior to implementation.

#### B. PROGRESS REPORTS

53. Unless otherwise specified in an EPA approved document pursuant to this Order, beginning with the first full month following the effective date of this Order, and through the period that this Order is effective, Respondent shall provide EPA with quarterly progress reports. Progress reports are due by the fifteenth (15) day of the month following the end of the previous quarter. The progress reports for specific deliverables shall conform to requirements in any relevant EPA guidance referenced in this Order.

## **XX. DISPUTE RESOLUTION**

54. The parties shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion. The parties agree that the procedures contained in this Section are the sole procedures for resolving disputes arising under this Order.
55. Notwithstanding any other provision in this Order, in the event the Respondent disagrees in whole or in part with any written decision by EPA, or revision of a submission or disapproval of any revised submission required by the Order, the following may, at the Respondent's discretion apply:

Any dispute concerning EPA written decisions, or revisions or disapprovals of deliverables required under this Order (including required revisions for, disapprovals of, or approvals with conditions and/or modifications of any deliverable required under this Order), excluding any EPA final agency action, shall be raised to EPA within 15 days after receiving the written decision or comments on the deliverables. Disputes will be resolved as follows: EPA and Respondent shall expeditiously and informally attempt to resolve any disagreements. The Project Coordinators shall first confer in an effort to resolve the dispute. If the Project Coordinators are unable to informally resolve the dispute within 14 days, Respondent shall notify EPA's Chief, Restoration and Underground Storage Tank Branch, RCRA Division, in writing of its objections. The Respondent's written objections shall define the dispute and state the basis of Respondent's objections. EPA and Respondent then have an additional 14 days to reach agreement. If an agreement is not reached within 14 days, Respondent may request a determination by EPA Region 4's RCRA Division Director. The RCRA Division Director's determination is EPA's final decision, and shall be incorporated into and become an enforceable part of this Order to the extent it is otherwise consistent with this Order. If Respondent does not agree to perform or does not actually perform the Work in accordance with EPA's final decision, EPA reserves the right in its sole discretion to conduct the work itself, to seek reimbursement from Respondent, to seek enforcement of this Order on the issue subject to EPA's decision, to seek stipulated penalties, and/or to seek any other appropriate relief. Notwithstanding any other provision of this Order, Respondent retains the right to contest the validity of or assert any defenses it may have with respect to any EPA written decision it claims was taken or made pursuant to this Order, including with respect to any EPA written decision that was subject to the dispute resolution procedure set forth in this Paragraph.

56. If EPA and Respondent reach agreement on a dispute at any stage, the agreement shall be set forth in writing, and shall upon signature of EPA and Respondent, be incorporated into and become an enforceable part of this Order.
57. The existence of a dispute and EPA's consideration of matters placed in dispute shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to the Order during the pendency of the dispute resolution process except as provided in

Section XXVIII, Delay in Performance/Stipulated Penalties or agreed to by EPA in writing. With the exception of those conditions under dispute, the Respondent shall proceed to take any action required by those portions of the submission and of the Order that the EPA determines are not affected by the dispute. The invocation of dispute resolution does not stay accrual of stipulated penalties under this Order, unless the delay is a result of EPA's failure to timely issue a written resolution of the dispute

#### **XXI. PROPOSED CONTRACTOR/CONSULTANT**

58. All work performed pursuant to this Order shall be under the direction and supervision of a professional engineer, hydrologist, geologist, or environmental scientist, with expertise in hazardous waste cleanup. Respondent's contractor or consultant shall have the technical expertise sufficient to adequately perform all aspects of the work for which it is responsible. Within forty-five (45) days of the effective date of this Order, Respondent shall notify the EPA Project Coordinator in writing of the name, title, and qualifications of the engineer, hydrologist, geologist, or environmental scientist and of any contractors or consultants and their personnel to be used in carrying out the terms of this Order. EPA reserves the right to disapprove Respondent's contractor and/or consultant. If EPA disapproves a contractor or consultant, then Respondent must, within forty-five (45) days of receipt from EPA of written notice of disapproval, notify EPA, in writing, of the name, title, and qualifications of any replacement.
59. Respondent shall provide at least ten (10) days written notice prior to changing professional engineer/geologist/hydrologist/environmental scientist or contractor/subcontractor.

#### **XXII. ADDITIONAL WORK**

60. EPA may determine or Respondent may propose that certain tasks, including investigatory work, engineering evaluation and design work plan, remediation, procedure/methodology modifications, or community engagement documents are necessary in addition to or in lieu of the tasks included in any EPA approved Work Plan, when such additional work is otherwise consistent with this Order and necessary to meet the purposes set forth in Section IV. Statement of Purpose. If EPA determines that Respondent shall perform additional work, EPA will notify Respondent in writing and specify the basis for its determination that the additional work is necessary. Consistent with Paragraph 12 of this Order, Respondent may confer with EPA to discuss the additional work. If required by EPA, subject to Section XX, Respondent shall submit for EPA approval a Work Plan for the additional work. EPA will specify the contents of such Work Plan. Such Work Plan shall be submitted within sixty (60) days of receipt of EPA's determination that additional work is necessary, or at a later date according to an alternative schedule established by EPA. Upon approval of a Work Plan by EPA, Respondent shall implement it in accordance with the schedule and provisions contained therein.

#### **XXIII. QUALITY ASSURANCE**

61. Respondent shall follow EPA guidance for sampling and analysis. Work Plans shall contain quality assurance/quality control (“QA/QC”) and chain of custody procedures for all sampling, monitoring, and analytical activities. Any deviations from the QA/QC and chain of custody procedures in approved Work Plans must be approved by EPA prior to implementation; must be documented, including reasons for the deviations; and must be reported in the applicable report (e.g., CMS).
62. The name(s), addresses, and telephone numbers of the analytical laboratories Respondent propose to use must be specified in the applicable Work Plan(s).
63. Respondent shall monitor to ensure that high quality data is obtained by its consultant or contract laboratories. All investigation activities shall be done in accordance with the USEPA, Region 4, Science and Ecosystem Support Division’s (SESD’s) “Field Branches Quality System and Technical Procedures” which is available on the SESD website. The direct link to the website is:

<http://www.epa.gov/region4/sesd/fbqstp/>

Any RCRA Work Plan submitted pursuant to this Order (e.g., IM, RFI, CMS, CMI) shall include data quality objectives and guidance which can be found in the February 2006 “U.S. EPA Guidance for the Data Quality Objectives Process” available at:

<http://www.epa.gov/quality1/qs-docs/g4-final.pdf>

and the March 2001 “U.S. EPA Requirements for Quality Assurance Project Plan” (EPA QA/R-5) for achieving the Data Quality Objectives available at:

<http://www.epa.gov/QUALITY/qs-docs/r5-final.pdf>

Samples are to be collected and analyzed in accordance with EPA publication SW# 846 “Test Methods for Evaluating Solid Waste,” 3<sup>rd</sup> Edition. A National Environmental Laboratory Accreditation Program (NELAP) certified laboratory is to be used to analyze the samples. If methods other than EPA methods are to be used, Respondent shall specify all such protocols in the applicable Work Plan (e.g., CMS). EPA may reject any data that does not meet the requirements of the approved Work Plan or EPA analytical methods and may require re-sampling and additional analysis.

64. Respondent shall ensure that laboratories they use for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. EPA may conduct a performance and quality assurance/quality control audit of the laboratories chosen by Respondent before, during, or after sample analyses. Upon request by EPA, Respondent shall have any such laboratory perform analyses of samples provided by EPA to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control, re-sampling and additional analysis may be required.

#### **XXIV. DATA AND DOCUMENT AVAILABILITY**

65. Respondent shall submit (i.e., in hardcopy and in an electronic copy in appropriate standard business format) to EPA upon request the results of all sampling and/or tests or other data generated by divisions, agents, consultants, or contractors pursuant to this Order.
66. Notwithstanding any other provisions of this Order, the United States retains all of its information gathering and inspection authorities and rights, including the right to bring enforcement actions related thereto, under RCRA, CERCLA, and any other applicable statutes or regulations.
67. Respondent shall notify EPA in writing at least ten (10) days before engaging in any field activities and/or corrective measures, such as well sampling, installation of equipment, and/or sampling. If Respondent believes it must commence emergency field activities without delay, Respondent may seek emergency telephone authorization from the EPA Project Coordinator or, if the EPA Project Coordinator is unavailable, his/her management, to commence such activities immediately. At the request of EPA, Respondent shall provide or allow EPA or its authorized representative to take split or duplicate samples of all samples collected by Respondent pursuant to this Order. Similarly, at the request of Respondent, EPA shall allow Respondent or its authorized representative(s) to take split or duplicate samples of all samples collected by EPA under this Order.
68. Respondent may assert a business confidentiality claim covering all or part of any information submitted to EPA pursuant to this Order. Any assertion of confidentiality must be accompanied by information that satisfies the items listed in 40 C.F.R. § 2.20(e)(4) or such claim shall be deemed waived. Information determined by EPA to be confidential shall be disclosed only to the extent permitted by 40 C.F.R. Part 2. If no such confidentiality claim accompanies the information when it is submitted to EPA, the information may be made available to the public by EPA without further notice to Respondent. Respondent agrees not to assert any confidentiality claim with regard to any physical or analytical data.

#### **XXV. ACCESS**

69. EPA, its contractors, employees, and/or any duly designated EPA representatives are authorized to enter and freely move about the Facility accompanied by Respondent's representative pursuant to this Order for the purposes of, inter alia: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts related to the Facility; reviewing the progress of Respondent in carrying out the terms of this Order; conducting such tests, sampling, or monitoring as EPA deems necessary for purposes of this Order; using a camera, sound recording, or other documentary type equipment for purposes of this Order, and verifying the reports and data submitted to EPA by Respondent. EPA agrees to provide Respondent with copies of any such tests, sampling, or monitoring, including photographs, sound recordings or other documentary type equipment. Furthermore, upon Respondent's request, EPA shall provide Respondent the

opportunity to receive a split of any sample taken by EPA for purposes of this Order. Respondent agrees to provide EPA and its representatives access at all reasonable times to the Facility and subject to the next Paragraph below, to any other property to which access is required for implementation of this Order. Subject to Paragraph 68, Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of Respondent or their contractors or consultants, excluding any attorney-client privileged or attorney work product privileged documents.

70. To the extent that work being performed pursuant to this Order must be done beyond the Facility property boundary, Respondent shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owner(s) of such property within thirty (30) days of approval of any Work Plan for which access is required. Best efforts, as used in this Paragraph shall include, at a minimum, a certified letter from Respondent to the present owner(s) of such property requesting access agreement(s) to permit Respondent and its authorized representatives to access such property, and as necessary and appropriate the payment of reasonable compensation in consideration of granting access. Any such access agreement shall provide for access by EPA and its representatives. Respondent shall insure that EPA's Project Coordinator has a copy of any access agreement(s). In the event that agreements for access are not obtained within thirty (30) days of approval of any Work Plan for which access is required, or of the date that the need for access became known to Respondent, Respondent shall notify EPA in writing within fourteen (14) days thereafter of both the efforts undertaken to obtain access and the failure to obtain access agreements. EPA may, at its discretion, assist Respondent in obtaining access. In the event EPA obtains access, Respondent shall undertake EPA- approved work on such property.
71. The Respondent agrees to indemnify the United States to the extent provided in Section XXXIII. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT, for any and all claims arising from activities on such property.
72. Nothing in this section limits or otherwise affects EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.
73. Nothing in this section shall be construed to limit or otherwise affect Respondent's liability and obligation, if any, to perform corrective action including corrective action beyond the Facility boundary. In case of transfer or lease of any portion of the Facility, Respondent shall retain a right of access to the extent required to fully implement the terms of this Order.

#### **XXVI. RECORD PRESERVATION**

74. Respondent shall retain, during the pendency of this Order and for a minimum of six (6) years after its termination, all data, records, and documents now in its possession or control or which come into its possession or control which relate in any way to this Order. Respondent shall notify EPA in writing ninety (90) days prior to the destruction of any

such records, and shall provide EPA with the opportunity to take possession of any such records, including those over which a CBI claim has been made pursuant to Paragraph 68, but excluding any attorney-client privileged or attorney work product privileged documents. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be addressed to:

EPA Project Coordinator  
RCRA Corrective Action Section  
Restoration and Underground Storage Tank Branch  
RCRA Division  
United States Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303

75. Respondent agrees that within thirty (30) days of retaining or employing any agent, consultant, or contractor for the purpose of carrying out the terms of this Order, Respondent will enter into an agreement with any such agents, consultants, and/or contractors whereby such agents, consultants, and/or contractors will be required to provide the Respondent a copy of all documents produced pursuant to this Order.
76. All documents required under this Order shall be stored by the Respondent in a centralized location to afford ease of access by EPA or its representatives.

#### **XXVII. NOTIFICATION AND DOCUMENT CERTIFICATION**

77. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submittals relating to or required under this Order shall be in writing and shall be hand delivered, sent by certified mail, return receipt requested, or by overnight express mail as follows:
- a. Two hardcopies and one electronic copy on a disk and by email in an appropriate standard business format, of all documents to be submitted to the EPA shall be sent to the:  
  
Project Coordinator  
RCRA Corrective Action Section  
Restoration and Underground Storage Tank Branch  
RCRA Division  
United States Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303
  - b. One electronic copy on a disk and email in an appropriate standard business format to:

Chief,  
RCRA Corrective Action Section

Restoration and Underground Storage Tank Branch  
RCRA Division  
United States Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303.

- c. One hardcopy and one electronic copy on a disk and email in an appropriate standard business format, of all documents to be submitted to ADEM shall be sent to:

Chief, Engineering Services Section  
Industrial Hazardous Waste Branch  
Land Division  
Alabama Dept. of Environmental Mgmt.  
1400 Coliseum Blvd.  
Montgomery, AL 36110

- d. Documents to be submitted to Respondent shall be sent to:

President & COO *cut 9/12/12*  
Walter Coke  
3500 35<sup>th</sup> Avenue North  
P.O. Box 5327  
Birmingham, Alabama 35207

and

Dan Grucza  
Vice President & Sr. Counsel – Environmental  
Walter Energy, Inc.  
3000 Riverchase Galleria  
Suite 1700  
Birmingham, Alabama 35244

78. Any report or other document submitted by a Respondent pursuant to this Order which makes any representation concerning the Respondent's compliance or noncompliance with any requirement of this Order shall be certified by a responsible corporate officer of the Respondent or a duly authorized representative. A responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.
79. The certification required by Paragraph 78 above, shall be in the following form:

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that to the best of my knowledge and belief the information

contained in or accompanying this submittal is true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, 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.”

Signature:

Name:

Title:

Date:

### **XXVIII. DELAY IN PERFORMANCE/STIPULATED PENALTIES**

80. Unless there has been a written modification by EPA of a compliance date, a written modification by EPA of an approved Work Plan condition, or excusable delay as defined in Section XXIX: Force Majeure and Excusable Delay, if Respondent fails to comply with any term or condition set forth in this Order in the time or manner specified herein, EPA may, by written demand, direct Respondent to pay stipulated penalties as set forth below.
- a. For failure to commence, perform, and/or complete field work in a manner acceptable to EPA or at the time required pursuant to this Order: \$1,500.00 per day for the first ten business days of such violation, \$2,000.00 per day for the eleventh through twenty-first business day of such violation, and \$2,500.00 per day for each business day of such violation thereafter
  - b. For failure to complete and submit, other written submittals not included in Paragraph 80 (a) of this section in a manner acceptable to EPA or at the time required pursuant to this Order: \$1,000.00 per day for the first ten business days of such violation, \$1,500.00 per day for the eleventh through twenty-first business day of such-violation, and \$2,000.00 per day for each business day of such violation thereafter;
  - c. For failure to comply with any other provisions of this Order in a manner acceptable to EPA: \$1,000.00 per day for the first ten business days of such violation, \$1,500.00 per day for the eleventh through twenty-first business day of such violation, and \$2,000.00 per day for each business day of such violation thereafter.
81. Penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the day of correction of the

violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Order. Penalties shall continue to accrue regardless of whether EPA has notified the Respondent of a violation.

82. All penalties owed to the United States under this Section shall be due and payable within thirty (30) days of the Respondent's receipt from EPA of a written demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XX: Dispute Resolution. Such a written demand will describe the violation and will indicate the amount of penalties due.
83. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first day after Respondent's receipt of EPA's demand letter. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. Pursuant to 31 U.S.C. § 3717, an additional penalty of 1% per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for ninety (90) or more days.
84. All penalties shall be made by cashier's check or certified check payable to: **"Treasurer, United States of America"** or by one of the other payment options set out below: The Facility name and the docket number for this matter shall be referenced on the face of the check or noted if possible on the other payment options. The payment options are:

- a. Check Payment By U.S. Postal Service:

US Environmental Protection Agency  
Fines and Penalties  
Cincinnati Finance Center  
P.O. Box 979077  
St. Louis, Missouri 63197

- b. Check Payment By Overnight Commercial Delivery Service:

U.S. Bank  
Government Lockbox 979077  
US EPA Fines & Penalties  
1005 Convention Plaza  
SL-MO-C2-GL  
St. Louis, Missouri 63101  
(314) 418-1028

- c. Wire Transfer:

Federal Reserve Bank of New York  
ABA: 021030004  
Account Number: 68010727  
SWIFT address: FRNYUS33  
33 Liberty Street

New York, New York 10045

Field Tag 4200 of the Fedwire message should read:

"D 68010727 Environmental Protection Agency

- d. Automated Clearinghouse (ACH) for receiving US currency (also known as REX or remittance express):

PNC Bank

US Treasury REX / Cashlink ACH Receiver

ABA: 051036706

Account Number: 310006, Environmental Protection Agency

CTX Format Transaction Code 22 – checking

Environmental Protection Agency

808 17<sup>th</sup> Street, N.W.

Washington, DC 20074

Contact: Jesse White, (301) 887-6548

- e. On line payment:

There is now an On Line Payment Option, available through the Dept. of Treasury. This payment option can be accessed from the information below:

[www.pay.gov](http://www.pay.gov)

Enter sfo 1.1 in the search field

Open form and complete required fields.

85. Respondent shall submit a copy of the payment or a copy of the confirmation of the payment to the following addresses:

Regional Hearing Clerk

U.S. EPA - Region 4

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

and to:

Chief, South Section

Enforcement and Compliance Branch

RCRA Division

U.S. Environmental Protection Agency, Region 4

61 Forsyth Street, S.W.

Atlanta, Georgia 30303

86. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to the EPA Project Coordinator.

87. Respondent may dispute EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XX: DISPUTE RESOLUTION. The stipulated penalties in dispute shall continue to accrue, but need not be paid, during the dispute resolution period. Respondent shall pay stipulated penalties and interest, if any, in accordance with the dispute resolution decision and/or agreement. Respondent shall submit such payment to EPA within ten (10) business days of receipt of such resolution in accordance with Paragraph 84 of this Section.

Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way the Respondent's obligation to comply with the terms and conditions of this Order. The stipulated penalties set forth in this section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondent's failure to comply with any of the terms and conditions of this Order. EPA may waive any portion of the stipulated penalties that have accrued pursuant to this Order.

88. No payments under this section shall be tax deductible for federal tax purposes.

#### **XXIX. FORCE MAJEURE AND EXCUSABLE DELAY**

89. Force majeure, for purposes of this Order, is defined as any event arising from causes not foreseen and beyond the control of Respondent or any person or entity controlled by Respondent, including but not limited to Respondent's contractors that delays or prevents the timely performance of any obligation under this Order despite Respondent's best efforts to fulfill such obligation. The requirement that Respondent exercise "best efforts to fulfill such obligation" shall include, but not be limited to, best efforts to anticipate any potential force majeure event and address it before, during, and after its occurrence, such that any delay or prevention of performance is minimized to the greatest extent possible. Force majeure does not include increased costs of the work to be performed under this Order, or financial inability to complete the work.
90. If any event occurs or has occurred that may delay the performance of any obligation under this Order, whether or not caused by a force majeure event, Respondent shall contact by telephone and communicate orally with EPA's Project Coordinator or, in his or her absence, his or her supervisor or second level manager or, in the event both of EPA's designated representatives are unavailable, the Deputy Director of the RCRA Division, EPA Region 4, within forty-eight (48) hours of when Respondent first knew or should have known that the event might cause a delay. Within five (5) days thereafter, Respondent shall provide to EPA in writing the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; all other obligations affected by the force majeure event, and what measures, if any, taken or to be taken to minimize the effect of the event on those obligations; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a force majeure event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Respondent shall include with any notice all available documentation supporting its claim that the delay was attributable to a force majeure. Failure to comply

with the above requirements shall preclude Respondent from asserting any claim of force majeure for that event. Respondent shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.

91. If EPA determines that the delay or anticipated delay is attributable to a force majeure event, the time for performance of such obligation under this Order that is affected by the force majeure event will be extended by EPA for such time as EPA determines is necessary to complete such obligation. An extension of the time for performance of such obligation affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation, unless Respondent can demonstrate that more than one obligation was affected by the force majeure event. If EPA determines that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of such obligations affected by the force majeure event.
92. If EPA disagrees with Respondent's assertion of a force majeure event, EPA will notify the Respondent in writing and the Respondent may elect to invoke the dispute resolution provision, and shall follow the time-frames set forth in Section XX. Dispute Resolution. In any such proceeding, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of this Section. If Respondent satisfies this burden, the time for performance of such obligation will be extended by EPA for such time as is necessary to complete such obligation.

### **XXX. RESERVATION OF RIGHTS**

93. EPA reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under Section 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h)(2). This Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, and/or authorities, civil or criminal, which EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.
94. EPA reserves the right to disapprove of work performed by Respondent pursuant to this Order to the extent that such work does not satisfy the requirements of the Order and, in such event, to order that Respondent perform additional tasks consistent with this Order.
95. EPA reserves any right it may have to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and remedial work as it deems necessary to protect human health and/or the environment. EPA may exercise its authority under CERCLA to undertake response actions at any time. In any event, EPA reserves its right to seek reimbursement from Respondent for costs incurred by the United States. Notwithstanding compliance with the terms of this Order, Respondent is not

released from liability, if any, for the costs of any response actions taken or authorized by EPA.

96. If EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work ordered, EPA may order the Respondent to stop further implementation of this Order for such period of time as EPA determines may be needed to abate any such release or threat and/or to undertake any action which EPA determines is necessary to abate such release or threat.
97. This Order is not intended to be nor shall it be construed to be a permit. Further, the parties acknowledge and agree that EPA's approval of any final Work Plan does not constitute a warranty or representation that the Work Plan will achieve the required cleanup or performance standards. Compliance by the Respondent with the terms of this Order shall not relieve the Respondent of its obligation to comply with RCRA or any other applicable local, State, or Federal laws and regulations.
98. The Respondent does not admit any of the factual or legal determinations made by the EPA and reserves all rights and defenses it may have regarding liability or responsibility for conditions at or from the Facility, with the exception of its right to contest EPA's jurisdiction to issue or enforce this Order and its right to contest the terms of this Order. The Respondent has entered into this Order in good faith without trial or adjudication of any issue of fact or law.
99. Notwithstanding any other provision of this Order, no action or decision by EPA pursuant to this Order, including without limitation, decisions of the EPA, the Director or Deputy Director of the RCRA Division, or any authorized representative of EPA, shall constitute final agency action giving rise to any right of judicial review prior to EPA's initiation of a judicial action to enforce this Order, including an action for penalties or an action to compel Respondent's compliance with the terms and conditions of this Order.
100. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive or other appropriate relief relating to the Facility, Respondent shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been raised in the present matter.

#### **XXXI. OTHER CLAIMS**

101. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, demand, or defense 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 constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken or migrating from the Facility.

## **XXXII. OTHER APPLICABLE LAWS**

102. All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations. Respondent shall obtain or cause their representatives to obtain all permits and approvals necessary under such laws and regulations.

## **XXXIII. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT**

103. Respondent agrees to indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising [solely] from or on account of acts or omissions of Respondent or its officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Order. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts. Respondent shall not be responsible for indemnifying the EPA for claims or causes of action solely from or on account of acts or omissions of EPA.

## **XXXIV. MODIFICATION**

104. This Order may only be modified by mutual agreement of EPA and Respondent. Any agreed modifications shall be in writing, be signed by both parties, shall have as their effective date the date on which they are signed by EPA, and shall be incorporated into this Order.
105. Any requests for a compliance date modification or revision of an approved Work Plan requirement must be made in writing. Such requests must be timely and provide justification for any proposed compliance date modification or Work Plan revision. EPA has no obligation to approve such requests, but if it does so, such approval must be in writing. Any approved compliance date or Work Plan modification shall be incorporated by reference into the Order.

## **XXXV. SEVERABILITY**

106. If any provision or authority of this Order or the application of this Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall remain in force and shall not be affected thereby.

## **XXXVI. TERMINATION AND SATISFACTION**

107. The provisions of this Order shall be deemed satisfied upon Respondent's and EPA's execution of an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" ("Acknowledgment"). EPA will prepare the Acknowledgment for Respondent's signature. The Acknowledgment will specify that Respondent has

demonstrated to the satisfaction of EPA that the terms of this Order, including any additional tasks determined by EPA to be required pursuant to this Order, have been satisfactorily completed. Respondent's execution of the Acknowledgement will affirm Respondent's continuing obligation (1) to preserve all records as required under the Order and (2) to recognize EPA's reservation of rights in accordance with these respective sections of the Order after the rest of the Order is satisfactorily completed.

**XXXVII. SURVIVABILITY/PERMIT INTEGRATION**

108. Except as otherwise expressly provided in this section, this Order shall survive the issuance or denial of a RCRA permit for the Facility, and this Order shall continue in full force and effect after either the issuance or denial of such permit. Accordingly, the Respondent shall continue to be liable for the performance of obligations under this Order notwithstanding the issuance or denial of such permit. If the Facility is issued a RCRA permit and that permit expressly incorporates all or a part of the requirements of this Order, or expressly states that its requirements are intended to replace some or all of the requirements of this Order, Respondent may request a modification of this Order and shall, with EPA approval, be relieved of liability under this Order for those specific obligations.

**XXXVIII. EFFECTIVE DATE**

109. The effective date of this Order shall be five (5) days after Respondent has received notice from EPA that EPA has signed the Order.

**AGREED AND CONSENTED TO:**

Walter Coke, Inc.

By: Carol W. Farrell  
Name: Carol W. Farrell  
Title: President

Dated: September 12, 2012  
(Typed or Printed)  
(Typed or Printed)

**U.S. Environmental Protection Agency**

By: Jeffrey T. Pallas

Jeffrey T. Pallas  
Acting Deputy Director  
RCRA Division  
US EPA, Region 4  
61 Forsyth Street S.W.  
Atlanta, Georgia 30303-3104

Dated: September 17, 2012

## Attachment A: DEFINITIONS & TERMS

Unless otherwise expressly provided herein or listed below, terms used in this Order which are defined in RCRA or in regulations promulgated under RCRA shall have the meaning assigned to them under RCRA or in such regulations.

- a) "Administrative Record" shall mean the record compiled and maintained by EPA relative to this Order. For information on the contents of the Administrative Record see "Guidance on Administrative Records for RCRA 3008(h) Actions," OSWER Directive 9940.4, July 6, 1989.
- b) An "Area of Concern" (AOC) includes any discrete contiguous area that is not a SWMU and has a probable release of hazardous waste or hazardous constituents that is determined by the EPA to pose a current or potential threat to human health or the environment.
- c) "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, et seq.
- d) The terms "Comply" or "Compliance" may be used interchangeably and shall mean performance of work required by this Order of a quality approvable by EPA, and in the manner and the time specified in this Order or any modification thereof or its attachments or any modification thereof. Respondent must meet both the quality and timeliness components of a particular requirement to be considered in compliance with the terms and conditions of this Order.
- e) "Contractor" shall include any subcontractor, consultant or laboratory retained to conduct or monitor any portion of the work performed pursuant to this Order.
- f) "Confirmatory Sampling" shall mean environmental sampling and analysis to confirm that hazardous waste or hazardous constituents have been released into the environment from SWMUs or AOCs at the Facility. Confirmatory Sampling may result in a determination of no further action.
- g) "Day" shall mean a calendar day unless expressly stated to be a business day.
- h) "Business Day" shall mean a day other than a Saturday, Sunday, or Federal Holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the end of the next business day.
- i) "EPA" or "U.S. EPA" shall mean the United States Environmental Protection Agency, and any successor departments or agencies of the United States.
- j) "Extent of Contamination" is defined as the horizontal and vertical area in which the concentrations of hazardous constituents in the environmental media being

investigated are above detection limits or background concentrations indicative of the region, whichever is appropriate as determined by the EPA.

- k) “Facility” shall mean the Walter Coke, Inc. facility located at 3500 35<sup>th</sup> Avenue North, Birmingham, Alabama 33618.
- l) “Hazardous Constituents” shall include mean those constituents contained within hazardous and nonhazardous solid waste that are listed in Appendix VIII of 40 C.F.R. Part 261 or in Appendix IX of 40 C.F.R. Part 264.
- m) “Interim Measures” for the purpose of this Order interim measures are actions necessary to minimize or prevent the further migration of contaminants subject to regulation under RCRA and limit actual or potential human and environmental exposure to contaminants subject to regulation under RCRA while long-term corrective action remedies are evaluated and, if necessary, implemented.
- n) “Institutional Controls and/or Land Use Restrictions” for the purpose of this Order are legal instruments that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.
- o) “RCRA” shall mean the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. §§ 6921 et. seq.
- p) “Receptors” shall mean those humans, animals, or plants and their habitats affected by releases subject to regulation under RCRA from the Facility.
- q) “Release” for purposes of this Order shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents that is subject to regulation under RCRA.
- r) A “Remedy” for the purposes of this Order, is selected actions or measures to be implemented to prevent, mitigate, and/or remediate any release of hazardous waste or hazardous constituents at or from the Facility regardless of whether the action or measure must be undertaken on the Respondent’s property or on adjacent properties impacted by hazardous wastes or hazardous constituents from the Facility.
- s) “Scope of Work” shall mean the outline of work that the Respondent must use to develop all Work Plans and reports required by this Order. All Scopes of Work and modifications or amendments thereto are incorporated by reference and are an enforceable part of this Order.
- t) “Site” shall mean the facility, as defined herein
- v) “SWMU Management Area” (SMA) means areas of SWMUs or AOCs with similar exposures, chemical drivers, and proposed remedial actions.

- w) “Solid Waste Management Unit” (SWMU) for the purpose of this Order means any unit which has been used for the treatment, storage or disposal of a solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid wastes. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding, for example, one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (e.g., product or process spills).
- x) “State” shall mean the State of Alabama.
- y) “Submittal” shall mean any written document that Respondent is required by this Order to send to EPA.
- z) “United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.
- aa) “Waste Material” shall mean (a) any hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (d) any hazardous waste under Alabama Code Section 22-30-3(5).
- bb) “Work” or “Obligation” shall mean any activity Respondent must perform to comply with the requirements of this Order and its attachments.

**Attachment B:**

**(For electronic version, Maps in PDF format are separately attached but incorporated as Attachment B into the Order)**

**MAPs prepared by Terracon for the  
Walter Coke Facility  
Birmingham, Alabama  
Project No. E1127096  
Figures 1-6  
Entitled in the Legend:**

**Figure 1: Proposed Solid Waste Management Areas (SMAs) dated 7/24/2012**

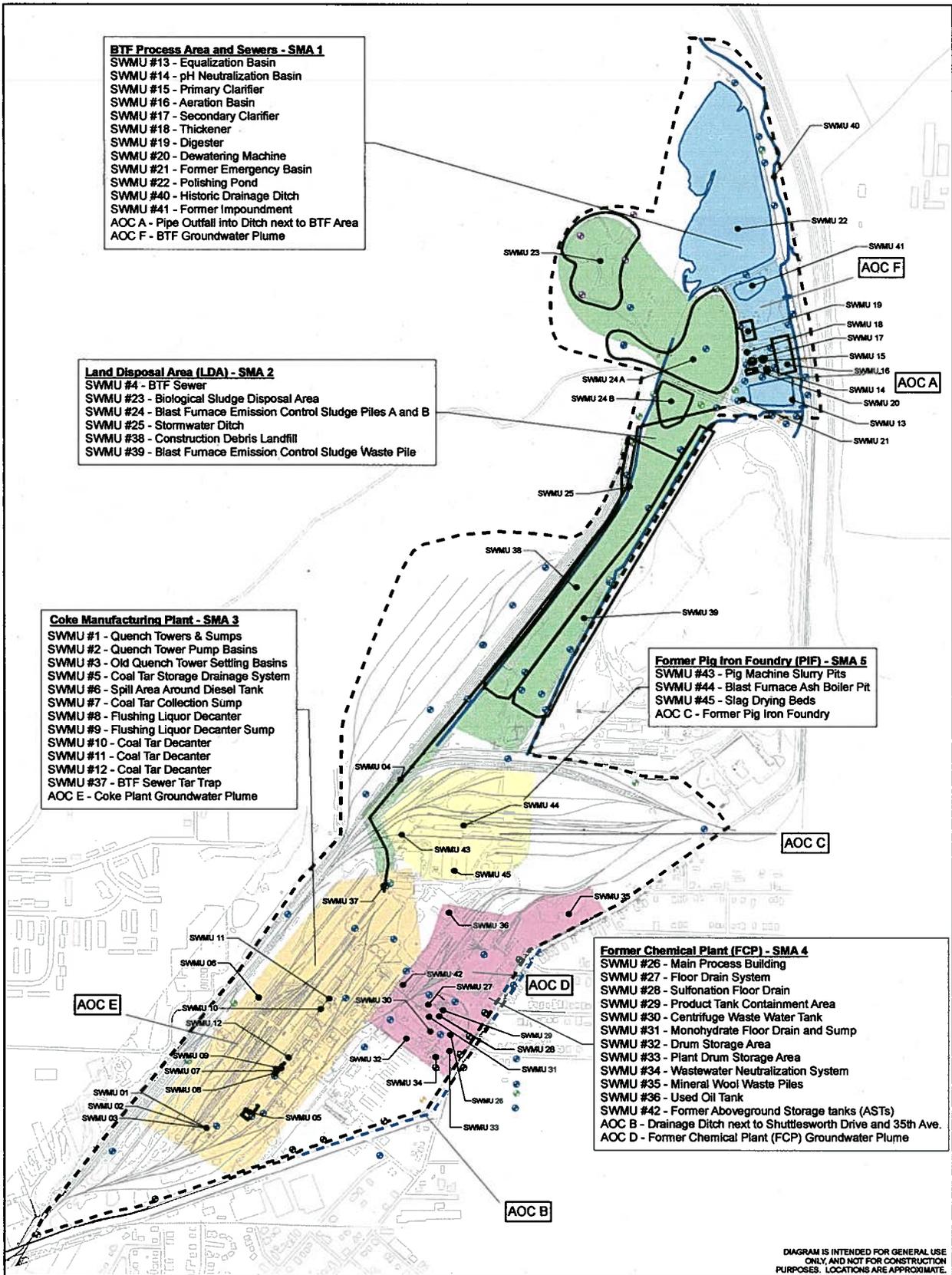
**Figure 2: BTF Process Area and Sewers - SMA 1 dated 8/16/2012**

**Figure 3: Land Disposal Area - SMA 2 dated 8/16/2012**

**Figure 4: Coke Manufacturing Plant - SMA 3 dated 8/16/2012**

**Figure 5: Former Chemical Plant - SMA 4 dated 8/16/2012**

**Figure 6: Former Pig Iron Foundry - SMA 5 dated 8/16/2012**



**BTF Process Area and Sewers - SMA 1**  
 SWMU #13 - Equalization Basin  
 SWMU #14 - pH Neutralization Basin  
 SWMU #15 - Primary Clarifier  
 SWMU #16 - Aeration Basin  
 SWMU #17 - Secondary Clarifier  
 SWMU #18 - Thickener  
 SWMU #19 - Digester  
 SWMU #20 - Dewatering Machine  
 SWMU #21 - Former Emergency Basin  
 SWMU #22 - Polishing Pond  
 SWMU #40 - Historic Drainage Ditch  
 SWMU #41 - Former Impoundment  
 AOC A - Pipe Outfall into Ditch next to BTF Area  
 AOC F - BTF Groundwater Plume

**Land Disposal Area (LDA) - SMA 2**  
 SWMU #4 - BTF Sewer  
 SWMU #23 - Biological Sludge Disposal Area  
 SWMU #24 - Blast Furnace Emission Control Sludge Piles A and B  
 SWMU #25 - Stormwater Ditch  
 SWMU #38 - Construction Debris Landfill  
 SWMU #39 - Blast Furnace Emission Control Sludge Waste Pile

**Coke Manufacturing Plant - SMA 3**  
 SWMU #1 - Quench Towers & Sumps  
 SWMU #2 - Quench Tower Pump Basins  
 SWMU #3 - Old Quench Tower Settling Basins  
 SWMU #5 - Coal Tar Storage Drainage System  
 SWMU #6 - Spill Area Around Diesel Tank  
 SWMU #7 - Coal Tar Collection Sump  
 SWMU #8 - Flushing Liquor Decanter  
 SWMU #9 - Flushing Liquor Decanter Sump  
 SWMU #10 - Coal Tar Decanter  
 SWMU #11 - Coal Tar Decanter  
 SWMU #12 - Coal Tar Decanter  
 SWMU #37 - BTF Sewer Tar Trap  
 AOC E - Coke Plant Groundwater Plume

**Former Pig Iron Foundry (PIF) - SMA 5**  
 SWMU #43 - Pig Machine Slurry Pits  
 SWMU #44 - Blast Furnace Ash Boiler Pit  
 SWMU #45 - Slag Drying Beds  
 AOC C - Former Pig Iron Foundry

**Former Chemical Plant (FCP) - SMA 4**  
 SWMU #26 - Main Process Building  
 SWMU #27 - Floor Drain System  
 SWMU #28 - Sulfonation Floor Drain  
 SWMU #29 - Product Tank Containment Area  
 SWMU #30 - Centrifuge Waste Water Tank  
 SWMU #31 - Monohydrate Floor Drain and Sump  
 SWMU #32 - Drum Storage Area  
 SWMU #33 - Plant Drum Storage Area  
 SWMU #34 - Wastewater Neutralization System  
 SWMU #35 - Mineral Wool Waste Piles  
 SWMU #36 - Used Oil Tank  
 SWMU #42 - Former Aboveground Storage tanks (ASTs)  
 AOC B - Drainage Ditch next to Shuttlesworth Drive and 35th Ave.  
 AOC D - Former Chemical Plant (FCP) Groundwater Plume

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

**Legend**

- Proposed Solid Waste Management Areas (SMAs)**
- BTF Process Area and Sewer - SMA 1
  - Land Disposal Area - SMA 2
  - Coke Manufacturing Plant - SMA 3
  - Former Chemical Plant - SMA 4
  - Former Pig Iron Foundry - SMA 5

- Notes:**
- 1) SWMU - Solid Waste Management Unit
  - 2) Management Area boundaries are used for approximation.
  - 3) AOC - Area of Concern



Project Mgr:	TWR	Scale:	SHOWN
Checked By:	TWR	Date:	7/24/2012
Approved By:	TWR	Project No.:	E1127096
Drawn By:	GFA	File Name:	Figure 1

**Terracon**  
 Consulting Engineers & Scientists  
 110 17th St. North  
 Birmingham, Alabama 35203  
 Phone: (205) 942-1288 Fax: (205) 443-5302

<b>SITE MAP</b>	
CLIENT:	<b>Walter Coke</b> 3500 35th Avenue North Birmingham, AL 35207

<b>FIGURE</b>
1

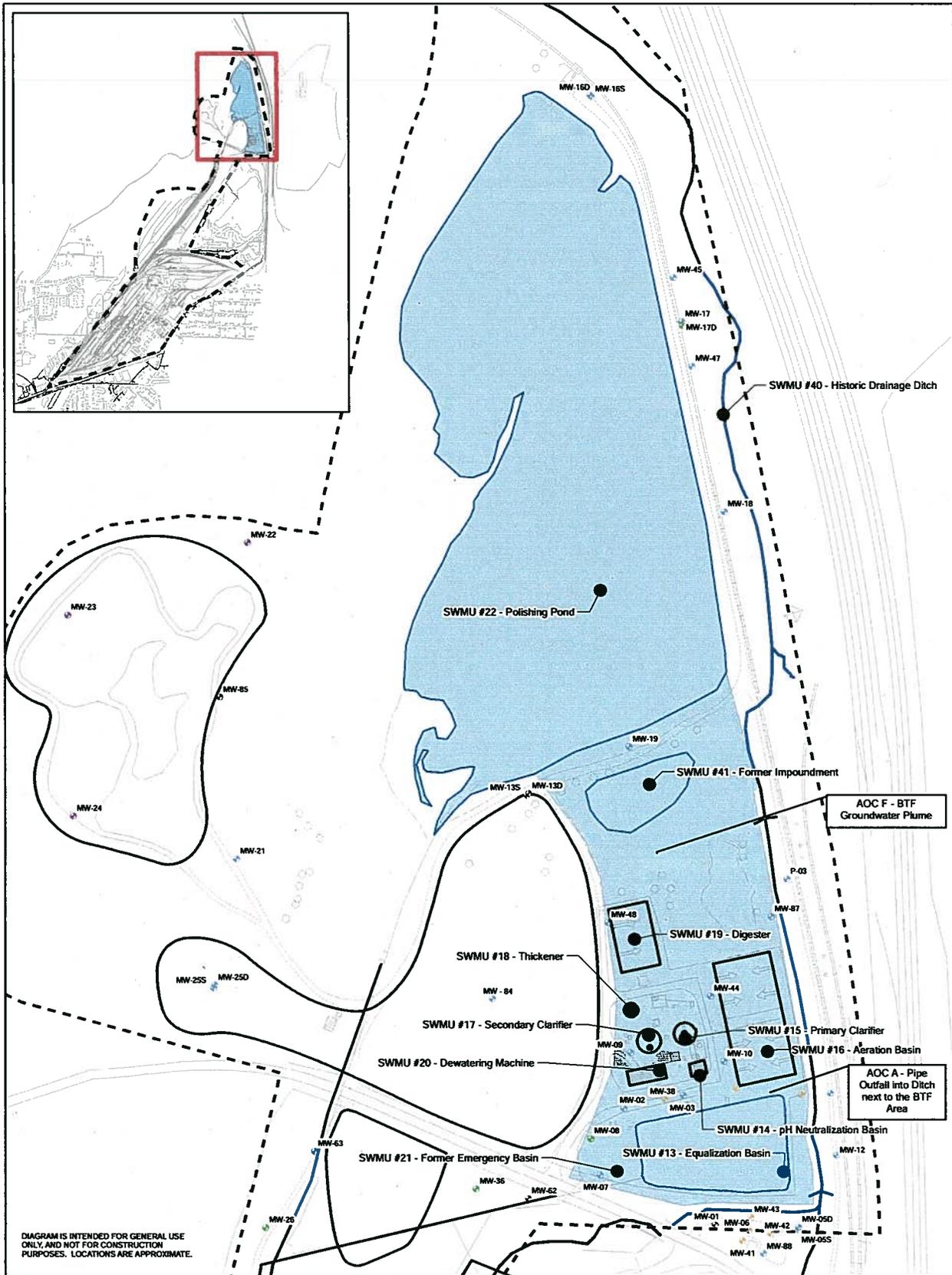


DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

**Legend**

- BTF Process Area and Sewers - SMA 1
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Residuum or Mixed Monitoring Well
- Non-Conasauga Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
  - 2) Management Area boundaries are used for approximation.
  - 3) AOC - Area of Concern



Project Mgr:	TWR	Scale:	SHOWN
Checked By:	TWR	Date:	8/16/2012
Approved By:	TWR	Project No.:	E1127096
Drawn By:	GFA	File Name:	Figure 2

**Terracon**  
 Consulting Engineers & Scientists  
 110 12th St. North  
 Birmingham, Alabama 35202  
 Phone: (205) 942-1289 Fax: (205) 413-5302

**BTF PROCESS AREA AND SEWERS - SMA 1**  
 CLIENT: **Walter Coke**  
 3500 35th Avenue North  
 Birmingham, AL 35207

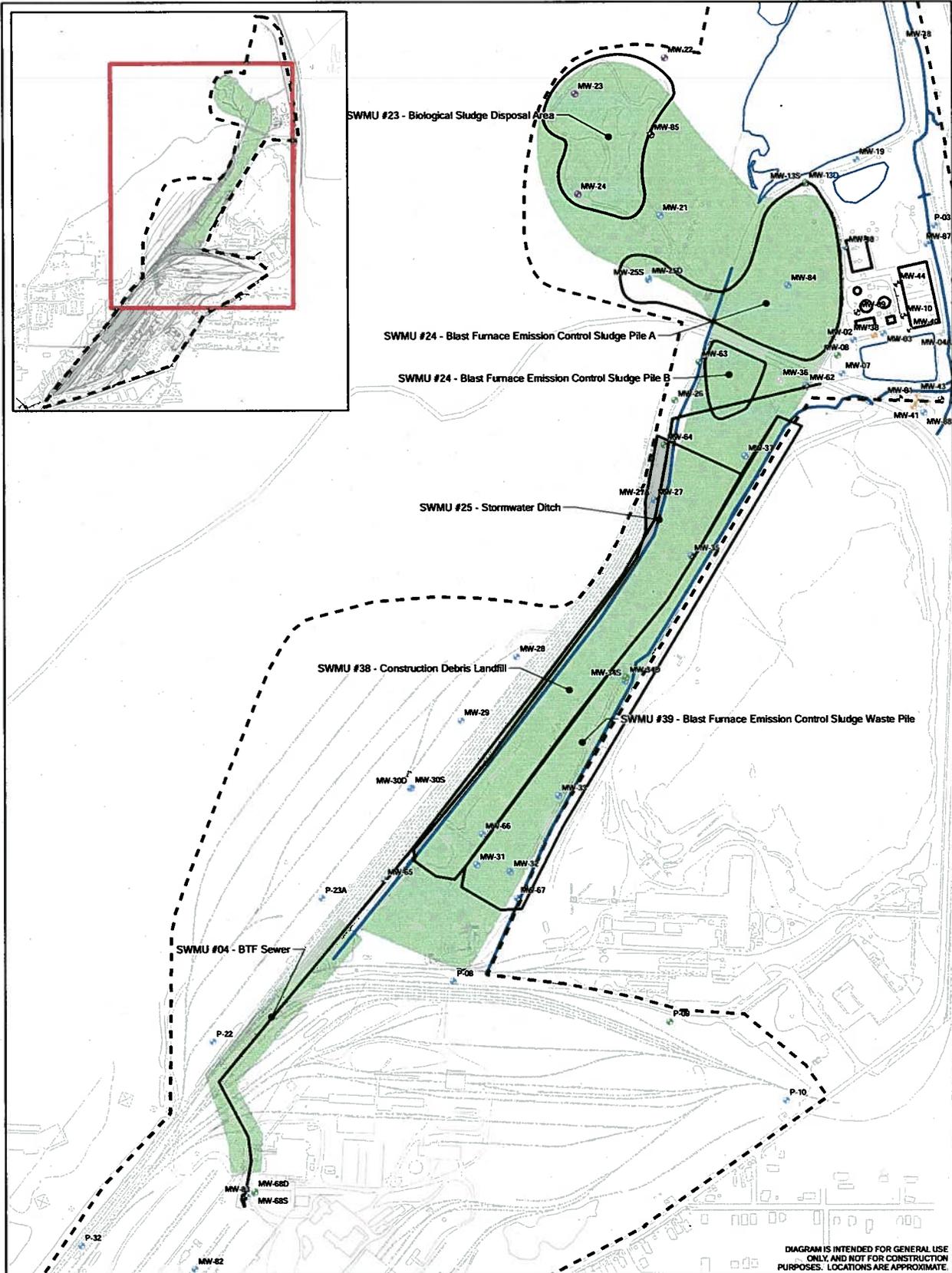


DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

**Legend**

- Land Disposal Area - SMA 2
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Residuum or Mixed Monitoring Well
- Non-Conasauga Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
  - 2) Management Area boundaries are used for approximation.
  - 3) AOC - Area of Concern



Project Mgr:	TWR
Checked By:	TWR
Approved By:	TWR
Drawn By:	GFA

**Terracon**  
 Consulting Engineers & Scientists  
 110 12th St. North Birmingham, Alabama 35203  
 Phone: (205) 942-1288 Fax: (205) 943-5302

Scale:	SHOWN
Date:	8/16/2012
Project No.:	E1127096
File Name:	Figure 3

LAND DISPOSAL AREA (LDA) - SMA 2
CLIENT: Walter Coke 3500 35th Avenue North Birmingham, AL 35207
FIGURE 3

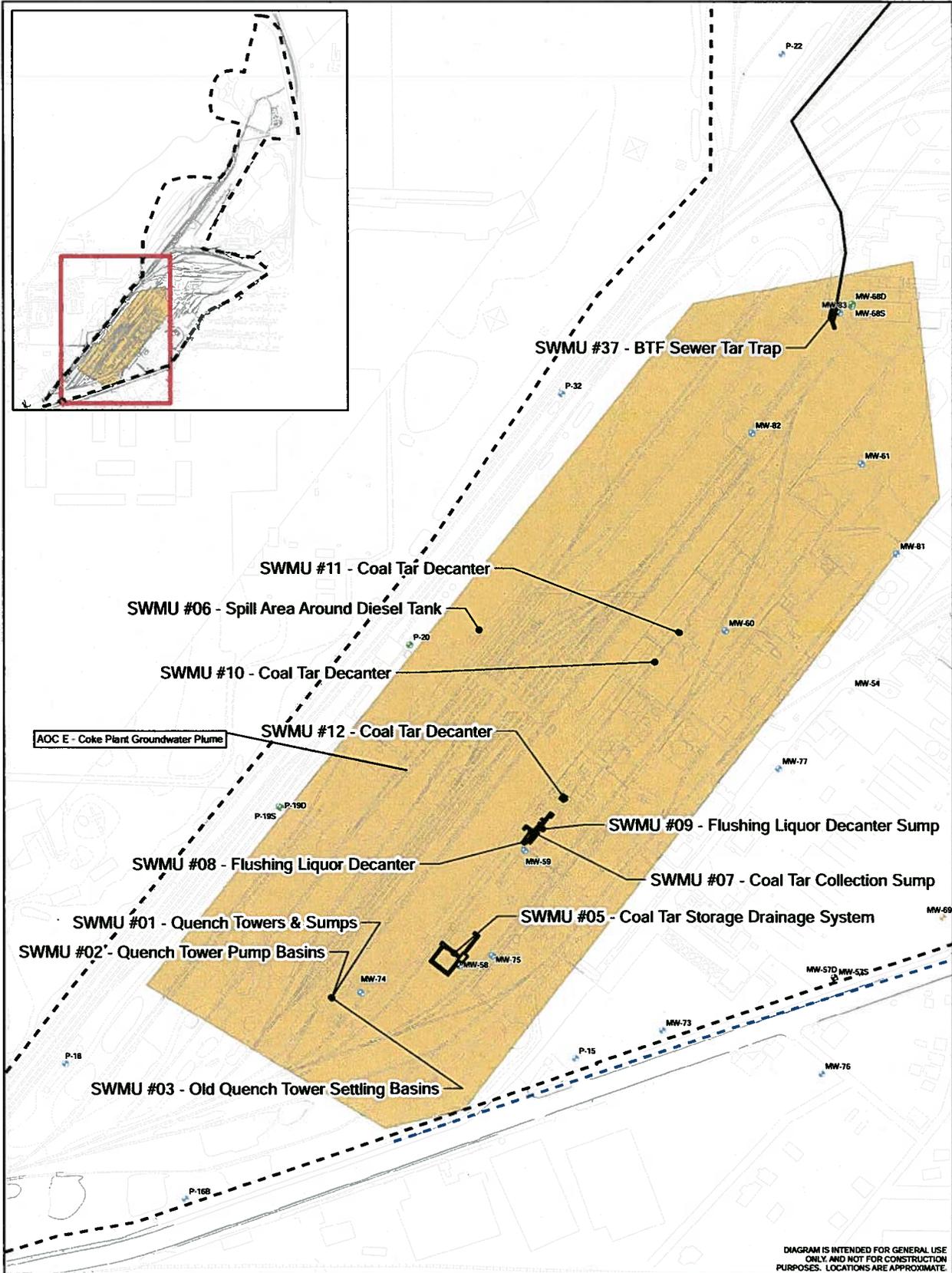


DIAGRAM IS INTENDED FOR GENERAL USE ONLY AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

**Legend**

- Coke Manufacturing Plant - SMA 3
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Residuum or Mixed Monitoring Well
- Non-Conasauga Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
  - 2) Management Area boundaries are used for approximation.
  - 3) AOC - Area of Concern



Project Mgr: TWR	Scale: SHOWN
Checked By: TWR	Date: 8/16/2012
Approved By: TWR	Project No: E1127096
Drawn By: GFA	File Name: Figure 4

**Terracon**  
 Consulting Engineers & Scientists  
 110 12th St. North Birmingham, Alabama 35203  
 Phone: (205) 942-1289 Fax: (205) 443-5302

**COKE MANUFACTURING PLANT - SMA 3**  
 CLIENT: Walter Coke  
 3500 35th Avenue North  
 Birmingham, AL 35207

**FIGURE**  
 4

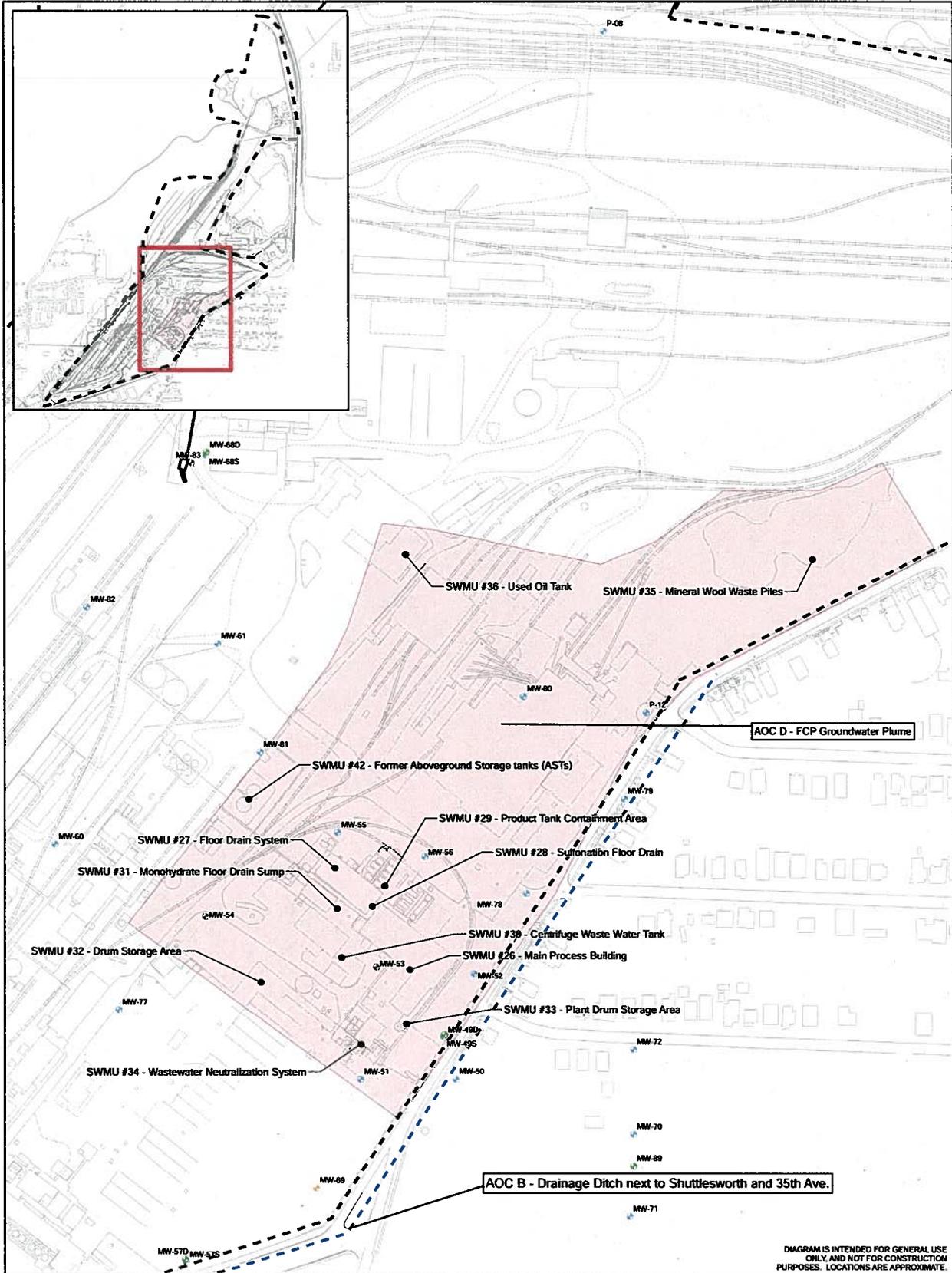
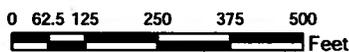


DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

**Legend**

- Former Chemical Plant - SMA 4
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Residuum or Mixed Monitoring Well
- Non-Conasauga Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
  - 2) Management Area boundaries are used for approximation.
  - 3) AOC - Area of Concern



Project Mgr:	TWR	Scale:	SHOWN
Checked By:	TWR	Date:	8/16/2012
Approved By:	TWR	Project No.:	E1127096
Drawn By:	GFA	File Name:	Figure 5

**Terracon**  
 Consulting Engineers & Scientists  
 110 12th St. North  
 Birmingham, Alabama 35202  
 Phone: (205) 942-1289 Fax: (205) 443-5302

**FORMER CHEMICAL PLANT (FCP) - SMA 4**  
 CLIENT: **Walter Coke**  
 3500 35th Avenue North  
 Birmingham, AL 35207

<b>FIGURE</b>
5

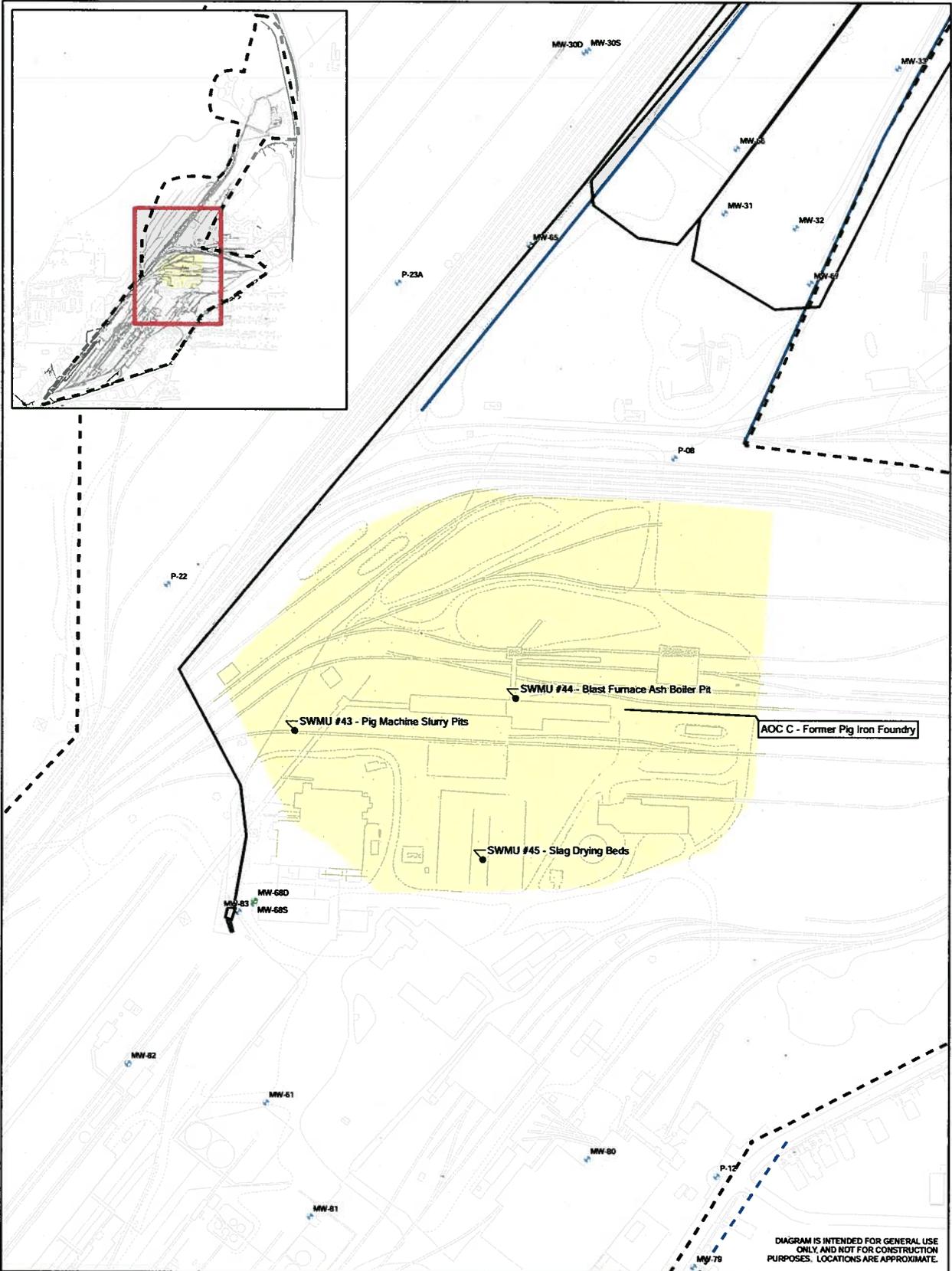
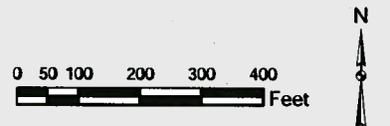


DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

- Legend**
- Former Pig Iron Foundry - SMA 5
  - Shallow Bedrock Monitoring Well
  - Deep Bedrock Monitoring Well
  - Residuum or Mixed Monitoring Well
  - Non-Conasauga Limestone Monitoring Well

- Notes:**
- 1) SWMU - Solid Waste Management Unit
  - 2) Management Area boundaries are used for approximation.
  - 3) AOC - Area of Concern



Project Mgr:	TWR	Scale:	SHOWN
Checked By:	TWR	Date:	8/16/2012
Approved By:	TWR	Project No.:	E1127096
Drawn By:	GFA	File Name:	Figure 6

**Terracon**  
 Consulting Engineers & Scientists  
 110 12th St. North  
 Birmingham, Alabama 35203  
 Phone: (205) 942-1289 Fax: (205) 943-5262

**FORMER PIG IRON FOUNDRY (PIF) - SMA 5**  
 CLIENT: **Walter Coke**  
 3500 35th Avenue North  
 Birmingham, AL 35207

**FIGURE**  
 6

## Attachment C: Financial Assurance

1. Following RTC issuance for each Remedy, the Respondent shall provide cost estimates, and demonstrate financial assurance for completing the approved Remedy. Thereafter, the Respondent shall review the Remedy cost estimates, adjust the financial assurance instrument, and submit the revised estimate and instrument to the EPA annually for each Remedy.
  - a. Within 120 calendar days of RTC issuance for each remedy, Respondent shall submit to EPA for review and approval an Estimated Cost of the Corrective Measures Work to Be Performed that includes the total third party cost of implementing the CMS remedy, including any necessary long-term CMS costs. Third-party costs are described in 40 C.F.R. § 264.142(a)(2) and shall include all direct costs and also all indirect costs (including contingencies) as described in EPA Directive No. 9476.00-6 (November, 1986), Volume III, Chapter 10. The cost estimate shall contain sufficient details to allow it to be evaluated by EPA.
  - b. Until the CMS remedy required by this Order is completed, Respondent shall annually adjust the Estimated Cost of the Corrective Measures Work for inflation within thirty (30) days after the close of Respondent's fiscal year for the Financial Test and Corporate Guarantee, or within sixty (60) days prior to the anniversary date of the establishment of all other financial assurance. In addition, the Respondent shall adjust the Estimated Cost of the Corrective Measures Work if EPA determines that any additional Work is required, pursuant to Section XXII Additional Work, or if any other condition increases the cost of the work to be performed under this Order.
  - c. The EPA shall either approve or disapprove, in writing, the Estimated Cost of the Corrective Measures Work. If the EPA disapproves the Estimated Cost of the Corrective Measures Work, the EPA shall either: (1) notify the Respondent in writing of the Estimated Cost of the Corrective Measures Work's deficiencies and specify a due date for submission of a revised Estimated Cost of the Corrective Measures Work, or (2) conditionally approve the CMS and notify the Respondent of the conditions.
  - d. The mechanism for financial assurance shall be one that is described and allowable under 40 C.F.R. §§ 264.140 through 264.151 Subpart H unless otherwise agreed to by the EPA.
  - e. Within 60 calendar days of EPA's written approval of the Estimated Cost of the Corrective Measures Work for each remedy, in order to secure the full and final completion of work in accordance with this Order, Respondent shall establish and maintain financial assurance for the benefit of EPA for the amount stated in the approved Estimated Cost of the Corrective Measures Work. Respondent may use one or more of the financial assurance instruments generally described in 40 C.F.R. § 264.151. Respondent may combine more than one instrument to demonstrate financial assurance in accordance with this Order, except that instruments guaranteeing performance (i.e. surety bond for performance, the financial test, or the

corporate guarantee) rather than payment may not be combined with other instruments.

- f. Any and all financial assurance instruments provided under this Order shall be satisfactory in form and substance as determined by EPA.
2. If the Respondent seeks to establish financial assurance by using the financial test specified in 40 C.F.R. § 264.151, Respondent shall submit to EPA within 60 days of EPA's approval of the Estimated Cost of the Corrective Measures Work all documentation required by that regulation, including the Chief Financial Officer's letter, the Respondent's most recent audited financial statements, and the special auditor's letter. Respondent's financial assurance shall be considered effective immediately upon EPA's determination that the submitted financial information appears to satisfy the financial test criteria.
3. If Respondent seeks to establish financial assurance by using a surety bond or a letter of credit, Respondent shall at the same time establish, and thereafter maintain, a standby trust fund, which meets the requirements specified in 40 C.F.R. § 264.151, into which funds from the other financial assurance instrument can be deposited, if the financial assurance provider is directed to do so by EPA.
4. (a) Respondent shall submit proposed (draft) financial assurance instruments and related required documents for review to EPA as follows:

EPA Project Coordinator  
RCRA Corrective Action Section  
Restoration and Underground Storage Tank Branch  
RCRA Division  
United States Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303

- (b) Following EPA's approval of Respondent's proposed (draft) financial assurance instruments for each and every Remedy, Respondent shall execute or otherwise finalize all instruments or other required documents, and shall submit them as follows:

Regional Administrator  
Attn: RCRA & CERCLA Records Program Manager  
Atlanta Federal Center – 11<sup>th</sup> Floor  
United States Environmental Protection Agency  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303

5. Also, copies of all final financial assurance instruments and related required documents shall be sent by certified mail to the State of Alabama.

6. If at any time during the effective period of this Order, the Respondent provides financial assurance by means of a corporate guarantee or financial test pursuant to 40 C.F.R. § 264.151, Respondent shall also comply with the other relevant requirements of 40 C.F.R. § 264.143(f), 40 C.F.R. § 264.151(f), and 40 C.F.R. § 264.151(h)(1) relating to these methods, unless otherwise provided in this Order, including but not limited to, (1) initial submission of required financial reports and statements from the guarantors' chief financial officer and independent certified public accountant; (2) annual re-submission of such reports and statements within ninety (90) days after the close of each of the guarantors' fiscal years; and (3) notification of EPA within ninety (90) days after the close of any of the guarantors' fiscal years in which any such guarantor no longer satisfies the financial test requirements set forth at 40 C.F.R. § 264.143(f)(1). Respondent further agrees that if the Respondent provides financial assurance by means of a corporate guarantee or financial test, EPA may request additional information (including financial statements and accountant's reports) from the Respondent or corporate guarantor at any time.
7. For purposes of evaluating the viability of a corporate guarantee or satisfaction of the financial test described in 40 C.F.R. § 264.151, references in 40 C.F.R. § 264.143(f) or 40 C.F.R. § 264.145(f) to "the sum of current closure and post-closure costs and the current plugging and abandonment cost estimates" shall mean "the sum of all environmental remediation obligations" (including obligations under CERCLA, RCRA, Underground Injection Control (UIC), TSCA and any other state or tribal environmental obligation) guaranteed by such company or for which such company is otherwise financially obligated in addition to the cost of the work to be performed in accordance with this Order.
8. If at any time EPA determines that a financial assurance instrument provided pursuant to this Section is inadequate, or no longer satisfies the requirements set forth or incorporated by reference in the Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, EPA shall so notify the Respondent in writing. If at any time the Respondent becomes aware of information indicating that any financial assurance instrument provided pursuant to this Section is inadequate or no longer satisfies the requirements set forth or incorporated by reference in the Section, whether due to an increase in the estimated cost of completing the Corrective Measures or for any other reason, then Respondent shall notify EPA in writing of such information within ten days. Within thirty (30) days of receipt of notice of EPA's determination, or within thirty (30) days of Respondent becoming aware of such information, as the case may be, Respondent shall obtain and present to EPA for approval, a proposal for a revised or alternative form of financial assurance listed in 40 C.F.R. § 264.151 that satisfies all requirements set forth or incorporated by reference in this Section.
9. Respondent's inability or failure to establish or maintain financial assurance for completion of the work shall in no way excuse performance of any other requirements of this Order, including, without limitation, the obligation of Respondent to complete the work in strict accordance with the terms of this Order.

10. If Respondent elects to establish financial assurance by using a letter of credit, a surety bond, or an insurance policy, any and all automatic renewal requirements and/or cancellation notification terms related to those instruments shall be in accordance with the regulations at 40 C.F.R. §§ 264.143, .145 and .151.
11. In the event that EPA determines that the Respondent (1) has ceased implementation of any portion of the work, (2) is significantly or repeatedly deficient or late in its performance of the work, or (3) is implementing the work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice (“Performance Failure Notice”) to both the Respondent and the financial assurance provider of Respondent’s failure to perform. The notice issued by EPA will specify the grounds upon which such a notice was issued, and will provide the Respondent with a period of ten days within which to remedy the circumstances giving rise to the issuance of such notice.
12. Failure by the Respondent to remedy the relevant Performance Failure to EPA’s satisfaction before the expiration of the ten-day notice period shall trigger EPA’s right to have immediate access to and benefit of the financial assurance. EPA may at any time thereafter direct the financial assurance provider to immediately (1) deposit into the standby trust fund, or a newly created trust fund approved by EPA, the remaining funds obligated under the financial assurance instrument (2) or arrange for performance of the work in accordance with this Order.
13. If EPA has determined that any of the circumstances of performance failure described above have occurred, and if EPA is nevertheless unable after reasonable efforts to secure the payment of funds or performance of the work in accordance with this Order from the financial assurance provider pursuant to this Order, then, upon receiving written notice from EPA, Respondent shall within ten days thereafter deposit into the standby trust fund, or a newly created trust fund approved by EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount equal to the estimated cost of the remaining Work to be performed in accordance with this Order as of such date, as determined by EPA.
14. Respondent may invoke the procedures set forth in Section XX. DISPUTE RESOLUTION, to dispute EPA’s determination that any of the circumstances of performance failure described above have occurred. Invoking the dispute resolution provisions shall not excuse, toll or suspend the obligation of the financial assurance provider to fund the trust fund or perform the work. Furthermore, notwithstanding Respondent’s invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion direct the trustee of such trust fund to make payments from the trust fund to any person that has performed the work in accordance with this Order until the earlier of (1) the date that Respondent remedies, to EPA’s satisfaction, the circumstances giving rise to EPA’s issuance of the relevant Performance Failure Notice or (2) the date that a final decision is rendered in accordance with Section XX. DISPUTE RESOLUTION, that Respondent has not failed to perform the work in accordance with this Order.

15. Reduction of Amount of Financial Assurance. If the Respondent believes that the estimated cost to complete the remaining Corrective Measures has diminished below the amount covered by the existing financial assurance provided under this Order, Respondent may, at the same time that Respondent submits the annual cost adjustment, or at any other time agreed to by EPA, submit a written proposal to EPA to reduce the amount of the financial assurance provided under this Section so that the amount of the financial assurance is equal to the estimated cost of the remaining work to be performed. The written proposal shall specify, at a minimum, the cost of the remaining work to be performed and the basis upon which such cost was calculated. EPA shall notify Respondent of its decision in writing. After receiving EPA's written decision, Respondent may reduce the amount of the financial assurance only in accordance with and to the extent permitted by such written decision. In the event of a dispute, Respondent may reduce the amount of the financial assurance required hereunder only in accordance with the final EPA dispute decision resolving such dispute. No change to the form or terms of any financial assurance provided under this Section, other than a reduction in amount, is authorized except as provided below.
16. Change of Form of Financial Assurance. (1) If the Respondent desires to change the form or terms of financial assurance, Respondent may, at the same time that the Respondent submits the annual cost adjustment, or at any other time agreed to by EPA, submit a written proposal to EPA to change the form of financial assurance. The submission of such proposed revised or alternative form of financial assurance shall be as provided in paragraph (2) below. The decision whether to approve a proposal shall be made in EPA's sole and unreviewable discretion and such decision shall not be subject to challenge by Respondent pursuant to the dispute resolution provisions of this Order or in any other forum. (2) A written proposal for a revised or alternative form of financial assurance shall specify, at a minimum, the cost of the remaining work to be performed, the basis upon which such cost was calculated, and the proposed revised form of financial assurance, including all proposed instruments or other documents required in order to make the proposed financial assurance legally binding. The proposed revised or alternative form of financial assurance shall satisfy all requirements set forth or incorporated by reference in this Section. EPA shall notify the Respondent in writing of its decision to accept or reject a revised or alternative form of financial assurance submitted pursuant to this Paragraph. Within ten (10) days after receiving a written decision approving the proposed revised or alternative financial assurance, Respondent shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding in a form substantially identical to the documents submitted to EPA as part of the proposal, and such financial assurance shall be fully effective. Respondent shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding to the RCRA & CERCLA Records Program Manager within thirty (30) days of receiving a written decision approving the proposed revised or alternative financial assurance, with a copy to the EPA Project Coordinator and the State. EPA shall release, cancel or terminate the prior existing financial assurance instruments only after Respondent has submitted all executed and/or otherwise finalized new financial assurance instruments or other required documents to EPA.

17. Release of Financial Assurance. Respondent may submit a written request to the EPA Project Coordinator that EPA releases the Respondent from the requirement to maintain financial assurance under this Section at such time as EPA and Respondent have both executed an “Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Right” pursuant to Section XXXVI: Termination and Satisfaction, of this Order. EPA shall notify both the Respondent and the provider(s) of the financial assurance that Respondent is released from all financial assurance obligations under this Order. Respondent shall not release, cancel or terminate any financial assurance provided pursuant to this section except as provided in this Order. In the event of a dispute, Respondent may release, cancel, or terminate the financial assurance required hereunder only in accordance with a final administrative or judicial decision resolving such dispute.

**Attachment D: SWMU Management Areas (SMAs)**

**SWMU MANAGEMENT AREAS (SMAs) – SWMU List**

SMA	SWMUs	Schedule for Completion and Submission of Final Report to EPA
<b>BTF PROCESS AREA &amp; SEWERS – SMA 1</b>	SWMU #13 (Equalization Basin) SWMU #14 (pH Neutralization Basin) SWMU #15 (Primary Clarifier) SWMU #16 (Aeration Basin) SWMU #17 (Secondary Clarifier) SWMU #18 (Thickener) SWMU #19 (Digester) SWMU #20 (Dewatering Machine) SWMU #21 (Former Emergency Basin) SWMU #22 (Polishing Pond) SWMU #40 (Historic Drainage Ditch) SWMU #41 (Former Impoundment) AOC A (Pipe Outfall into Ditch next to BTF Area) AOC F (BTF Groundwater Plume)	180 days
<b>Land Disposal Area (LDA) – SMA 2</b>	SWMU #4 (BTF Sewer) SWMU #23 (Biological Sludge Disposal Area) SWMU #24 (Blast Furnace Emission Control Sludge Piles A and B) SWMU #25 (Stormwater Ditch) SWMU #38 (Construction Debris Landfill) SWMU #39 (Blast Furnace Emission Control Sludge Waste Pile)	270 days
<b>Coke Manufacturing Plant (CMP) – SMA 3</b>	SWMU #1 (Quench Towers and Sumps) SWMU #2 (Quench Tower Pump Basins) SWMU #3 (Old Quench Tower Settling Basins) SWMU #5 (Coal Tar Storage Drainage System) SWMU #6 (Spill Area Around Diesel Tank) SWMU #7 (Coal Tar Collection Sump) SWMU #8 (Flushing Liquor Decanter) SWMU #9 (Flushing Liquor Decanter Sump) SWMU #10 (Coal Tar Decanter) SWMU #11 (Coal Tar Decanter) SWMU #12 (Coal Tar Decanter) SWMU #37 (BTF Sewer Tar Trap) AOC E (Coke Plant Groundwater Plume)	12 months
<b>Former Chemical Plant (FCP) – SMA 4</b>	SWMU #26 (Main Process Building) SWMU #27 (Floor Drain System) SWMU #28 (Sulfonation Floor Drain) SWMU #29 (Product Tank Containment Area) SWMU #30 (Centrifuge Waste Water Tank) SWMU #31 (Monohydrate Floor Drain and Sump) SWMU #32 (Drum Storage Area) SWMU #33 (Plant Drum Storage Area) SWMU #34 (Wastewater Neutralization System) SWMU #35 (Mineral Wool Waste Piles) SWMU #36 (Used Oil Tank) SWMU #42 (Former Aboveground Storage tanks [ASTs]) AOC B (Drainage Ditch next to Shuttlesworth Drive and 35 <sup>th</sup> Ave) AOC D (Former Chemical Plant [FCP] Groundwater Plume)	18 months
<b>Former Pig Iron Foundry (PIF) – SMA 5</b>	SWMU #43 (Pig Machine Slurry Pits) SWMU #44 (Blast Furnace Ash Boiler Pit) SWMU #45 (Slag Drying Beds) AOC C (Former Pig Iron Foundry)	24 months

**Attachment E: 45 SWMUs and 6 AOCs**

- 
- 1 - Quench Towers & Sumps
  - 2 - Quench Tower Pump Basins
  - 3 - Old Quench Tower Settling Basins
  - 4 - BTF Sewer
  - 5 - Coal Tar Storage Drainage System
  - 6 - Spill Area Around Diesel Tank
  - 7 - Coal Tar Collection Sump
  - 8 - Flushing Liquor Decanter
  - 9 - Flushing Liquor Decanter Sump
  - 10 - Coal Tar Decanter
  - 11 - Coal Tar Decanter
  - 12 - Coal Tar Decanter
  - 13 - Equalization Basin
  - 14 - pH Neutralization Basin
  - 15 - Primary Clarifier
  - 16 - Aeration Basin
  - 17 - Secondary Clarifier
  - 18 - Thickener
  - 19 - Digester
  - 20 - Dewatering Machine
  - 21 - Former Emergency Basin
  - 22 - Polishing Pond
  - 23 - Biological Sludge Disposal Area
  - 24 - Blast Furnace Emission Control Sludge Piles A and B
  - 25 - Storm Water Ditch
  - 26 - Main Process Building
  - 27 - Floor Drain System
  - 28 - Sulfonation Floor Drain
  - 29 - Product Tank Containment Area
  - 30 - Centrifuge Waste Water Tank
  - 31 - Monohydrate Floor Drain & Sump
  - 32 - Drum Storage Area
  - 33 - Plant Drum Storage Area
  - 34 - Wastewater Neutralization System

- 35 - Mineral Wool Waste Piles
- 36 - Used Oil Tank
- 37 - BTF Sewer Tar Trap
- 38 - Construction Debris Landfill
- 39 - Blast Furnace Emission Control Sludge Waste Pile
- 40 - Historic Drainage Ditch
- 41 - Former Impoundment
- 42 - Former Aboveground Storage Tanks (ASTs)
- 43 - Pig Machine Slurry Pits
- 44 - Blast Furnace Ash Boiler Pit
- 45 - Slag Drying Beds

- AOC A - Pipe Outfall into Ditch next to the BTF Area
- AOC B - Drainage Ditch next to Shuttlesworth and 35th Ave.
- AOC C - Former Pig Iron Foundry
- AOC D - Former Chemical Plant (FCP) Groundwater Plume
- AOC E - Coke Plant Groundwater Plume
- AOC F - BTF Groundwater Plume

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true and correct copy of the foregoing RCRA Section 3008(h) Administrative Order on Consent, In The Matter of Walter Coke, Inc., Docket No. RCRA-04-2012-4255, on the parties listed below in the manner indicated:

Joan Redleaf Durbin  
Associate Regional Counsel  
Office of Environmental Accountability  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, SW  
Atlanta, Georgia 30303

(Via EPA's internal mail)

Jeffrey T. Pallas  
Acting Deputy Director  
RCRA Division  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, SW  
Atlanta, Georgia 30303

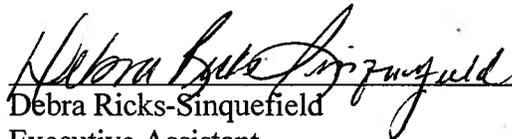
(Via EPA's internal mail)

Carol W. Farrell  
President  
Walter Coke, Inc.  
3500 35th Avenue North  
Birmingham, Alabama 35207-2918

(Via Certified Mail)

I also hereby certify that I have this day filed the original and one true and correct copy of foregoing RCRA Section 3008(h) Administrative Order on Consent, Docket No. RCRA-04-2012-4255, with the Regional Hearing Clerk, United States Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, GA 30303.

Dated this 17 day of September, 2012.

  
Debra Ricks-Sinquefield  
Executive Assistant  
RCRA Division  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, SW  
Atlanta, Georgia 30303-8960



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

**APR 16 2012**

Carol Farrell, President  
Walter Energy, Inc.  
P.O. Box 5327  
3500 35<sup>th</sup> Avenue  
Birmingham, Alabama 33618

**SUBJECT:** Approval of February 20, 2002, RCRA Facility Investigation Interim Remedial Measures Work Plan (IRMWP) – Groundwater Interim Measures Work Plan prepared by Arcadis, and the February 11, 2011, Groundwater Interim Measures Work Plan Addendum for the former Chemical Plant (Addendum IMWP) prepared by CH2MHill  
Walter Coke, Inc., Birmingham, Alabama  
EPA ID No. AL 000 828 848

Dear Ms. Farrell:

The U.S. Environmental Protection Agency has reviewed the above subject documents for the groundwater interim measures of the Former Chemical Plant submitted by Walter Coke, Birmingham, Alabama in February 2002 and revised in February 2011. Pursuant to Section VI of the RCRA Section 3008(h) Administrative Order dated September 29, 1989, EPA is hereby approving the groundwater interim measures Work Plan for the off-site migration of contaminated groundwater for the Former Chemical Plant.

This approval for the groundwater interim measures includes approval of Sections 2.0 and 5.0 of the above referenced IRMWP prepared by Arcadis, dated February 20, 2002, the above referenced Addendum IMWP prepared by CH2MHill, dated February 11, 2011, and the modifications to both documents as specified in the Enclosure entitled "EPA Final Comments on the Interim Measures Work Plan for the Off-site Migration of Contaminated Groundwater from the Former Chemical Manufacturing Plant." Together, these constitute the final interim measures work plan (IWMP) and the IWMP is considered effective on the date of this letter. Pursuant to the schedule contained in the Enclosure, Walter Coke is required to resubmit a final IMWP (to have everything in one document) for the Former Chemical Plant incorporating all of the changes to EPA within 30 days of the date of this letter.

## Enclosure

**EPA Final Comments on the Interim Measures Work Plan  
for the Off-site Migration of Contaminated Groundwater from the  
Former Chemical Manufacturing Plant  
Walter Coke, Inc., Birmingham, Alabama  
EPA ID No. AL 000 828 848  
Revised April 13, 2012**

### **Introduction**

EPA has completed its review of the Interim Remedial Measures Work Plan (IRMWP) for the Chemical Manufacturing Plant, dated February 20, 2002, and the Groundwater Interim Measures Work Plan Addendum (Addendum IMWP) for the former Chemical Manufacturing Plant dated February 11, 2011. Sections 2.0 and 5.0 of the IRMWP and the Addendum IMWP represent the proposed groundwater interim measures. The facility has proposed an interim measure for addressing off-site migration of contaminated groundwater from the former Chemical Manufacturing Plant. The interim measure is hydraulic containment with the secondary benefit of chemical mass reduction via groundwater recovery.

### **Comment #1 Objective of the Interim Measures (IM)**

Please add to the Scope in the final Interim Measures Work Plan (IMWP) for Groundwater Interim Measures the following objective: As a secondary benefit, the IM will reduce the mass of VOCs and SVOCs in the groundwater under the former Chemical Manufacturing Plant with the understanding that the final remedy goal for meeting the groundwater protection standards is to achieve the MCLs, regional screening levels (RSLs), and/or the Corrective Measures Study (CMS) risk-based standards.

### **Comment #2 Performance Objectives- Addendum IMWP**

The IM stated, “[t]he performance objective of the hydraulic containment IM is to maintain an inward gradient at those locations along the down gradient property boundary where chemical concentrations have been detected above the EPA’s tap water regional screening levels (RSLs). The specific area being targeted is “around” monitoring wells MW-49S, MW-50, and MW-51.”

- Revise the final IMWP to restate the performance objectives as follows: 1) Establish pumping rates in the recovery wells to maintain the inward gradient along the property line of MW-49S and MW 51. 2) Evaluate hydraulic interaction and capture for the interior wells (CW-3, CW-4, CW-5, and CW-6); and
- Revise the final IMWP to specify that Walter Coke will quantify the secondary benefits of chemical mass reduction by: 1) Determining on a quarterly basis, the mass of VOCs and SVOCs removed from the aquifer system-wide; and 2) Describe how Walter Coke will measure and calculate mass removal of VOCs and SVOCs.

quarter, and should continue to be submitted for two years.

- a. Quarterly monitoring reports should include:
  - i. Report Narrative
  - ii. Groundwater elevation data
  - iii. System Evaluation
    - a. Flow direction and magnitude, containment, potentiometric surface and chemical concentration maps, and data trend plots.
    - b. Well Performance (trend line plotted).
  - iv. Quarterly Groundwater Monitoring Results
    - a. Chemical concentrations from CW system sampling port
    - b. Chemical concentrations from monitoring wells (until EPA approves demonstrated system effectiveness)
    - c. Groundwater elevation tables.
  - v. Mass removal calculations system wide from the single combined system wide sample port.
  - vi. Recommendations for system improvement.
- H. The fourth quarter monitoring report shall include an "annual system effectiveness" report to include the calculated contaminant mass removal; and, if necessary, corrective measures with a schedule for implementation for EPA's concurrence.
- I. EPA may allow annual sampling after a minimum of 4 quarterly sampling events if Walter Coke can demonstrate, with EPA Approval, system effectiveness.

References:

Bair, Scott E. and George S. Roadcap, Comparison of Flow Models Used to Delineate Capture Zones of Wells: 1. Leaky-Confined Fractured-Carbonate Aquifer. *Groundwater*, Vol. 30, No. 2, March-April 1992, p. 199-211.

A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, EPA 600/R-08/003.

Elements for Effective Management of Operating Pump and Treatment System. 542-R-02-009 OSWER 9355.4-27FS-A December 2002.

Insitu Remediation Technology Status Report: Hydraulic and Pneumatic Fracturing. EPA542-K-94-005 April 1995.

Frank U. and N. Barkley, Remediation of Low Permeability Subsurface Formations by Fracturing Enhancement of Soil Vapor Extraction. *Journal of Hazardous Materials*, Vol. 40. 1995, p.191-201.