

Georgia Department of Natural Resources

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Mark Williams, Commissioner

Environmental Protection Division

Judson H. Turner, Director

Land Protection Branch

Keith M. Bentley, Branch Chief

Phone 404/657-8600 FAX 404/657-0807

September 27, 2012

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

COPY

Rhodia Inc.
c/o Mr. Paul Nemanic
Remediation Manager
CN 7500, 8 Cedar Brook Drive
Cranbury, NJ 08512-7500

Re: Monitoring and Maintenance Plan
Annual Groundwater and Surface Water Monitoring Report
Former Lyndal Chemical Site, HSI No. 10250,
1338 Coronet Drive, Dalton (Whitfield County)
Tax Parcel IDs 12-162-10-000 and 12-162-09-004

Dear Mr. Nemanic:

The Georgia Environmental Protection Division (EPD) has completed its review of the Revised Monitoring and Maintenance Plan (MMP), dated May 24, 2012, and the Annual Groundwater and Surface Water Monitoring Report, dated May 1, 2012, for the Former Lyndal Chemical Site (Site). The MMP describes the long-term monitoring and maintenance activities that will be performed at the Property to ensure on-going compliance with Type 5 Risk Reduction Standards (RRS) in accordance with Section 391-3-19-.07(10)(b) of the Rules for Hazardous Site Response (Rules). EPD hereby approves the Revised Monitoring and Maintenance Plan subject to the following conditions. Our comments regarding the MMP and Annual Groundwater and Surface Water Monitoring Report are provided below:

Maintenance and Monitoring Plan

1. EPD has included additional language in the Land-Use Certification Form regarding potential exposure to on-site workers from contact with contaminated soil or groundwater. Please use the enclosed Land Use Certification Form for all subsequent annual reports.
2. If major damage to the concrete cap is identified (bulleted items in Section 3.2), EPD should be notified within 30 days.
3. Activities such as surface water sampling, field measurements, equipment operation and decontamination, IDW management, quality assurance/quality control, and sample handling, preservation, and shipping must be conducted in accordance with the latest version of the appropriate USEPA Region IV Science and Ecosystem Support Division operating procedure.

4. SW-61 is not part of the required annual groundwater monitoring program, although it is marked as such on Figure 3. Please remove highlighting of SW-61 from Figure 3 in future reports.

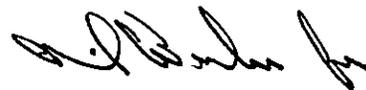
Annual Groundwater and Surface water Monitoring Report

5. As stated in our March 5, 2012 comment letter, Rhodia should attempt to locate monitoring well DW-32 in order to perform a proper abandonment in the event it has been damaged and is unusable. Please discuss these efforts in the next annual report.
6. It appears that the March 14, 2011 Sampling results for SW-49 were not included in the Mann-Kendall (MK) trend analysis. If this is the case, please include a note to that effect in future MK reporting.

EPD's approval of the MMP extends only to those technical aspects of the document that expressly require EPD approval under applicable rules and statutes. This approval is not an endorsement by EPD that it accepts as conclusive any representations made in the document. Nor does EPD guarantee or warrant that the document is free of errors or omissions. EPD may later withdraw approval of this document, in whole or in part, if EPD determines that withdrawal is necessary to ensure compliance with the applicable rules and statutes.

Please return the signed Uniform Environmental Covenant, including proof of delivery to required entities, to EPD by October 29, 2012. The next annual groundwater monitoring report should be submitted by May 1, 2013. If you have any questions please contact John Maddox of my staff at 404-657-8600.

Sincerely,



Derrick Williams
Program Manager
Response and Remediation Program

Encl: Example Land-Use Certification Form

c: Mr. Peter Battisti, Vericol (via electronic mail)
Mr. Edwin S. Schwartz, Esq., Sweetnam & Schwartz, LLC (via electronic mail)

File: HSI No. 10250

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**LAND-USE CERTIFICATION FORM
LYNDAL CHEMICAL SITE, HSI No. 10250**

TYPE	No.	CRITERIA RESPONSE	YES	NO
Land Use	1	Does this property meet the definition of non-residential property as defined in HSRA Rule 391-3-19.02(2)? "Non-residential property means any property or portion of a property not currently being used for human habitation or for other purposes with a similar potential for human exposure, at which activities have been or are being conducted that can be categorized in one of the 1987 Standard Industrial Classification major group..."		
	1a	If no to 1, attach a written explanation to this form.		
Exposure	2	Has excavation, construction, utility installation or maintenance, or similar land disturbing activities been conducted at the site within the last year?		
	2a	If yes to 2, was work performed using appropriate personal protective equipment (PPE)?		
	2b	Are site workers exposed directly to soils that do not meet the residential RRS at this HSRA site in excess of 250 days per year?		
	2c	If yes to 2b, are these same workers exposed to soils at this HSRA site in excess of 25 years throughout their career?		
Institutional Controls	3	Do all leases or other property instruments for the site have the applicable deed notice language inserted into them.		
	3a	If no to 3, attach a written explanation to this form.		
Inspection	4	Date of Inspection and Name of Inspector:		
	4a	Photographs showing current land use (attached)		

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, 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.

NAME (Please type or print)

TITLE

SIGNATURE

DATE

Rhodia Inc.

**Revised Monitoring and
Maintenance Plan**

Former Lyndal Chemical Site
Dalton, Georgia
HSI Site No. 10250

May 24, 2012



A handwritten signature in blue ink, appearing to read "C. Miller", written over a horizontal line.

Christopher Miller
Project Geologist

A handwritten signature in black ink, appearing to read "Evan B. Clark", written over a horizontal line.

Evan B. Clark, PE
Senior Project Manager

**Revised Monitoring and
Maintenance Plan**

Former Lyndal Chemical Site
Dalton, Georgia
HSI Site No. 10250

Prepared for:
Rhodia Inc.

Prepared by:
ARCADIS U.S., Inc.
1000 Cobb Place Blvd.
Bldg. 500-A
Kennesaw
Georgia 30144
Tel 770 428 9009
Fax 770 428 4004

Our Ref.:
GA062536

Date:
May 24, 2012

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B	Inspection Checklist/Land-Use Certification Form
C	Maintenance Record Form



Monitoring and Maintenance Plan

Former Lyndal Chemical Site
Dalton, Georgia
HSI No. 10250

List of Acronyms

ARCADIS	ARCADIS U.S., Inc.
CAP	Corrective Action Plan
Chemence	Chemence, Inc.
EPD	Georgia Department of Natural Resources Environmental Protection Division
HSRA	Hazardous Site Response Act
ISWQS	In-Stream Water Quality Standards
LPB	liquid production building
MMP	Monitoring and Maintenance Plan
PPE	personal protective equipment
Rhodia	Rhodia Inc.
RPI	Rhone-Poulenc, Inc.
RRS	risk reduction standards
SESD	Science and Ecosystem Support Division
USEPA	U.S. Environmental Protection Agency
Vericol	Vericol, Inc.
VOC	volatile organic compound



CD Certification Page

The electronic copy of the **Revised Monitoring and Maintenance Plan** for the Rhodia, Inc. (former Lyndal Chemical Site in Dalton, Georgia, HSI No. 10250) is complete and identical to the paper copy. The data on the CD was scanned for viruses using ARCADIS' standard security software and, to the best of ARCADIS' knowledge, is virus free.

A handwritten signature in black ink that reads "Evan B. Clark". The signature is written in a cursive style and is positioned above a horizontal line.

Evan B. Clark, PE
Senior Project Engineer



Revised Monitoring and Maintenance Plan

Former Lyndal Chemical Site
Dalton, Georgia
HSI No. 10250

5. Professional Engineer Certification

I certify that I am a qualified groundwater scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction.



Evan Clark, PE
Project Engineer
Georgia Registration No. 23871


Date 5/24/12



Revised Monitoring and Maintenance Plan

Former Lyndal Chemical Site
Dalton, Georgia
HSI No. 10250

1. Introduction

On behalf of Rhodia Inc. (Rhodia), ARCADIS U.S., Inc. (ARCADIS) has prepared this Revised Monitoring and Maintenance Plan (MMP) to address the Georgia Department of Natural Resources Environmental Protection Division (EPD), Chapter 391-3-19-.06, Hazardous Site Response Act (HSRA) rules, for the former Lyndal Chemical site (site).

The approved Revised Corrective Action Plan (CAP), Addendum 4 (ARCADIS 2009) outlines the use of Type 5 risk reduction standards (RRSs) for groundwater throughout the subject site, and Type 5 RRSs for soil under the liquid production building (LPB). The approved Revised CAP, Addendum 5 (ARCADIS 2011) outlines the use of Type 5 RRSs for soil under the warehouse and pilot plant building in addition to the LPB. This MMP was developed to ensure compliance with Type 5 RRS in accordance with Section 391-3-19-.07(10)(b) of the Rules for Hazardous Site Response.

1.1 Site Location

The site is located at 1338 Coronet Drive, just south of the northern boundary of the City of Dalton, in Whitfield County, Georgia. The site, which occupies approximately 10.25 acres, is located in an industrial area and is fenced along all property boundaries. The location of the site superimposed over a regional topographic map is included as Figure 1. The property was initially developed in 1965 by Chemical Processing of Georgia, Inc., which manufactured textile products (wettors, surfactants, and softeners for dyes and carpet finishings) and processed guar gum. The original plant buildings consisted of what are currently the LPB, offices, and laboratory.

1.2 Site Operational History

In approximately 1971, the warehouse on the western portion of the property was constructed. Between 1971 and 1980, the pilot plant was added on to the LPB. Around 1980, the facility was acquired by Lyndal Chemical, Division of Mill Onyx Group, Kewanee Industries, Inc. and subsequently became the Lyndal Division of Colloids, Inc. during the 1980s. Lyndal Chemical manufactured the same products as Chemical Processing of Georgia, Inc. In 1980 and 1981, Lyndal Chemical constructed a guar gum plant (guar gum is used for fracturing oil wells, as a print paste, as a binder, and as a thickener for foods). Rhone-Poulenc, Inc. (RPI) acquired the property in 1989 and continued to produce the same products.

The facility shut down production in 1992, and RPI completely ceased operation in November 1992. The facility was dormant until 1996, when it was leased to Rite

Industries, Inc., which distributed chemicals and manufactured water treatment chemicals for the carpet industry. RPI transferred ownership of the site to Rhodia in January 1998, when RPI formed this new company from its specialty chemical business (Dames & Moore 1998). Rite Industries, Inc. operated the plant until 2000 and then vacated the property. The plant remained dormant until 2001, when it was leased to Vericol, Inc. (Vericol), a subsidiary of Chemence, Inc. (Chemence). Vericol and/or Chemence have conducted various operations at the facility. Rhodia's site lease to Vericol has been terminated. Rhodia is now in the process of finalizing the sale of the site to Vericol.

2. Monitoring and Maintenance Plan Overview

This document has been created to ensure that the institutional and engineering controls outlined in the Revised CAP, Addendums 4 and 5 are in place and properly maintained. These controls, as part of the Type 5 RRSs for soil and groundwater, include the following:

- Direct use or extraction of groundwater from anywhere on the site is prohibited.
- The removal, destruction, or alteration of the concrete floor in the site buildings (warehouse, pilot plant building, and LPB) in such a way as to make any of the underlying soil above Type 4 RRSs accessible is prohibited, unless the concrete floor is expeditiously replaced in a manner so as to constitute a functionally equivalent engineering control.
- Excavation, construction, utility installation or maintenance, and similar land disturbing activities in soil below site buildings included in the Type 5 area is prohibited, unless such work is performed using appropriate personal protective equipment (PPE) by informed and properly trained contractors such that human exposure to potentially hazardous materials does not occur.
- Residential use of any existing or future buildings in the Type 5 RRS area is prohibited.
- Permanent markers identifying the Type 5 RRS areas will be installed and maintained.
- All improvements located in whole or in part on any portion of other Type 5 property must comply with institutional controls.

- Semiannual surface water and annual groundwater monitoring will be performed from select wells to ensure compliance with the approved RRSs. A list of the approved site-specific RRSs for soil and groundwater is included in Appendix A.

The following section outlines the specific items that will be inspected and/or performed on a routine basis to ensure that the controls outlined above are maintained.

3. Monitoring and Maintenance Plan Inspections

The site will be inspected, as described below, throughout the monitoring and maintenance period twice per year in conjunction with semiannual surface water and annual groundwater sampling events. At least one of those inspections per 2-year period will be conducted by a registered professional engineer. Also, at least one inspection per 2-year period will be conducted during or immediately following a significant rain event.

These inspections will ensure and document that the land use restrictions and other institutional and engineering controls as presented in Section 2 are followed. During site inspections, a Checklist and a Land Use Certification Form will be completed by the inspector and submitted with the Annual Groundwater and Surface Water Monitoring Report. A sample Inspection Checklist and Land Use Certification Form are included as Appendix B.

3.1 Land Use

During site inspections, a site walk will be performed to look for evidence of demolition, construction, and/or maintenance that would potentially violate the land use provisions. Furthermore, any indication of change of ownership or change of site use will also be documented in the Inspection Checklist. Additionally, a Land Use Certification Form will be completed certifying that the property continues to meet the definition of a non-residential property as defined by the HSRA Rule 391-3-19.02(2).

The results of the site inspection and the completed Land Use Certification Form will be submitted with each Annual Monitoring Report. If a violation of the land use is observed, Rhodia will notify EPD within 60 days of the observation.

3.2 Concrete Slabs

Concurrent with the inspections outlined above, the warehouse, pilot plant, and LPB will be inspected to verify that their respective concrete slabs (caps) are in place and in good condition. Specifically, this will include the following;

- Water is not allowed to collect on the caps for more than 24-hours.
- Cracks in the caps that exist throughout the entire thickness of the concrete slab are not permitted.
- The caps must be in place and unaltered (unless prior approval from EPD).
- Surface water drainage is not allowed to undermine/erode soil under the caps.

If damage of the concrete caps is detected during inspections, details of the damage, as well as the status of the repair, will be included in the subsequent Annual Monitoring Report. If repairs to the concrete caps are needed, those will be completed within 4 months of the inspection.

3.2.1 Long-Term Maintenance

In order for the concrete caps to exist as a long-term remedy, maintenance will be performed to address any potential problems with the caps as they arise. This includes:

- Repairing cracks in the concrete with an appropriate filler (epoxy-based or similar) suitable for the aperture of the crack;
- Applying a seal, if applicable (epoxy based or similar), to prevent water infiltration;
- Creating positive drainage on the caps to prevent ponding;
- Ensuring storm water runoff is not allowed to erode soil under the caps.

Any repairs and/or maintenance required to the caps will be summarized in a Maintenance Record Form (Appendix C) and submitted with the subsequent Annual Monitoring Report.

3.3 Type 5 RRS Boundary Markers

A total of four permanent stone monuments will be erected, as required, to outline the locations of the Type 5 areas. These markers will be placed in prominent locations based on the Type 5 areas outlined in the Revised CAP, Addendums 4 and 5, and as indicated on Figure 2. Furthermore, Type 5 area notification signs will be installed at the entrance/exit point of all Type 5 structures on site. The stone monuments and notification signs will state “Restricted Area Subject to Environmental Covenant – Hazardous Site Inventory No. 10250. Use of groundwater prohibited on this property. Contact Georgia Environmental Protection Division or Rhodia, Inc. prior to disturbing or digging under building foundations”.

The notification signs and stone monuments will be inspected semiannually to verify that they are still in place and in good overall condition. This information will be recorded on the MMP checklist. Damage to the signs or markers that would be noted as damage on the Inspection Checklist include, but is not limited to:

- Crushed or broken markers;
- Defaced markers or signs that render the markers illegible;
- Missing markers or signs.

If damage of the monuments is detected during inspections, details of the damage, as well as the status of the repair, will be noted on the Inspection Checklist, summarized on the Maintenance Record Form, and included with the subsequent Annual Monitoring Report. If repairs or replacement of the monuments caps are needed, those will be completed within 4 months of the inspection.

3.4 Groundwater and Surface Water Sampling

Annual groundwater and semiannual surface water monitoring is required as part of the Type 5 corrective action for groundwater on site to verify that groundwater in excess of Type 1 or 2 RRS is not expanding past the Type 5 groundwater area (Figure 3).

Groundwater samples will be collected following U.S. Environmental Protection Agency (USEPA) Region IV Science and Ecosystem Support Division (SESD) Operating Procedure Number SESDPROC-301-R1 (October 2011) for low-flow/low-volume purging techniques. Low-flow/low-volume purging yields a consistent and representative sample by extracting groundwater from the interval of which the intake

tubing is placed (within the screened interval). The purge rate is adjusted to match the recharge rate of each individual monitoring well, resulting in minimal and stabilized drawdown. Purging is considered adequate when drawdown has stabilized; pH measurements remain constant within 0.1 standard unit; specific conductance, temperature, and dissolved oxygen measurements vary no more than 10 percent among at least three consecutive readings; and the sample is below 10 Nephelometric Turbidity Units.

Immediately following the completion of monitoring well purging, groundwater samples will be collected using a peristaltic pump and dedicated Teflon[®] tubing. Samples will be collected by the reverse-flow method to ensure volatile organic compound (VOC) sample integrity.

Following the completion of sampling, groundwater samples will be labeled and immediately packed into a cooler with shock-absorbing material and a completed chain of custody form, which will be secured to the inside lid of the cooler. Signed custody seals will be affixed to the outside cooler body/lid joint, and samples will be delivered by overnight courier to a state-approved laboratory. Each sample will be analyzed for VOCs by USEPA Method 8260B plus cyclohexane. The condition of the monitoring wells will also be recorded on the checklist. Table 1 summarizes the approved annual groundwater and semiannual surface water program. Groundwater and surface water sample locations are illustrated on Figure 3.

3.4.1 Analytical Results Comparison to Applicable Standards

The results of the groundwater and surface water samples will be reviewed following each monitoring event and compared to site-specific RRSs (groundwater) and In-Stream Water Quality Standards (ISWQS; Surface Water). In the event that an off-site groundwater result exceeds Type 1-2RRS in groundwater and/or ISWQS in surface water, EPD will be notified in the subsequent Annual Monitoring Report. Any monitoring location that exceeds its representative standard will be resampled during the next semi-annual monitoring event to provide confirmation. If the confirmation sample also exceeds the representative standard, an evaluation of alternate corrective actions will be completed, and a Revised CAP will be prepared and submitted to EPD in conjunction with the next planned Annual Monitoring Report.

4. Reporting

Annual Monitoring Reports will be prepared as requested in the October 18, 2010 EPD letter to document the results of the sampling outlined in Section 3.4, and submitted to



Revised Monitoring and Maintenance Plan

Former Lyndal Chemical Site
Dalton, Georgia
HSI No. 10250

EPD by May 1 of each calendar year. The Annual Report will include analytical results from the annual groundwater monitoring and semiannual surface water monitoring; an interpretation of the data to ensure the site is in compliance with site-specific RRSs; and the results of the MMP inspections including the Inspection Checklist, Land Use Certification Form, and a Maintenance Record Form.

Additional details of relevant site information which will be included in the Annual Reports are provided in the following bullet list:

- Groundwater elevations and flow directions;
- Purging and sampling techniques;
- Comparison of analytical results to site-specific RRSs;
- Analytical summary tables and figures;
- Statistical analysis of monitoring wells which exceed the Types 1 through 4 RRSs (every 5 years) using the Mann-Kendall Test and linear regression methods;
- A review (every 5 years) to summarize and evaluate the conditions of the engineering controls;
- Summary the findings of the semiannual inspections including a completed Inspection Checklist, Land Use Certification Form, and Maintenance Record Form from each inspection, and photographic documentation of the Type 5 stone monuments and signage.

The site representative who can be contacted regarding long-term monitoring and maintenance requirements is as follows:

Mr. Paul Nemanic
Hydrogeologist/Remediation Manager
CN-7500, 8 Cedar Brook Drive
Cranbury, NJ 08512
609.860.4337

The next Annual Monitoring Report will be submitted to EPD by May 1, 2013.



Revised Monitoring and Maintenance Plan

Former Lyndal Chemical Site
Dalton, Georgia
HSI No. 10250

References

ARCADIS. 2009. Revised Corrective Action Plan Addendum 4 Former Lyndal Chemical Site, Dalton, Georgia, HSI Site Number 10250.

ARCADIS. 2011. Revised Corrective Action Plan Addendum 5 Former Lyndal Chemical Site, Dalton, Georgia, HSI Site Number 10250.

Dames & Moore. 1998. Compliance Status Report HSI Site Number 10250, Rhodia Inc. (Former Rhone-Poulenc Inc.) 1338 Coronet Drive, Dalton, Georgia.

Georgia Department of Natural Resources, Environmental Protection Division. 1999. Hazardous Site Response Act, Georgia Department of Natural Resources, Chapter 391-3-19.

Table 1 Annual and Semi-Annual Monitoring Program

Rhodia HSI No. 10250 Dalton, Georgia

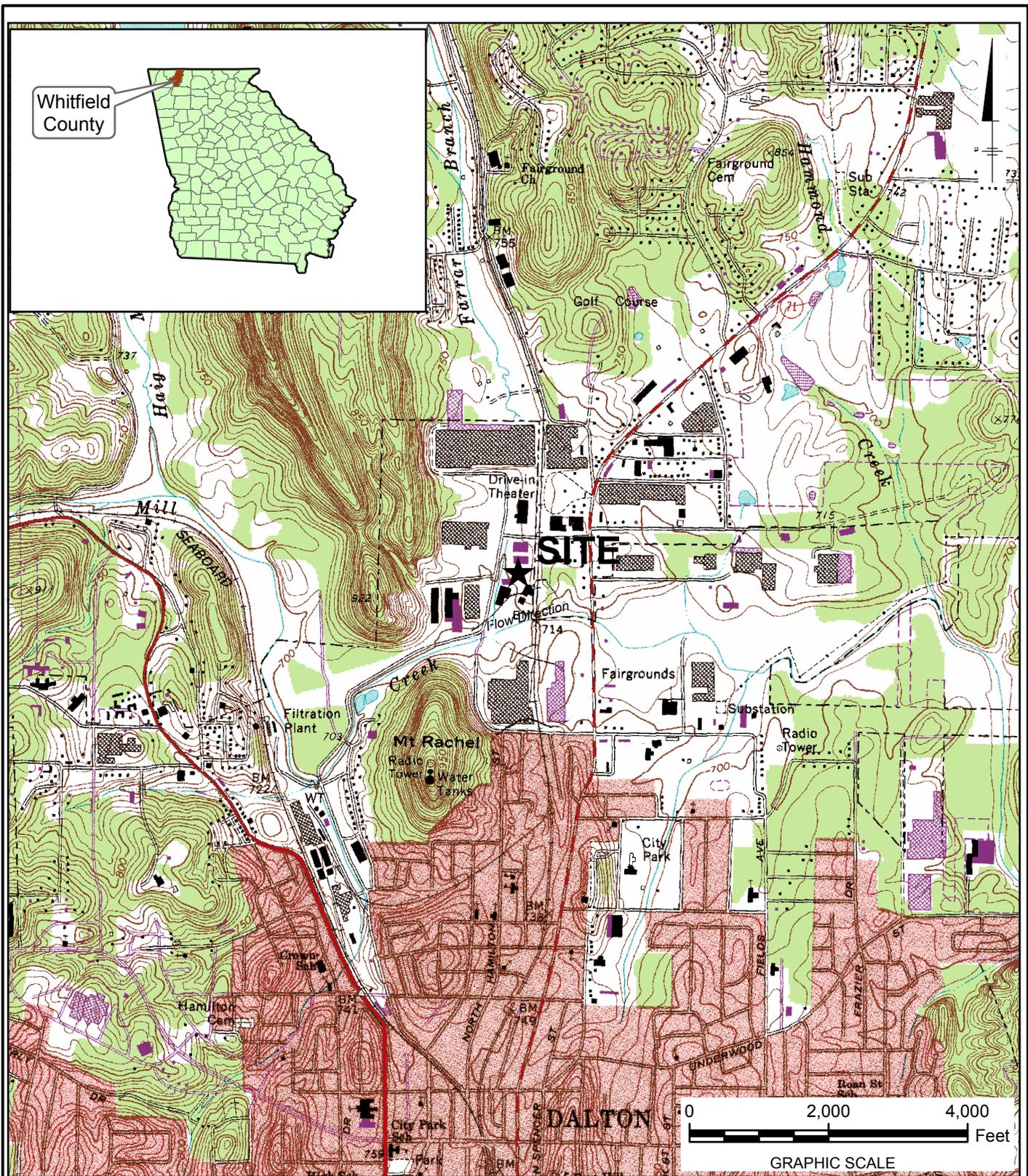
Sampling Location	VOCs (Method 8260B) ⁽¹⁾	Field Parameters ⁽²⁾
Overburden Monitor Wells - Annual Sampling		
SW-16	X	X
SW-18	X	X
SW-19	X	X
SW-28	X	X
SW-29	X	X
SW-36	X	X
SW-42	X	X
SW-43	X	X
SW-46	X	X
SW-49	X	X
SW-50	X	X
SW-60	X	X
SW-63	X	X
Upper/Lower Bedrock Monitor Wells - Annual Sampling		
DW-20	X	X
DW-21	X	X
DW-22	X	X
DW-23	X	X
DW-24	X	X
DW-25	X	X
DW-26	X	X
DW-27	X	X
DW-32	X	X
DW-37	X	X
DW-44	X	X
DW-45	X	X
Surface Water - Semiannual Sampling		
Mill Creek		
SW-MC-02	X	X
SW-MC-03	X	X
Bear Creek		
SW-BC-02	X	X
SW-BC-03	X	X

Note:

⁽¹⁾ - 8260 plus cyclohexane

⁽²⁾ - pH, temperature, and conductivity

VOCs - volatile organic compounds



CITY: DIV/GROUP: DB: LD: PIC: PM: TM: TR:
 Project (Project #)
 Q:\Rhodia\MapDocuments\2012\RevisedMonitoringMaintenancePlan\Fig 1 RegionalLocationMap.mxd - 5/15/2012 @ 10:37:59 AM

Source:
 Digital Raster Graphic (DRG) of Dalton North
 Quad obtained from Georgia GIS Data Clearinghouse on 2/9/2009.
 Projection: Universal Transverse Mercator (UTM)
 Zone 16 North - North American Datum (NAD) 1983.

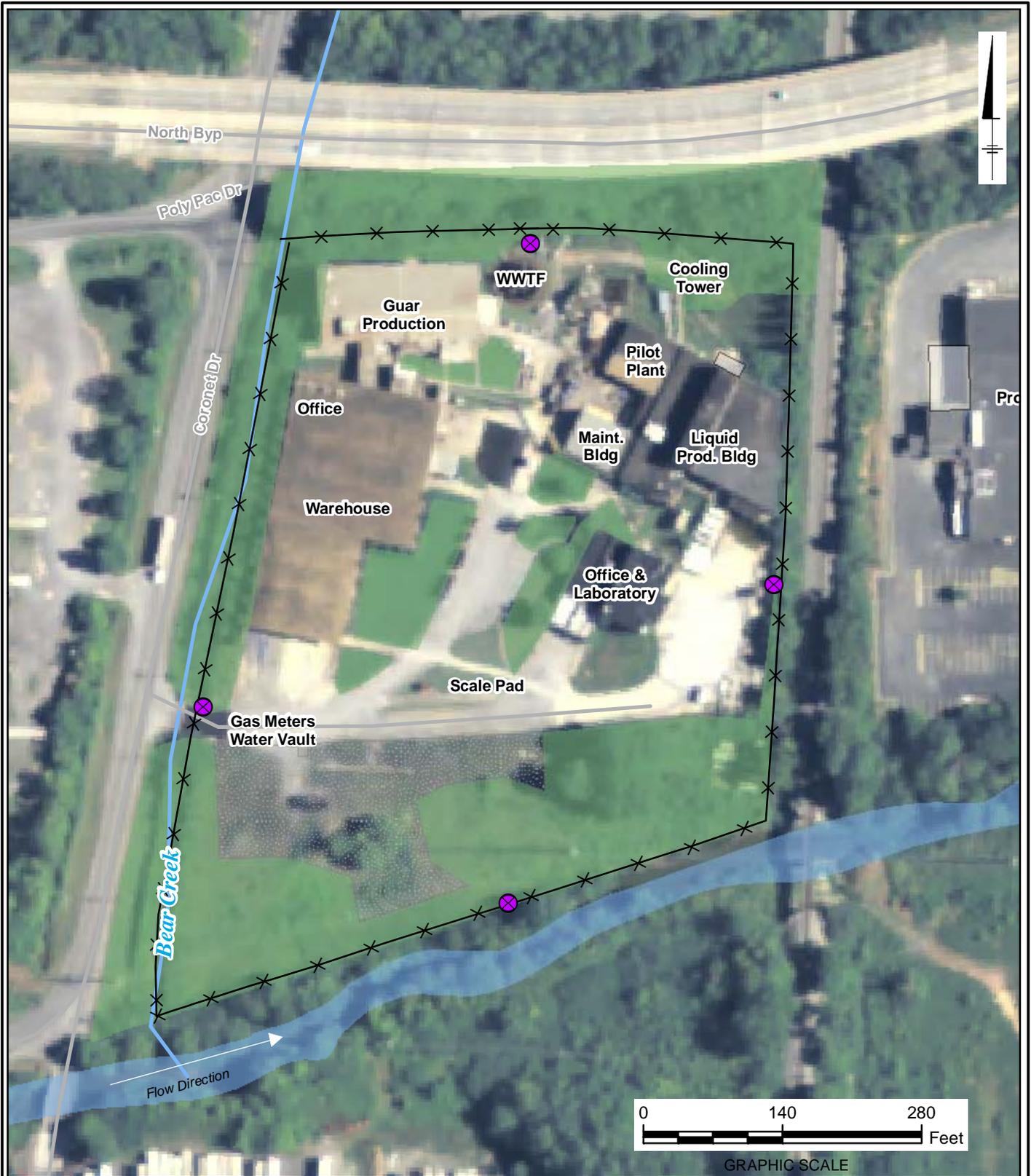
RHODIA
 DALTON, GA
REVISED MONITORING AND MAINTENANCE PLAN

Regional Location Map



FIGURE
1

CITY: San Francisco DIV/GROUP: IM/GIS DB: ME LD: PIC: PM: TM: TR:
 Project #G:A062536.0012.00001
 Q:\Rhodia\MapDocuments\2012\Revised\Monitoring\MaintenancePlan\Fig 2_SiteMap.mxd: 5/15/2012: 11:17:17 AM



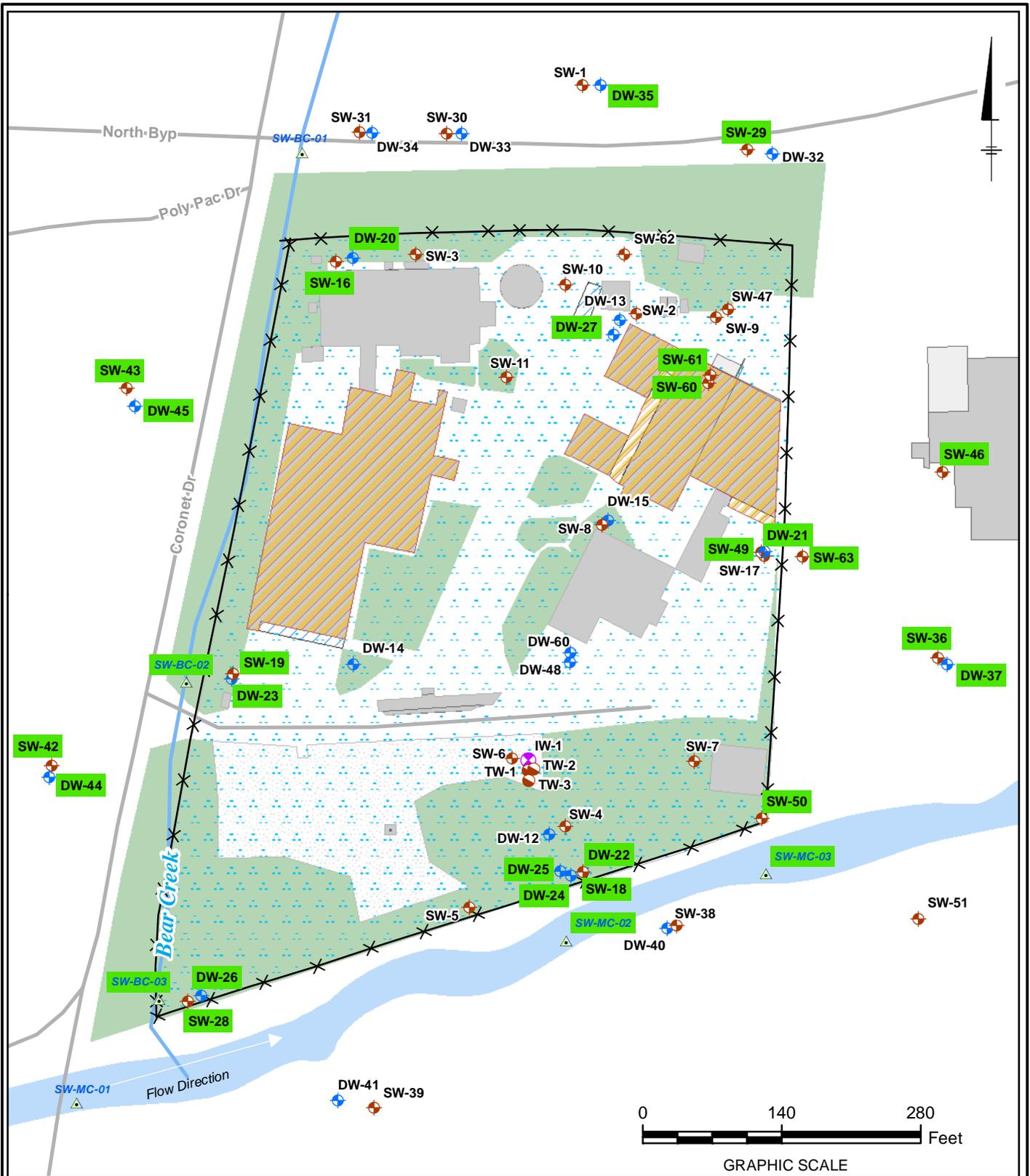
Notes:
 Aerial imagery provided by Georgia GIS Clearinghouse:
 National Agriculture Imagery Program - 2009, scale 1:12000.

Legend:

- Fence Line
- Streams
- Mill Creek
- Concrete Pad
- Grass
- Gravel
- Proposed Location of Stone Monuments

RHODIA DALTON, GA	
REVISED MONITORING AND MAINTENANCE PLAN	
Site Map	
	FIGURE 2

CITY: DIV/GROUP: DB: LD: PIC: PM: TM: TR:
 Project (Project #)
 Q:\Rhodia\MapDocuments\2012\RevisedMonitoring\MaintenancePlan\Fig 3 Sample Location Map.mxd - 5/15/2012 @ 11:14:46 AM



Legend:

- Injection Well
- Tracer Well
- Property Boundary
- Site Main Buildings
- Shipping Dock
- Concrete Pad
- Grass
- Gravel
- Whitfield County Streets
- Whitfield County Creeks and Rivers
- Type 5 RRS Area for Soil
- Type 5 RRS Area for Groundwater
- Monitoring Point (Shallow)
- Monitoring Point (Deep)
- Semiannual Surface Water Monitoring Location
- Annual Sample Locations

RHODIA
DALTON, GA

REVISED MONITORING AND MAINTENANCE PLAN

Sample Locations

ARCADIS

**FIGURE
3**



Appendix A

Approved Risk Reduction Standards

Appendix A
Risk Reduction Standards
Former Lyndal Chemical Site
Dalton, Whitfield County, Georgia

Constituent	Type 1 RRS (mg/L)	Type 2 RRS (mg/L)	Type 3 RRS (mg/L)	Type 4 RRS (mg/L)
Volatile Organic Compounds				
Acetone	4.0	8.0	4.0	46
Benzene	0.0050	0.0054	0.0050	0.0087
2-Butanone (MEK)	2.0	2.3	—	—
Carbon disulfide	4.0	4.0	4.0	4.0
Carbon tetrachloride	0.0050	0.0057	0.0050	0.010
Chlorobenzene	0.10	0.10	0.10	0.14
Chloroethane	0.010	6.0	0.010	29
Chloroform	0.080	0.080	0.080	0.080
Cyclohexane	0.010	3.6	0.010	18
1,2-Dichlorobenzene	0.60	0.60	0.60	0.60
1,3-Dichlorobenzene	0.60	0.60	0.60	0.60
1,4-Dichlorobenzene	0.075	0.075	0.075	0.075
1,1-Dichloroethane	4.0	4.0	4.0	4.0
1,1-Dichloroethene	0.0070	0.10	0.0070	0.52
cis-1,2-Dichloroethene	0.070	0.07	0.070	1.0
trans-1,2-Dichloroethene	0.10	0.10	0.10	0.16
1,2-Dichloropropane	0.0050	0.0050	—	—
Ethylbenzene	0.70	0.70	0.70	0.70
Isopropylbenzene	0.0010	0.21	0.0010	1.0
Methylene chloride	0.0050	0.074	—	—
4-Methyl-2-pentanone (MIBK)	2.0	2.0	—	—
Naphthalene	0.020	0.020	0.020	0.020
Propyl benzene	0.0010	0.43	—	—
Tetrachloroethene	0.0050	0.019	0.0050	0.0050
Toluene	1.0	1.0	1.0	5.2
1,2,3-Trichlorobenzene	0.0020	0.013	0.0020	0.082
1,2,4-Trichlorobenzene	0.070	0.070	0.070	0.070
1,1,1-Trichloroethane	0.20	2.7	0.20	14
Trichloroethene	0.0050	0.0050	0.0050	0.038
Vinyl chloride	0.0020	0.0020	0.0020	0.0033
Xylenes	10	10	10	10
Semi-Volatile Organic Compounds				
Bis(2-ethylhexyl)phthalate	0.010	0.019	0.010	0.20
m-Cresol	0.010	0.25	0.010	5.1
p-Cresol	0.010	0.29	0.010	0.51
2,4-Dimethylphenol	0.70	0.70	0.70	2.0
Phenol	4.0	4.0	4.0	31



Appendix B

Sample Inspection Checklist and
Land-Use Certification Form

Monitoring and Maintenance Plan Inspection Checklist
Former Lyndal Chemical Site
HSI No. 10250
Rhodia, Inc.
Dalton, Georgia

Date of Inspection : _____

Inspector Name (printed): _____

Inspector Name (sign): _____

Weather Conditions: _____

Date of Previous Rain Event: _____

Inspection Item		In Place (Y/N)	Condition	Replacement Needed (Y/N)	Major Damage (Y/N) If yes, explain
Monuments	Concrete Monument #1				
	Concrete Monument #2				
	Concrete Monument #3				
	Concrete Monument #4				
Type-5 Signs	Warehouse				
	Pilot Plant				
	Liquid Production Building				
Type 5 Area		Concrete Cap Condition			
Building Slabs	Warehouse				
	Pilot Plant				
	Liquid Production Building				

Monitoring and Maintenance Plan Inspection Checklist
Rhodia, Inc.
Dalton, Georgia

Monitoring Wells	Pad Condition	Stick-up/Flush Mount (SU/FM)	Well Secure (Y/N)	Notes
Overburden Monitor Wells				
SW-16				
SW-18				
SW-19				
SW-28				
SW-29				
SW-36				
SW-42				
SW-43				
SW-46				
SW-49				
SW-50				
SW-60				
SW-63				
Upper/Lower Bedrock Monitor Wells				
DW-20				
DW-21				
DW-22				
DW-23				
DW-24				
DW-25				
DW-26				
DW-27				
DW-32				
DW-37				
DW-44				
DW-45				

I certify that I am a qualified engineer who has received a baccalaureate or post-graduate degree in engineering, and have sufficient training and experience in design and/or evaluating engineering covers, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding the effectiveness of the engineering controls at this site. I further certify that the concrete covers in the Type 5 areas of this Site are of adequate quantity and quality to mitigate human exposure and ensure prevention of erosion, ponding, and surface water infiltration.

Signature and P.E. Seal w/ Date

Land-Use Certification Form

Lyndal Chemical Site, HSI No. 10250

TYPE	No.	CRITERIA RESPONSE	YES	NO
Land Use	1	Does this property meet the definition of non-residential property as defined in HSRA Rule 391-3-19.02(2)? “Non-residential property means any property or portion of a property not currently being used for human habitation or for other purposes with a similar potential for human exposure, at which activities have been or are being conducted that can be categorized in one of the 1987 Standard Industrial Classification major group 01-97 inclusive (except the four-digit codes 4941, 8051, 8059, 8062-3, 8069, 8211, 8221-2, 8351, 8661, and 9223). Non-residential property includes all of the contiguous block(s) and lot(s) controlled by the same owner or operator that are vacant land, or that are used in conjunction with such business. For leased properties, non-residential property includes the leasehold and any external tank, surface impoundment, septic system, or any other structure, vessel, contrivance, or unit that provides, or is utilized for the management of regulated substances to or from the leasehold.”		
	1a	If no to 1, attach a written explanation to this form.		
Institutional Controls	2	Do all leases or other property instruments for the site have the applicable deed notice language inserted into them?		
	2a	If no to 2, attach a written explanation to this form.		
Inspection	3a	Date of Inspection and Name of Inspector		
	3b	Photographs showing current land use (attached)		

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, 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.

NAME (print or type) and Title

SIGNATURE

DATE



Appendix C

Maintenance Record Form

Maintenance Record Form
Former Lyndal Chemical Site
HSI No. 10250
Rhodia, Inc.
Dalton, Georgia

Date _____
Inspector(s) _____
Weather _____

Component Inspected	Repair Dates		Inspector	Description of Repairs	Check if Major Damage
	Initiated	Completed			