R.J. Reynolds Tobacco Company

October 1, 2013

NCDENR – Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Attention: Ms. Jackie Drummond – Compliance Hydrogeologist
Via E-Mail

Subject: Adoption of Selected Remedy
Groundwater Corrective Action Application
R.J. Reynolds Ash Landfill – Permit #34-05
Edwards Road Landfill
Rural Hall, Forsyth County, North Carolina

Dear Ms. Drummond:

R.J. Reynolds Tobacco Company (RJRT) is submitting the enclosed *North Carolina Solid Waste .0500 Groundwater Corrective Action Application* and associated supporting documents for the Edwards Road Landfill site in Rural Hall, North Carolina. The revised application is submitted in response to your July 2, 2013 letter to RJRT and your August 1, 2013 approval letter of ERM's request to extend the submittal date to October 1, 2013. The application and supporting documents present the corrective action selected by RJRT for groundwater and surface water quality remediation at the referenced site.

The selected remedy includes source area contaminant control and intrinsic remediation with performance monitoring as remedial technologies for restoration of water quality at and beyond the compliance boundary at the site. Details regarding these remedial technologies along with the required contingency alternatives are provided in the enclosed summary letter by ERM.

If you should have any questions or require additional information concerning this letter, please contact Ms. Yong Yi via email (YiY1@RJRT.com) or telephone at 336-741-1491 at your convenience.

Sincerely,

Mark A. Peters
Chief Financial Officer

Attachments:
Groundwater Corrective Action Application Package (ERM)

cc: Alan Martin, P.G. – ERM

ERM NC, Inc.

15720 John J. Delaney Drive
Suite 120
Charlotte, NC 28277
(704) 541-8345
(704) 624-7928 (fax)

October 1, 2013

NCDENR – Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
Attention: Ms. Jackie Drummond – Compliance Hydrogeologist

Via Email

Reference: Groundwater Corrective Action Application and
Revised Groundwater Modeling Scenarios
Edwards Road Landfill - Permit #34-05
Rural Hall, Forsyth County

Dear Jackie:

On behalf of R.J. Reynolds Tobacco (RJRT), ERM NC, Inc. is submitting a revised *North Carolina Solid Waste .0500 Groundwater Corrective Action Application* and associated supporting documents for the Edwards Road Landfill site in Rural Hall, North Carolina. The revised application is submitted in response to your July 2, 2013 letter to RJRT and your August 1, 2013 approval letter of ERM's request to extend the submittal date to October 1, 2013. The application and supporting documents present the corrective action selected by RJRT for groundwater and surface water quality remediation at the referenced site.

GROUNDWATER MODELING RESULTS

ERM conducted additional fate-and-transport modeling to simulate groundwater quality conditions at the compliance boundary 5, 10 and 25 years following installation of the synthetic liner and drainage improvements. For the Edwards Road Landfill, the compliance boundary is defined as 250 feet from the waste boundary or 50 feet within the property boundary, whichever is closer to the source. Installation of the liner and drainage improvements were completed in September 2012. ERM also developed groundwater modeling scenarios depicting approximately when water quality conditions will achieve the applicable North Carolina groundwater standards (15A NCAC 2L) or site-specific background conditions at the compliance boundary. The groundwater modeling was performed using the same methods and assumptions as previous modeling efforts by ERM for the site and outlined in ERM's *Summary Report – Groundwater Modeling for Site Assessment* submitted to the Division of Solid Waste (DWM) in May 2012.

As noted in previous modeling results presented to NCDENR, groundwater at the Site discharges into Leak Branch and the unnamed tributaries directly downgradient of the perimeter of the landfill. These streams and tributaries near the perimeter of the landfill are the ultimate receptors for site-related contaminants in groundwater. The modeling indicates that the private water wells in the surrounding areas are not receiving groundwater from the Edwards Road Landfill site. The simulated capture zones of the private water wells located east of Leak Branch do not extend to the Edwards Road landfill. The modeling results are supported by the analytical results of groundwater samples collected from private water wells which indicate no groundwater quality impacts due to the landfill.

Modeling simulations were used to estimate the concentrations of a contaminant at a point of compliance at some future point in time. Modeling scenarios were developed for sulfates, the primary contaminant of concern, as well as iron and manganese which occur naturally at elevated levels in the vicinity of the site. The enclosed Figures 1, 2 and 3 in Attachment A depict the above scenarios for sulfates, iron and manganese, respectively. Each figure depicts reasonable worst-case modeled conditions for the four modeled aquifers including the saprolite, shallow bedrock, intermediate bedrock and deep bedrock zones. The modeled worst case conditions in the 5, 10 and 25 year time steps occur in the deep bedrock zone while the worst case conditions at the time of compliance with the NC 2L Standard or site-specific background conditions are in the intermediate bedrock zone. Tables summarizing simulated concentrations at the groundwater sample location for each time step are also presented in the figures. It should be noted that the modeled concentrations for each sample location represent reasonable estimates of water quality in the future and the predicted results are subject to the differences between the model assumptions and the actual field conditions.

According to the modeling results, sulfate concentrations in groundwater beyond the compliance boundary significantly decline between 10 and 25 years after installation of the synthetic liner and drainage improvements. The modeling estimates that sulfate concentrations in groundwater at the compliance boundary will be remediated to the current North Carolina groundwater standard for sulfate of 250 milligrams per liter (mg/L) in approximately 55 years after the landfill capping.

Modeling results for dissolved iron indicate a similar decrease in concentrations between 10 and 25 years after installation of the synthetic liner and drainage improvements. However, the naturally occurring background levels of iron in the site groundwater exceed the North Carolina groundwater standard for iron of 0.30 mg/L. The average iron concentrations in groundwater for all samples from monitoring wells W-6 and W-7, which are representative of background conditions, are 0.940 mg/L and 0.702 mg/L, respectively. Remediation to below naturally-occurring background levels is not required by the NCDENR. Consequently, the site-specific groundwater remedial goal for iron is 0.94 mg/l. Figure 2D depicts modeled iron concentrations 90 years after installation of the synthetic liner when iron levels reach the background level of 0.940 mg/L at the compliance boundary. As shown, iron concentrations exceeding the 0.30 mg/L NC 2L standard are common on and near the site including hydraulically upgradient of the landfill due to naturally occurring levels of iron.

The groundwater modeling for dissolved manganese indicates a comparable decrease in concentrations between 10 and 25 years after the liner installation as noted in the sulfate and iron concentrations. The modeling indicates the current NC 2L standard for manganese of 0.050 mg/L will be achieved at the compliance boundary 150 years after the landfill capping. However, the naturally occurring background levels of manganese in groundwater at the site are greater than the NC 2L standard for manganese of 0.050 mg/L. The average manganese concentrations for all samples from the background monitoring wells W-6 and W-7 are 0.042 mg/L and 0.150 mg/L, respectively. Remediation to below naturally-occurring background levels is not required by the NCDENR. Consequently, the site-specific groundwater remedial goal for manganese is 0.150 mg/l. Figure 3D depicts modeled manganese concentrations 110 years after installation of the synthetic liner when manganese levels reach the background level of 0.150 mg/L at the compliance boundary.

The modeling scenarios indicate groundwater quality near the compliance boundary will steadily improve following the installation of the synthetic liner and drainage improvements. Sulfates concentrations, the primary contaminant, will decrease within a reasonable timeframe given the minimal risk to human health or the environment. The fate-and-transport groundwater modeling may be updated in the future based on observed water quality conditions or other information, if warranted.

SELECTED REMEDIAL ALTERNATIVES

The objective of the proposed remedial activities is to restore groundwater quality beyond the compliance boundary, to stop unacceptable impacts to the adjacent surface waters and to the adjacent properties, and to reduce the overall groundwater contamination at the facility.

The selected remedy includes source area contaminant control via the previous installation of the synthetic liner (cap) over the limits of waste plus drainage improvements to minimize rainfall infiltration and leachate generation plus intrinsic remediation with long term water quality monitoring. These two technologies are appropriate to meet the remedial objectives within a reasonable timeframe. Details of these technologies along with contingency plans are provided below. Enclosed as Attachment B is the *North Carolina Solid Waste .0500 Groundwater Corrective Action Application* and supporting documents.

Source Area Control

Construction of the cap modification including a 40-mil Linear Low Density Polyethylene (LLDPE) synthetic liner and drainage improvement began in March 2012 and was completed September 2012. The synthetic liner and drainage improvements provide source control measures that will significantly reduce or eliminate rainfall infiltration and leachate generation from the landfill. This decrease in leachate generation will reduce further affects to groundwater and surface water at the site and will effectively reduce constituent concentrations in groundwater and surface water to levels protective of human health. Improvements to water quality as a result of the synthetic liner installation and drainage modifications will be observed via the existing network of groundwater monitoring wells and surface water sampling locations.

The synthetic lined landfill cap modification design was submitted to the Division of Waste Management (DWM) on June 14, 2011 and approved by the DWM on August 12, 2011. ERM submitted the Construction Quality Assurance (CQA) Certification for Closure Modification to the DWM on October 2, 2012 for approval.

Intrinsic Remediation with Performance Monitoring

Reduction of rainfall infiltration and leachate generation from the landfill via the liner installation and drainage improvements will mitigate the migration of contaminants from the landfill and allow natural processes to gradually restore water quality beyond the compliance boundary. Routine groundwater and surface water monitoring will be conducted at the Site to monitor contaminant concentrations and concentration trends over time. The performance monitoring

results will be used to evaluate the effectiveness of the source area control remedy for the remediation of the affected groundwater and surface water.

Semi-annual water quality sampling has been conducted three times since installation of the liner and drainage improvements were completed in in September 2012. Sampling occurred in September 2012, April 2013 and September 2013. Results for the September 2013 samples are pending. As noted by NCDENR in its July 2, 2013 correspondence to RJRT, the April 2013 results "were consistent with historical results, but the water quality results did show a slight decrease in concentrations of specific constituents." Sulfate concentrations in surface water have generally declined since 2010 and there were only two exceedances of the applicable North Carolina Surface Water Standard in the September 2012 sample results. No surface water standard exceedances for sulfates were observed in the April 2013 results.

As determined by historical monitoring data and the fate-and-transport modeling results, the streams and tributaries near the perimeter of the landfill are serve as hydraulic boundaries for groundwater flow and effectively limit the extent of migration of site-related contaminants in groundwater. Surface water quality impacts to the tributary streams have been relatively limited. Groundwater sampling of private water wells in the surrounding areas confirm that there are no impacts to the water wells due to the Edwards Road Landfill site.

Contingency Plans

As required in the Groundwater Corrective Action Application, two contingency plans are provided in the event that source area control is determined to be ineffective at adequately reducing contaminant concentrations beyond the compliance boundary. The alternate remedial options will be considered in the event that source area control is ineffective and the performance monitoring results indicate a sustained increase in contaminant concentrations beyond the compliance boundary.

Contingency Plan A consists of in situ enhancement of biological sulfate reduction through the addition of supplemental electron donor (lactate) and additional sulfate reducing bacteria (SRB), if required. The sulfate would be reduced to sulfides via anaerobic processes. The lactate and SRB would be injected into the zone of contaminated groundwater via a network of injection wells that would be installed along the perimeter of the landfill.

Contingency Plan B consists of amending the previously injected lactate and SRB with zero valent iron (ZVI) to further decrease the oxidation-reduction potential (ORP) in the aquifer in the event that a greater level of reduction is required for sulfate treatment. Additional injections of lactate and SRB may be required at that time. The ZVI would be injected into the zone of contaminated groundwater via the network of injection wells previously installed along the perimeter of the landfill as part of Contingency A.

The approaches described for both Contingency Plans will be subject to successful bench scale and in situ pilot testing prior to full-scale implementation of either of these remedial options. Both contingencies will also be subject to permitting by NCDENR's Underground Injection Control (UIC) Program.

CLOSING

Source area contaminant control and intrinsic remediation with performance monitoring are proposed as remedial technologies for restoration of water quality at and beyond the compliance boundary at the site. These two technologies are appropriate to meet the remedial objectives within a reasonable timeframe given the limited risk to nearby receptors including surface water bodies and private water supply wells. Surface water quality conditions appear to have improved since completion of the source area control measures and fate-and-transport modeling results indicate that sulfate concentrations in groundwater will continue to decrease until acceptable levels are reached within approximately 55 years beyond the compliance boundary. Likewise, iron and manganese concentrations in groundwater and surface water will be remediated to naturally-occurring background levels. Enhanced bioremediation alternatives of the sulfate-affected groundwater will be considered as contingencies in the event a sustained increase in sulfate concentrations is observed beyond the compliance boundary.

Upon NCDENR approval of the proposed remedial strategy, a detailed Corrective Action Plan (CAP) will be prepared for submittal to NCDENR. The CAP will include additional details of the remedial strategy and contingency plans as well as an updated water quality monitoring plan.

Please contact Yong Yi of RJRT (336 741-1491) or myself if you have any questions or require additional information.

Sincerely,

Alan D. Martin

Alan Martin, P.G.
Project Manager

NORTH CAROLINA LICENSED SEAL 1846 GEOLOGIST ALAN D. MARTIN

Thomas M Wilson

Thomas M. Wilson, P.G.
Principal-in-Charge

Attachments:
A - Groundwater Modeling Figures
B - NC Solid Waste .0500 Groundwater Corrective Action Application

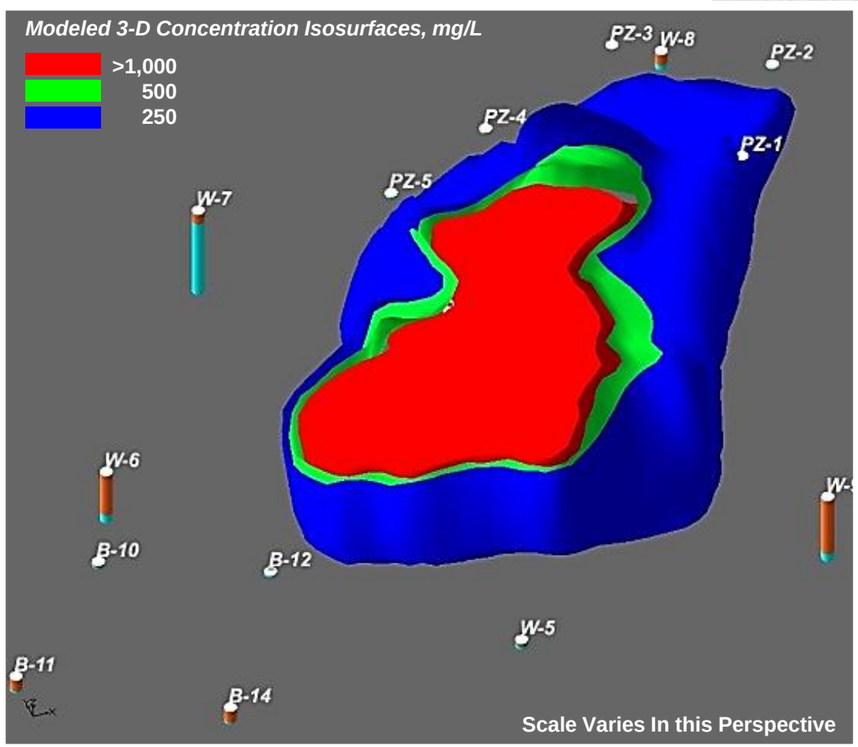
cc: Yong Yi, R.J. Reynolds

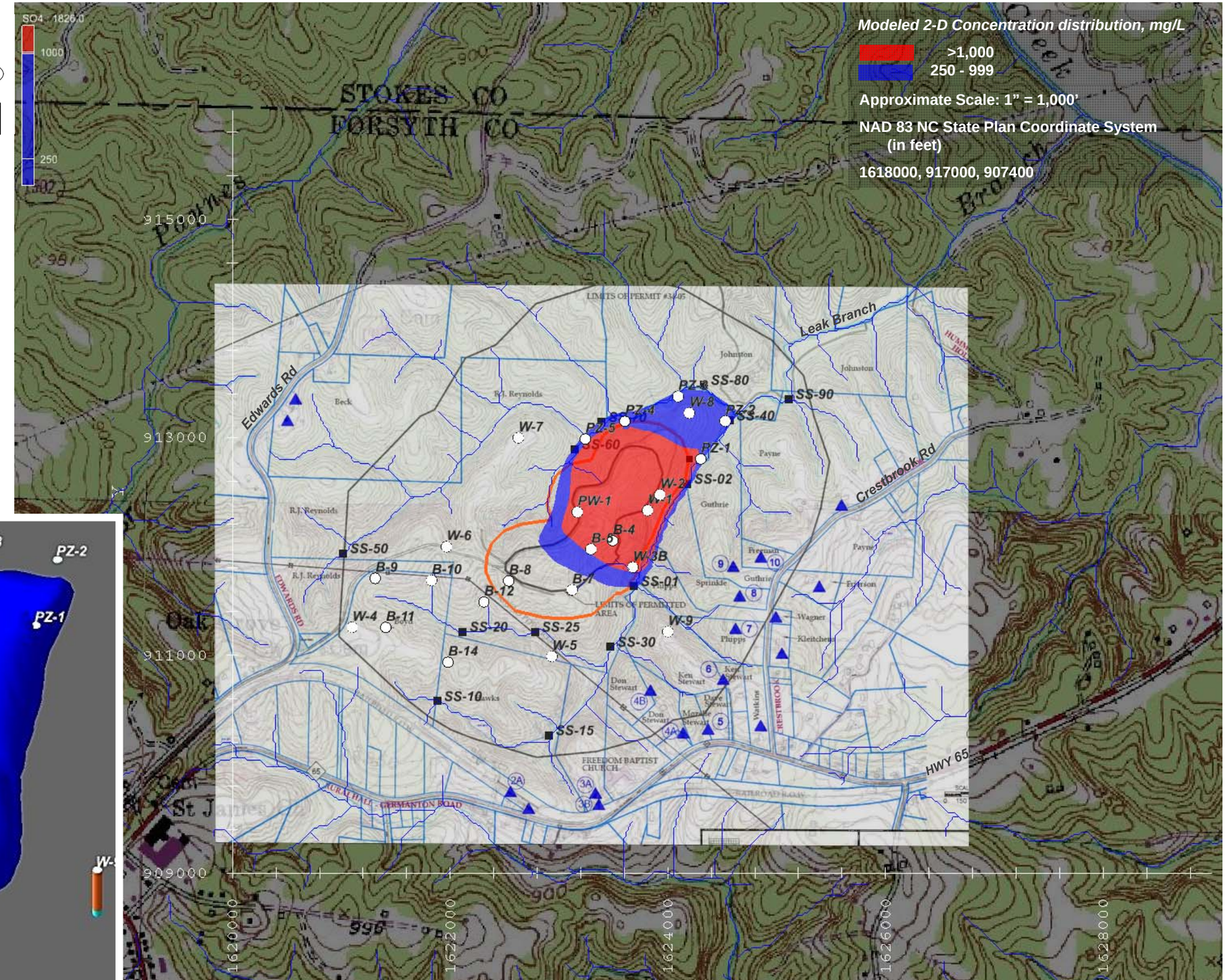
Attachment A
Groundwater Modeling Figures

LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Sulfate Concentration, mg/L			
Well	Year 5	Well	Year 5
PW-1	274	W-2	1,634
PZ-1	44	W-3	197
PZ-2	30	W-3B	800
PZ-3	27	W-6	19
PZ-4	30	W-7	19
PZ-5	48	W-8	19
W-1	1,771	W-9	19
2L Standard	250	Modeled Regional Background	19





ERM NC, Inc.

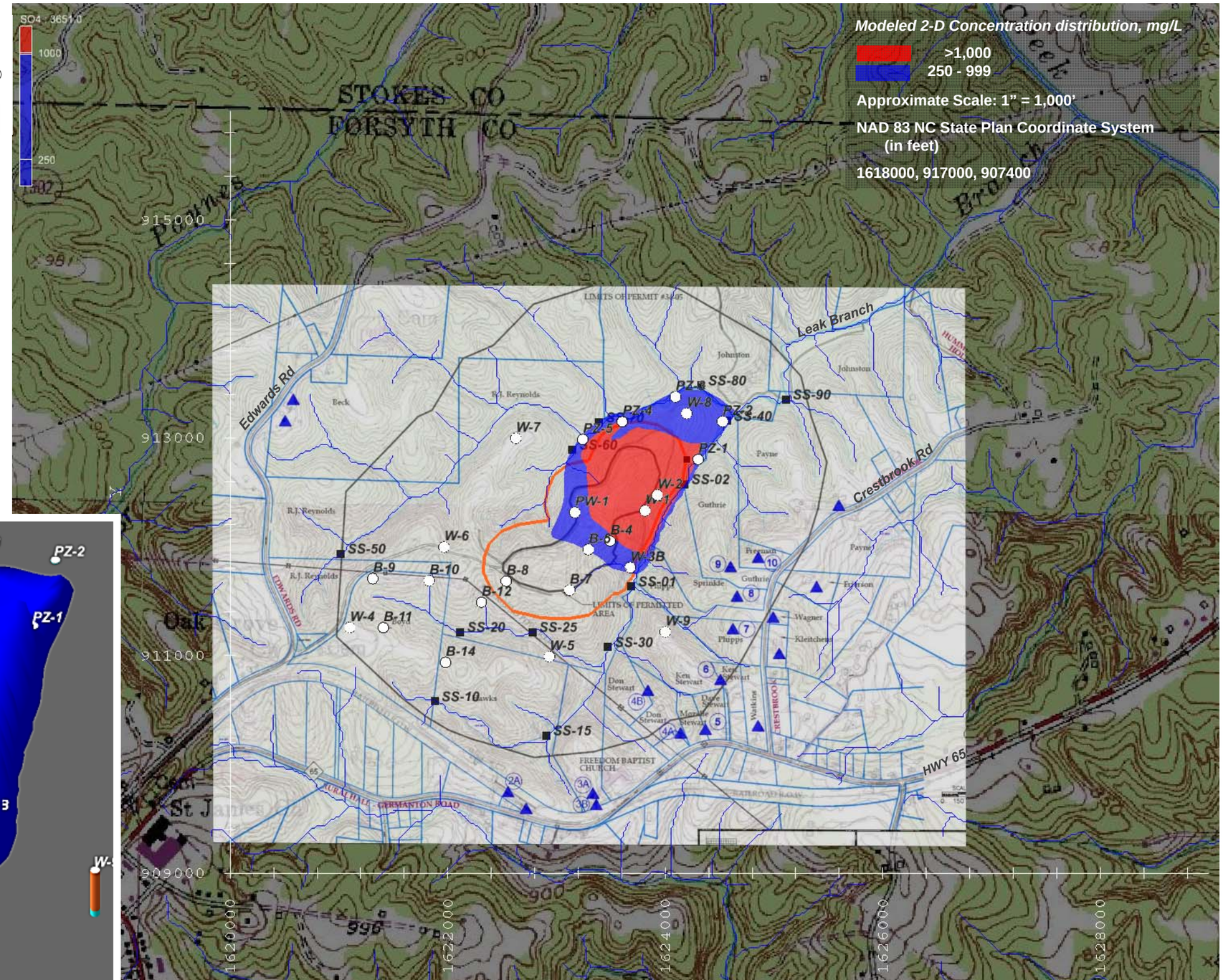
Modeled Future Distribution 5 Years After Landfill Capping
Sulfate In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

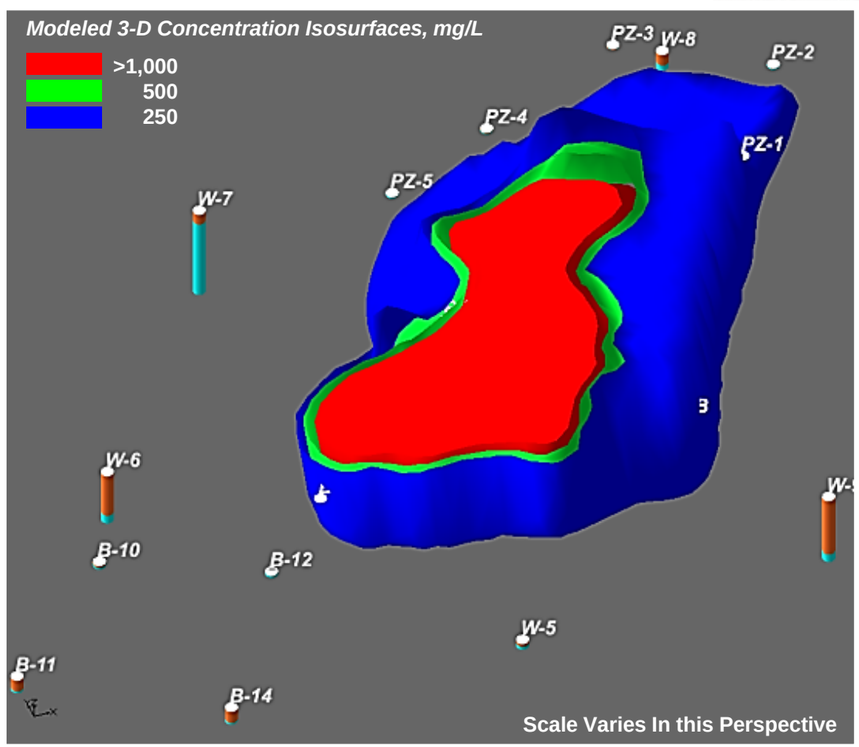
FIGURE
1A

LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Sulfate Concentration, mg/L			
Well	Year 10	Well	Year 10
PW-1	149	W-2	1,985
PZ-1	49	W-3	126
PZ-2	32	W-3B	213
PZ-3	27	W-6	19
PZ-4	30	W-7	19
PZ-5	47	W-8	19
W-1	2,066	W-9	19
2L Standard	250	Modeled Regional Background	19





ERM NC, Inc.

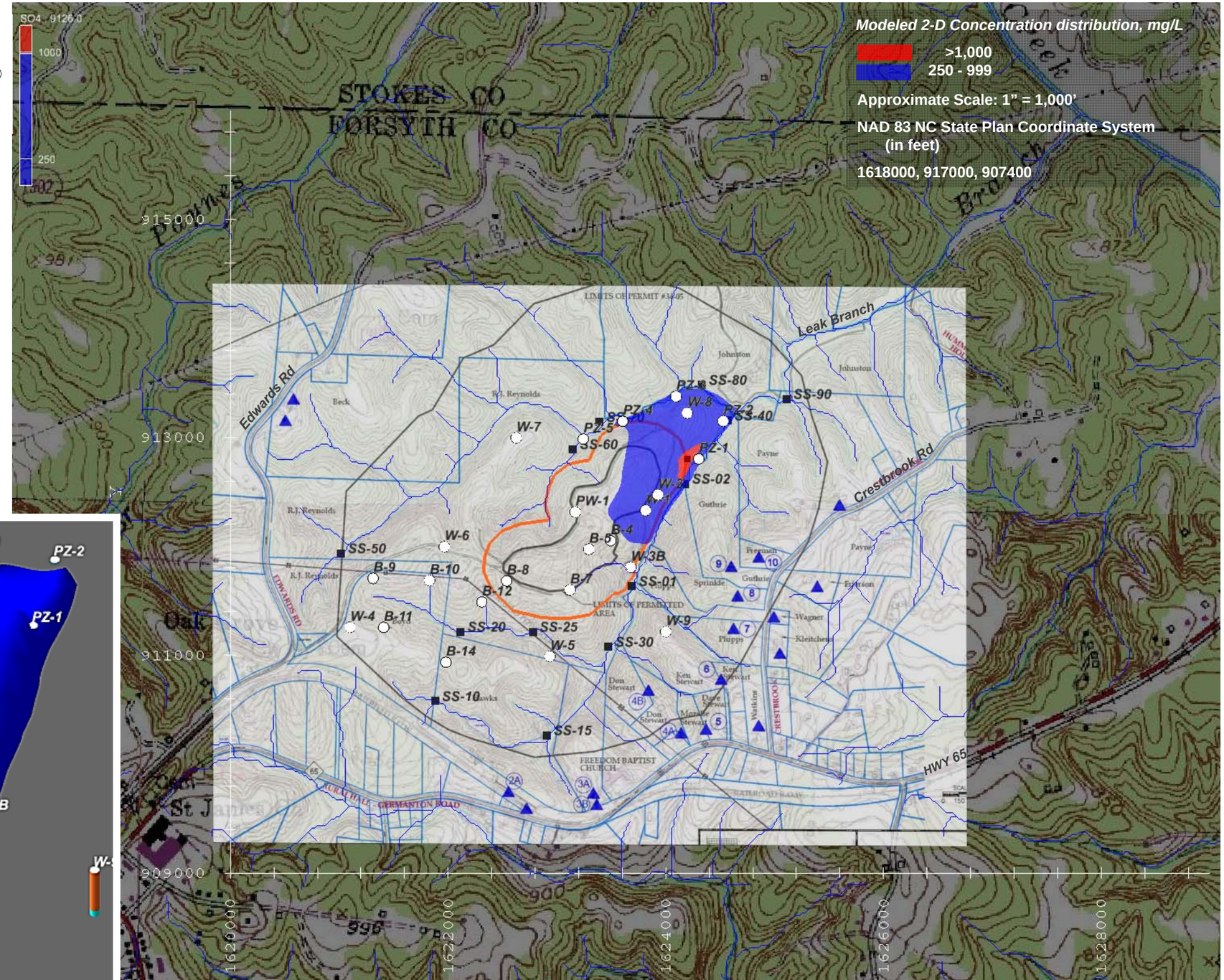
Modeled Future Distribution 10 Years After Landfill Capping
Sulfate In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

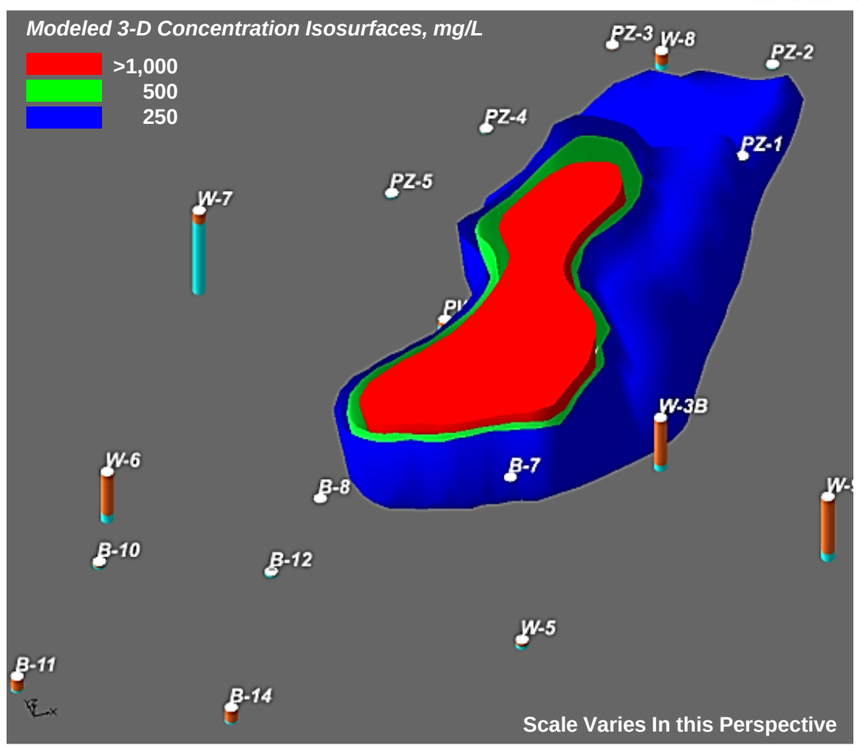
FIGURE
1B

LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Sulfate Concentration, mg/L			
Well	Year 25	Well	Year 25
PW-1	36	W-2	850
PZ-1	49	W-3	39
PZ-2	36	W-3B	39
PZ-3	26	W-6	19
PZ-4	24	W-7	19
PZ-5	27	W-8	19
W-1	838	W-9	19
2L Standard	250	Modeled Regional Background	19





ERM NC, Inc.

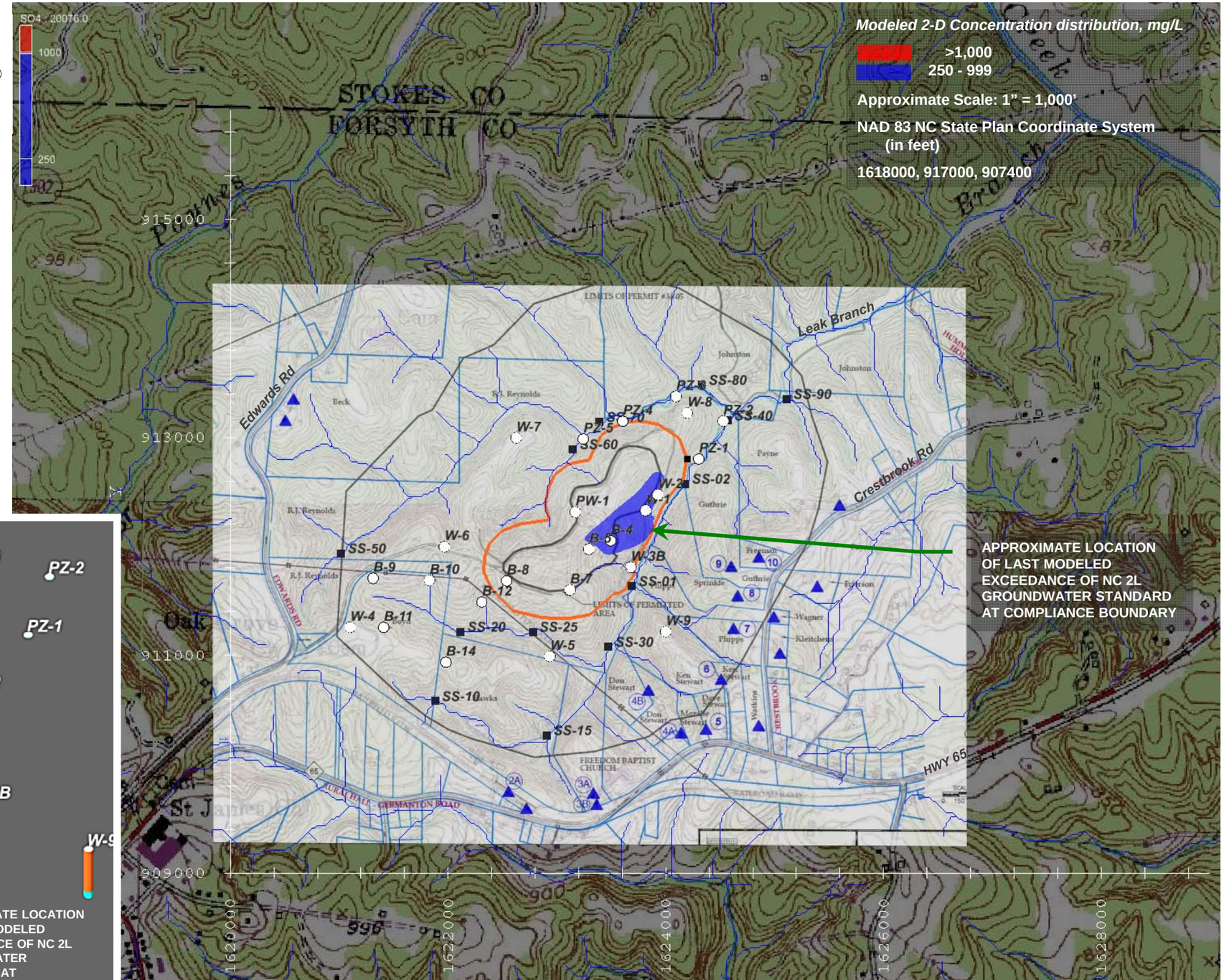
Modeled Future Distribution 25 Years After Landfill Capping
Sulfate In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

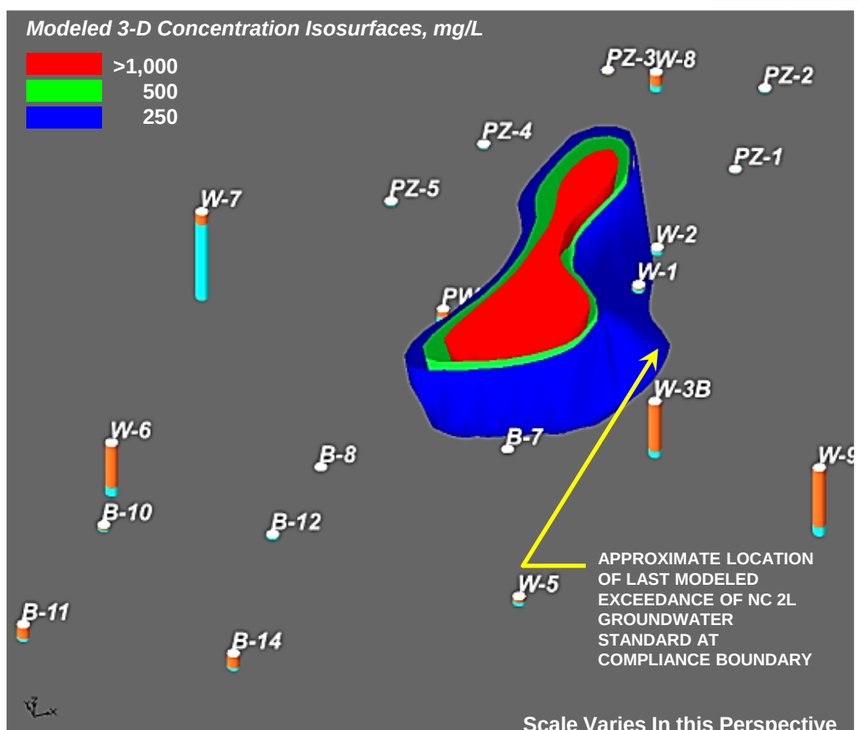
FIGURE
1C

LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Sulfate Concentration, mg/L			
Well	Year 55	Well	Year 55
PW-1	19	W-2	272
PZ-1	22	W-3	20
PZ-2	19	W-3B	19
PZ-3	19	W-6	19
PZ-4	19	W-7	19
PZ-5	19	W-8	19
W-1	295	W-9	19
2L Standard	250	Modeled Regional Background	19





ERM NC, Inc.

Modeled Future Distribution 55 Years After Landfill Capping
Sulfate In Intermediate Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

FIGURE
1D

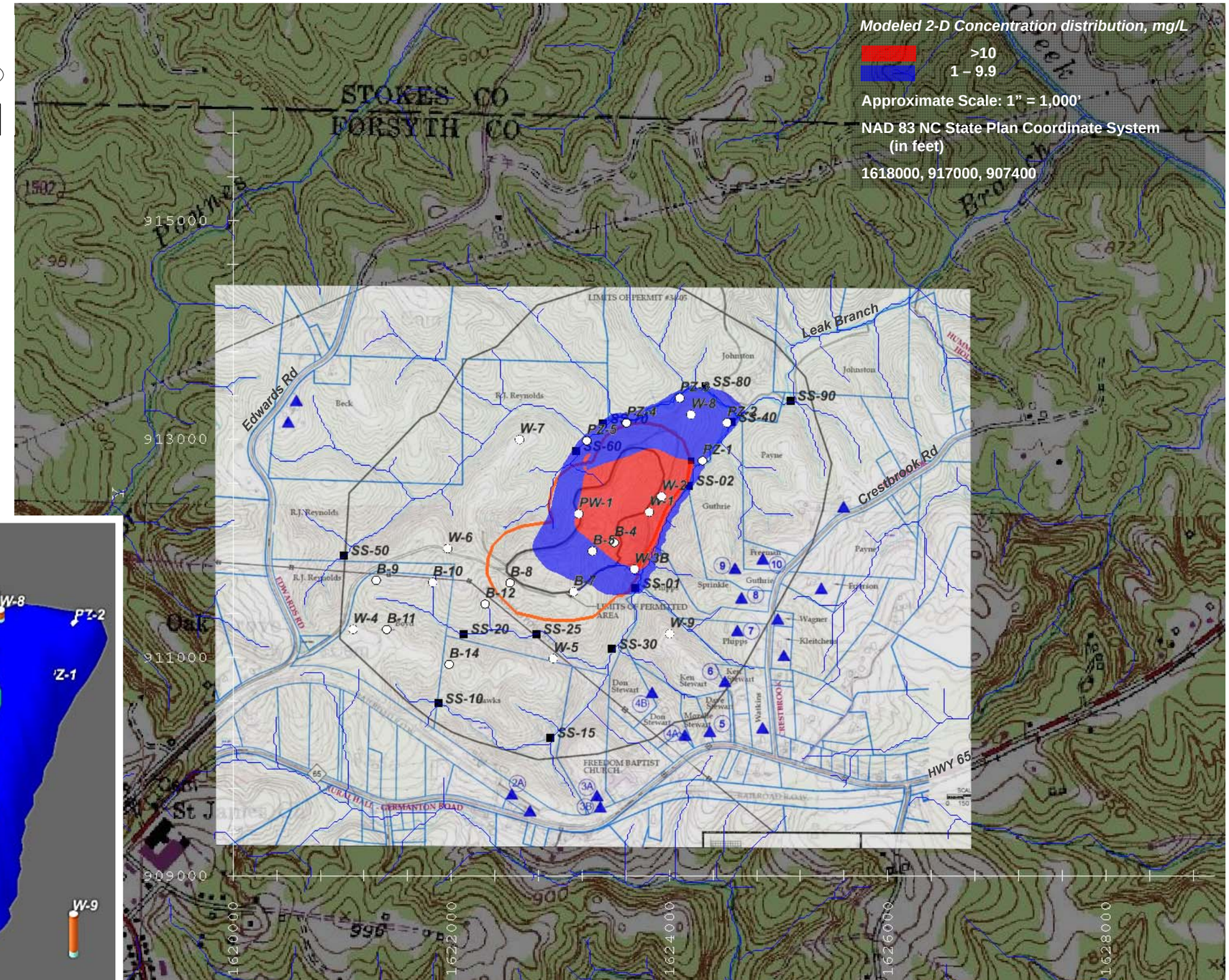
LEGEND

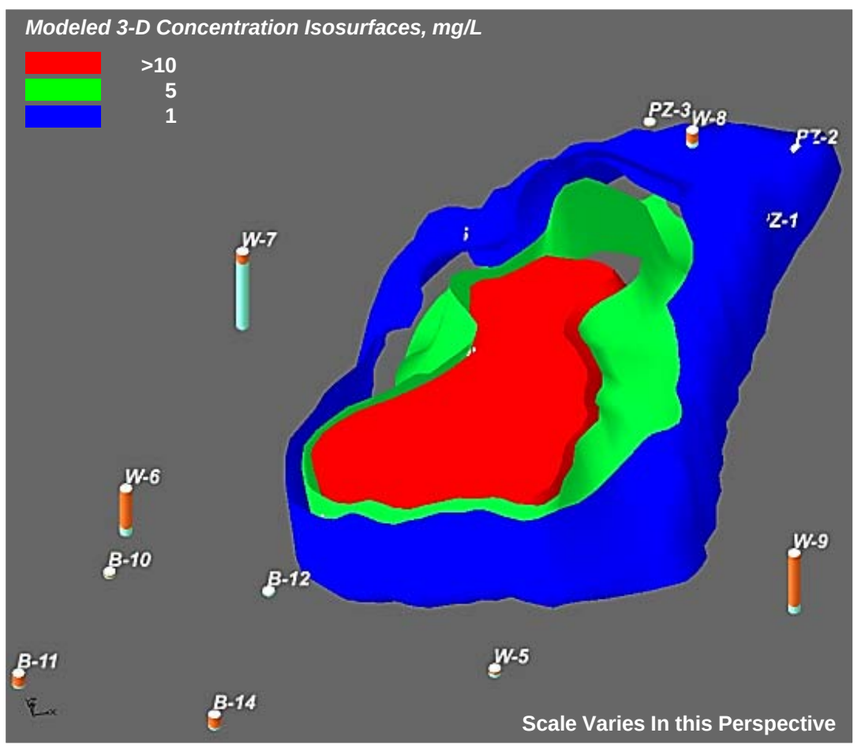
- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Iron Concentration, mg/L

Well	Year 5	Well	Year 5
PW-1	1.92	W-2	10.52
PZ-1	0.50	W-3	1.35
PZ-2	0.40	W-3B	1.52
PZ-3	0.39	W-6	0.30
PZ-4	0.37	W-7	0.30
PZ-5	0.48	W-8	0.49
W-1	8.57	W-9	0.30
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.940

* Historical average W-6 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 5 Years After Landfill Capping
Dissolved Iron In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

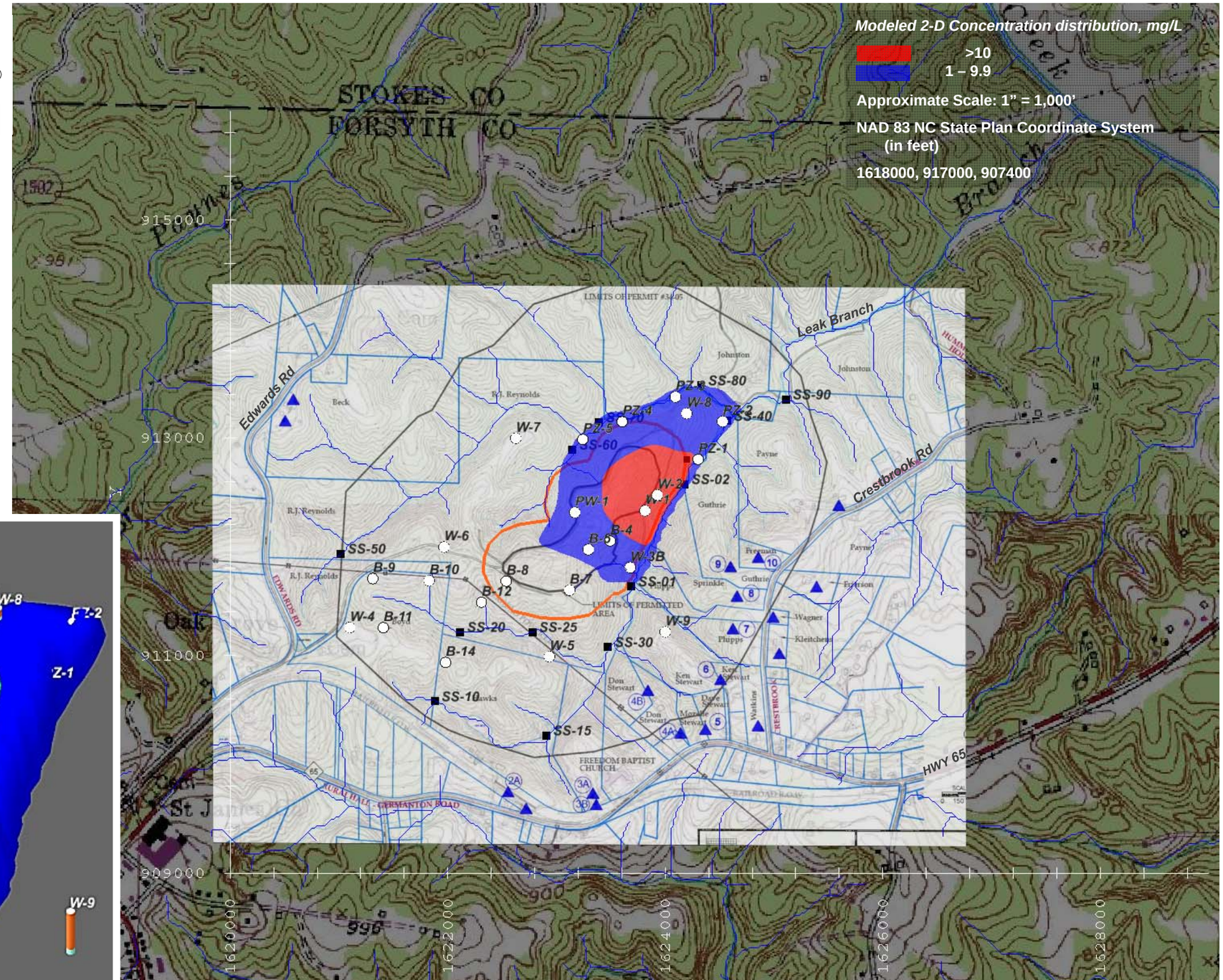
FIGURE
2A

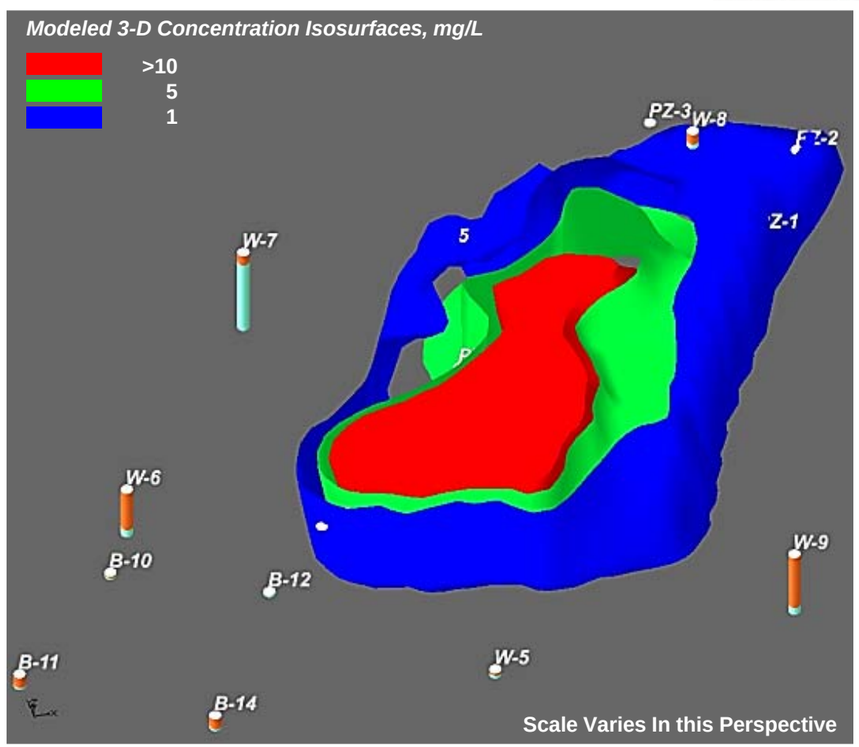
LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Iron Concentration, mg/L			
Well	Year 10	Well	Year 10
PW-1	1.18	W-2	13.41
PZ-1	0.52	W-3	1.13
PZ-2	0.41	W-3B	1.04
PZ-3	0.38	W-6	0.30
PZ-4	0.37	W-7	0.30
PZ-5	0.47	W-8	0.30
W-1	10.89	W-9	0.30
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.940

* Historical average W-6 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 10 Years After Landfill Capping
Dissolved Iron In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

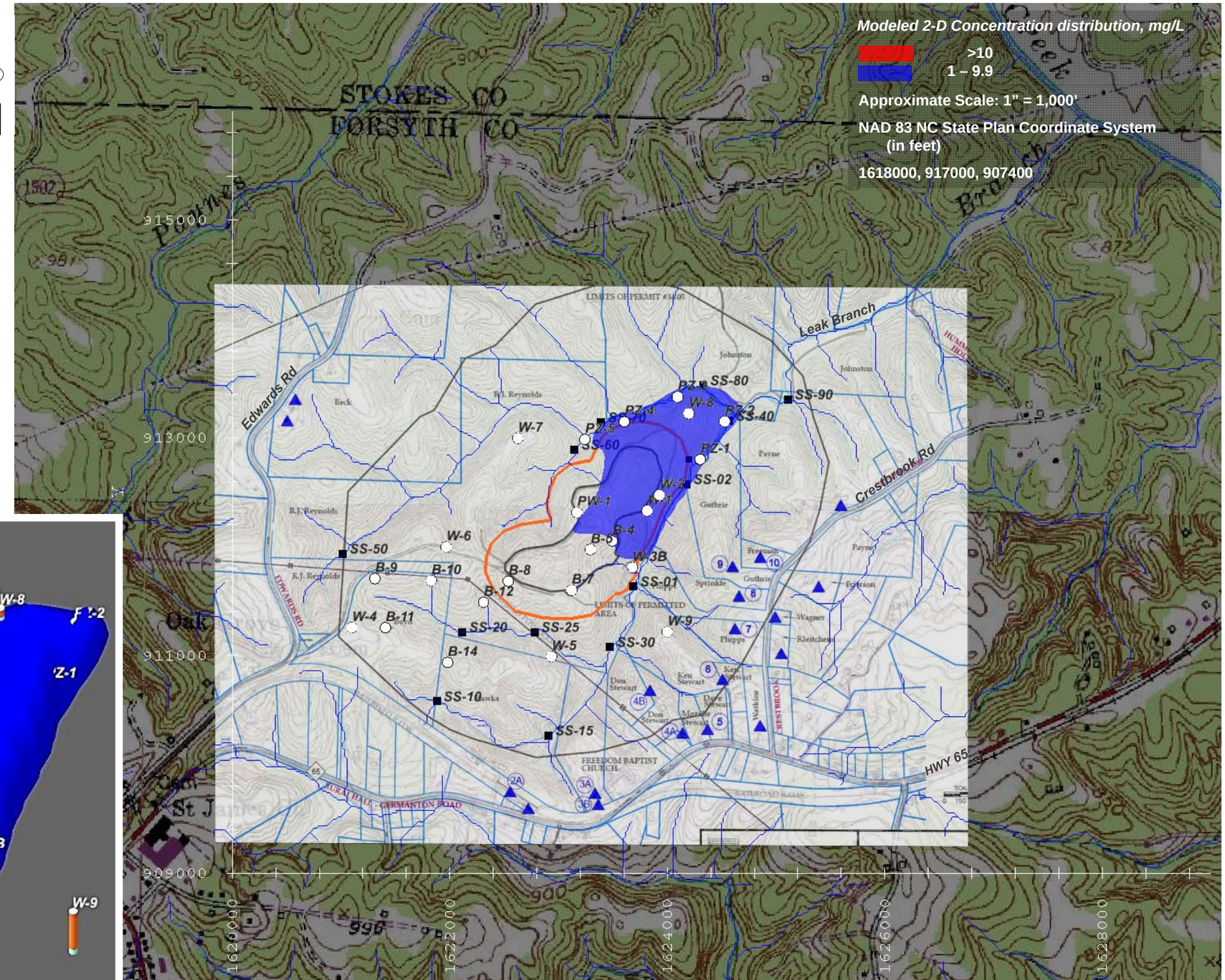
FIGURE
2B

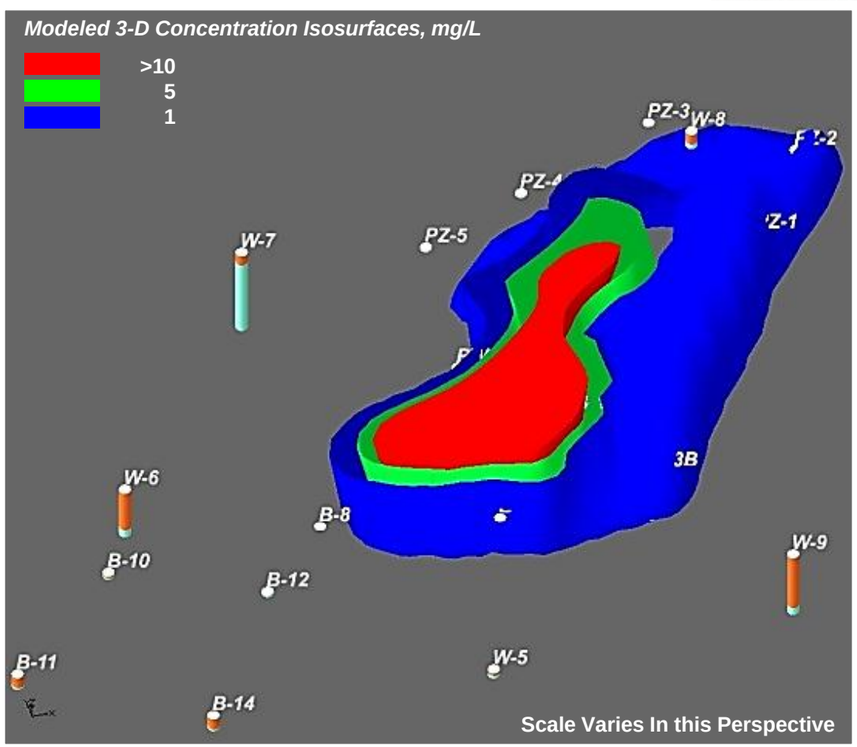
LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Iron Concentration, mg/L			
Well	Year 25	Well	Year 25
PW-1	0.44	W-2	5.97
PZ-1	0.51	W-3	0.43
PZ-2	0.42	W-3B	0.44
PZ-3	0.35	W-6	0.30
PZ-4	0.33	W-7	0.30
PZ-5	0.35	W-8	0.30
W-1	4.54	W-9	0.30
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.940

* Historical average W-6 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 25 Years After Landfill Capping
Dissolved Iron In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

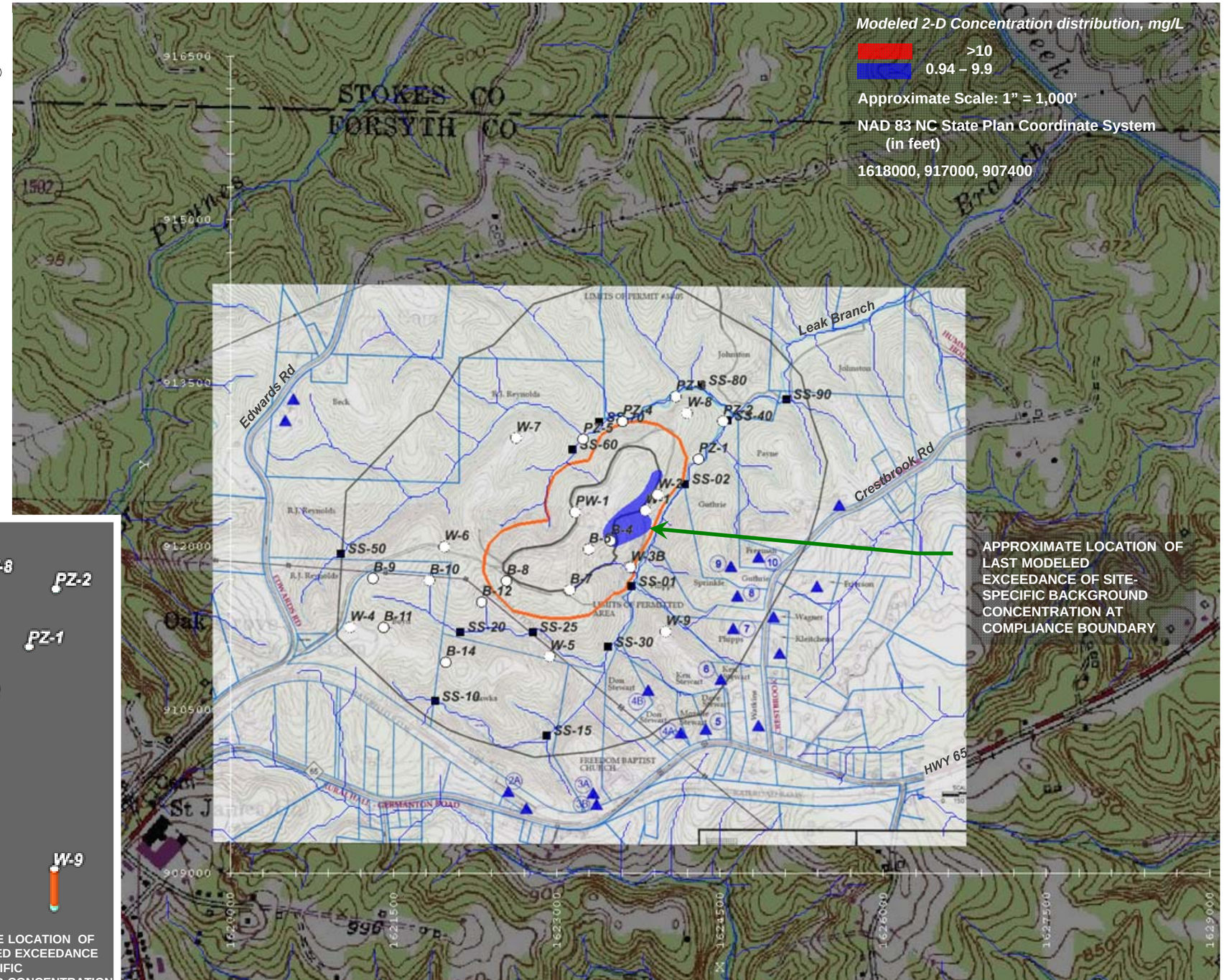
FIGURE
2C

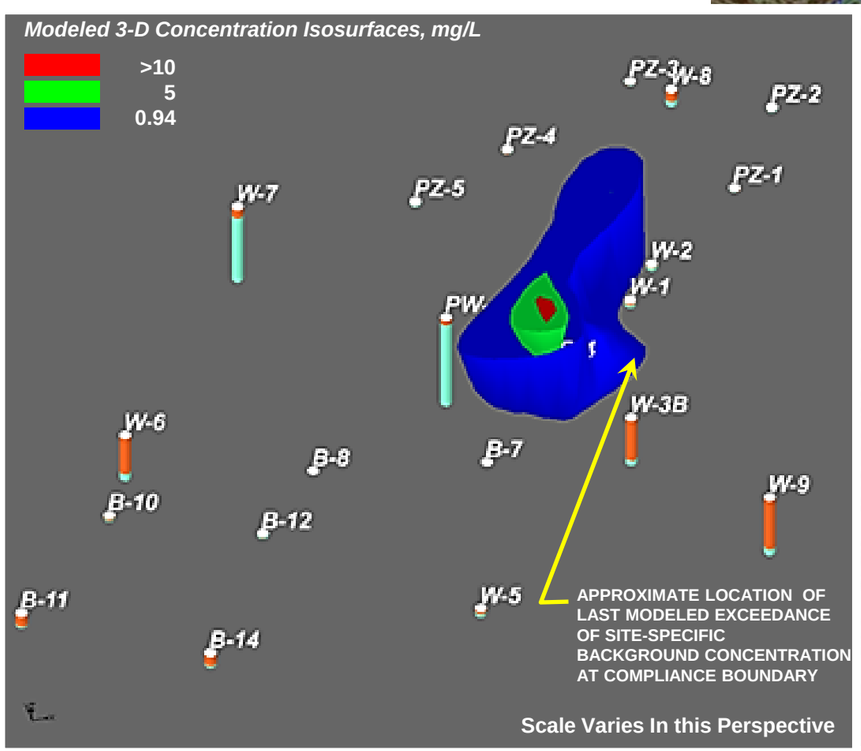
LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Iron Concentration, mg/L			
Well	Year 90	Well	Year 90
PW-1	0.30	W-2	0.83
PZ-1	0.30	W-3	0.31
PZ-2	0.30	W-3B	0.30
PZ-3	0.30	W-6	0.30
PZ-4	0.30	W-7	0.30
PZ-5	0.29	W-8	0.30
W-1	0.84	W-9	0.30
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.940

* Historical average W-6 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 90 Years After Landfill Capping
Dissolved Iron In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

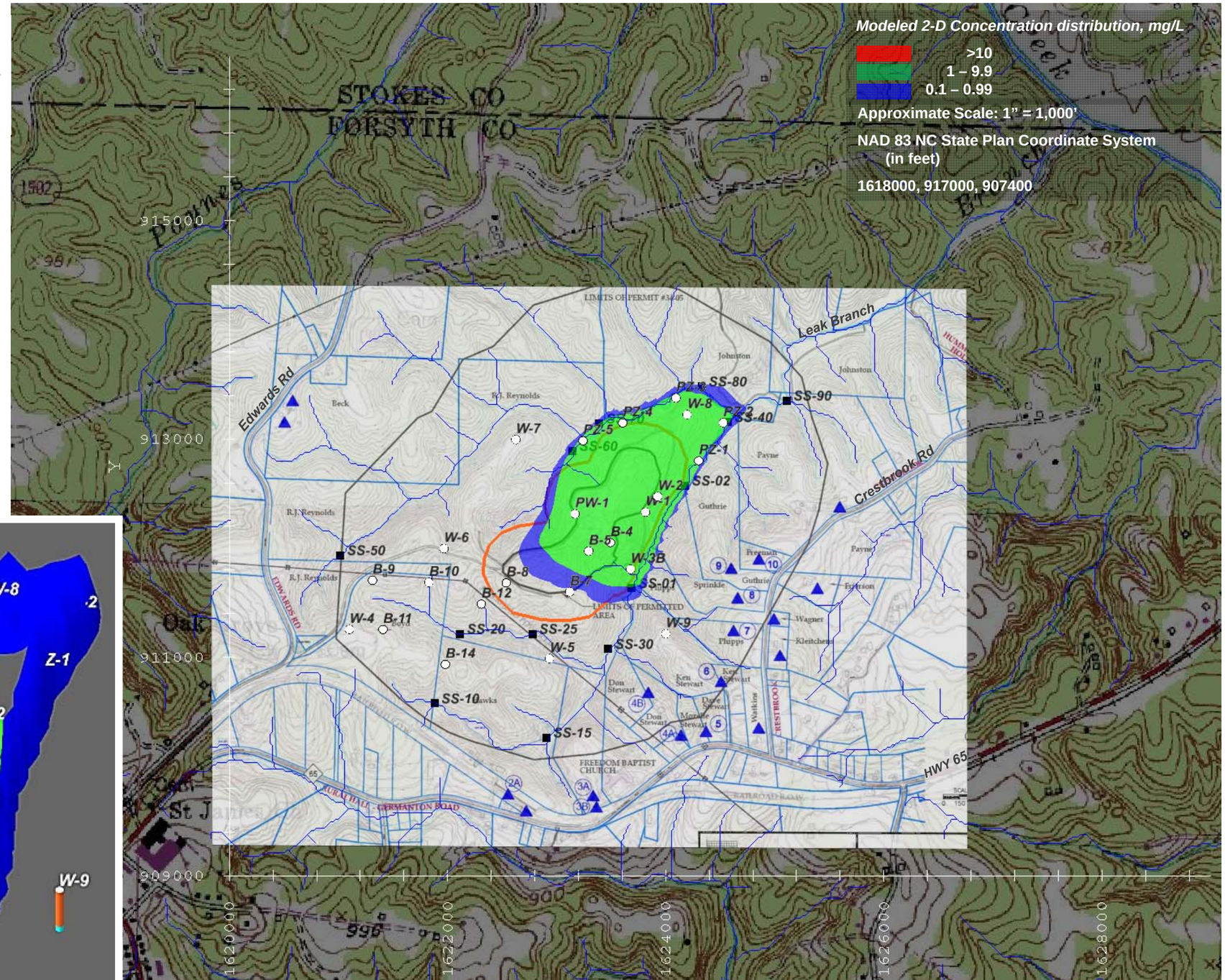
FIGURE
2D

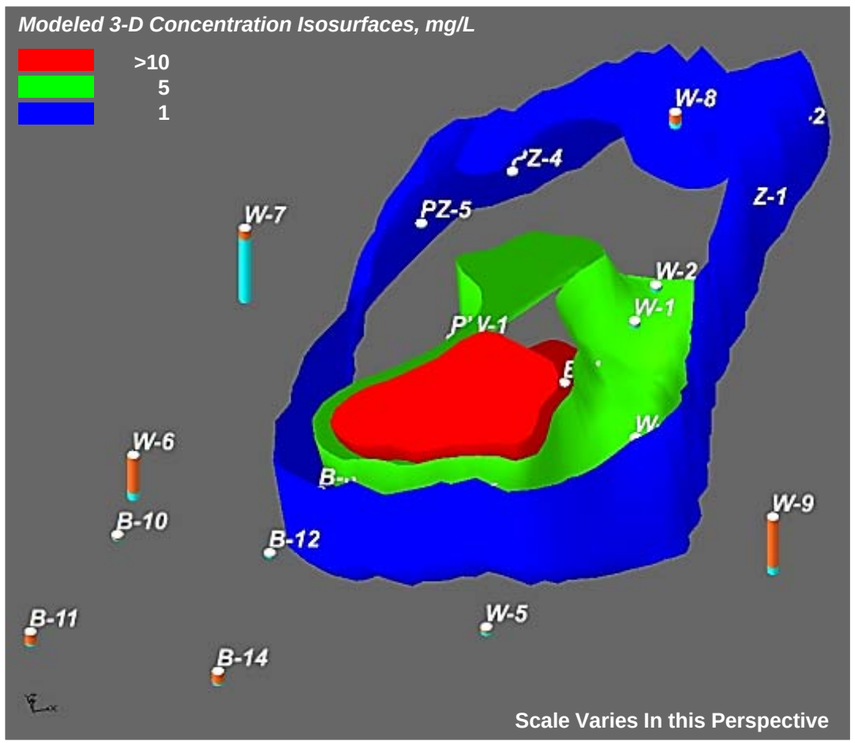
LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Manganese Concentration, mg/L			
Well	Year 5	Well	Year 5
PW-1	4.860	W-2	4.820
PZ-1	0.115	W-3	0.615
PZ-2	0.070	W-3B	2.580
PZ-3	0.058	W-6	0.030
PZ-4	0.068	W-7	0.030
PZ-5	0.127	W-8	0.030
W-1	6.030	W-9	0.030
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.150

* Historical average W-7 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 5 Years After Landfill Capping
Dissolved Manganese In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

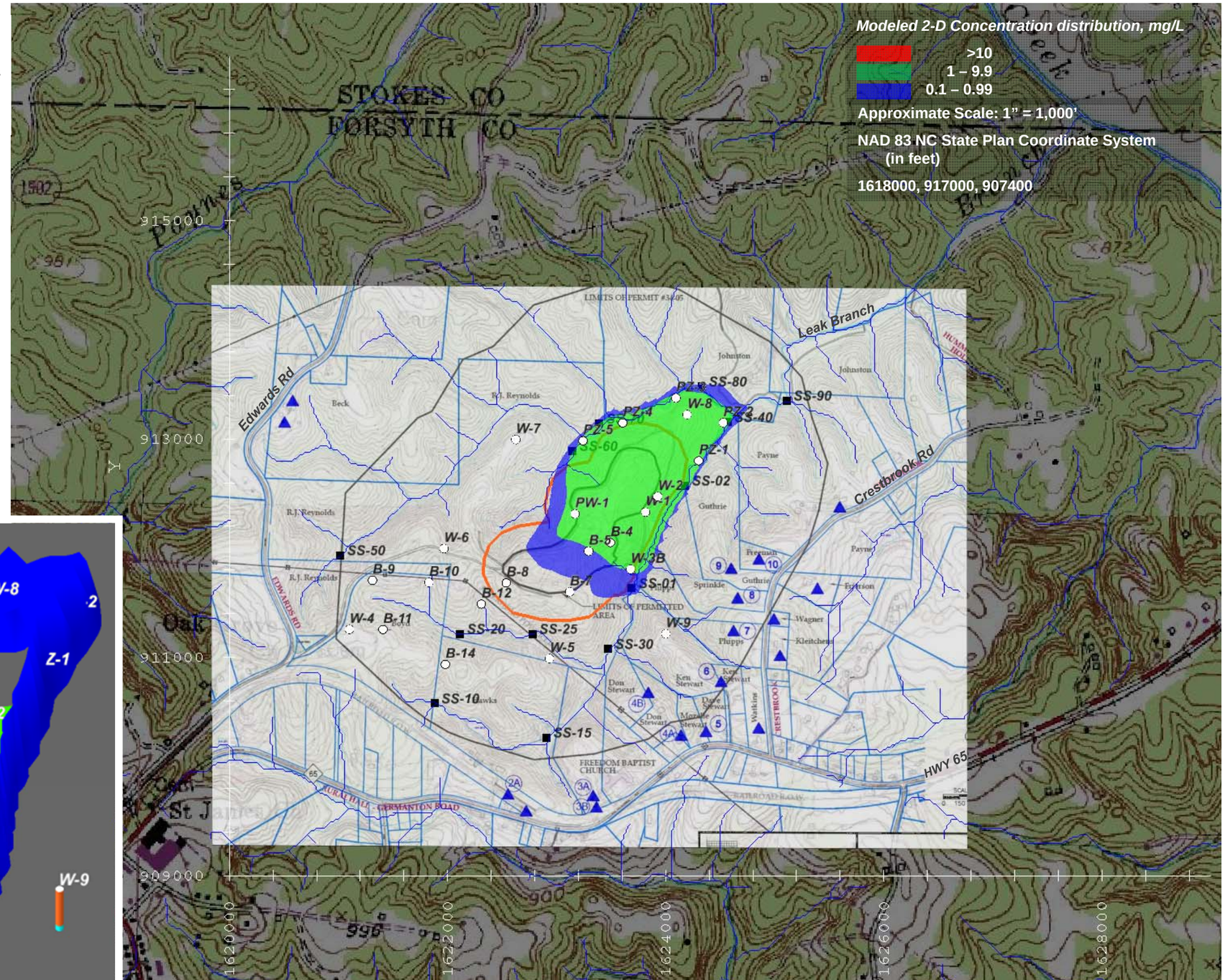
FIGURE
3A

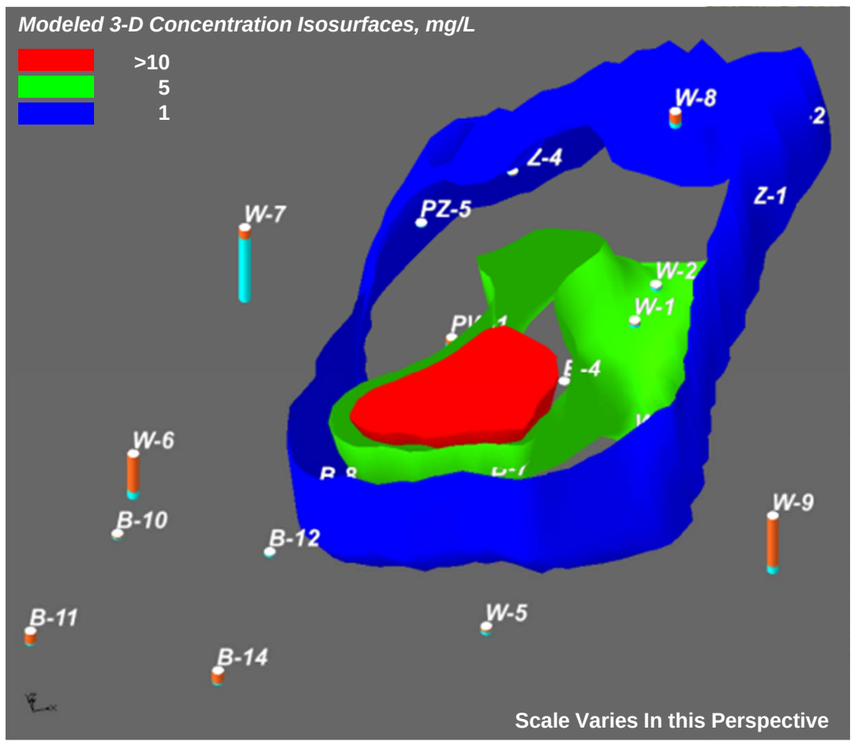
LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Manganese Concentration, mg/L			
Well	Year 10	Well	Year 10
PW-1	1.990	W-2	5.900
PZ-1	0.131	W-3	0.382
PZ-2	0.075	W-3B	0.660
PZ-3	0.057	W-6	0.030
PZ-4	0.069	W-7	0.030
PZ-5	0.126	W-8	0.030
W-1	6.830	W-9	0.030
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.150

* Historical average W-7 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 10 Years After Landfill Capping
Dissolved Manganese In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

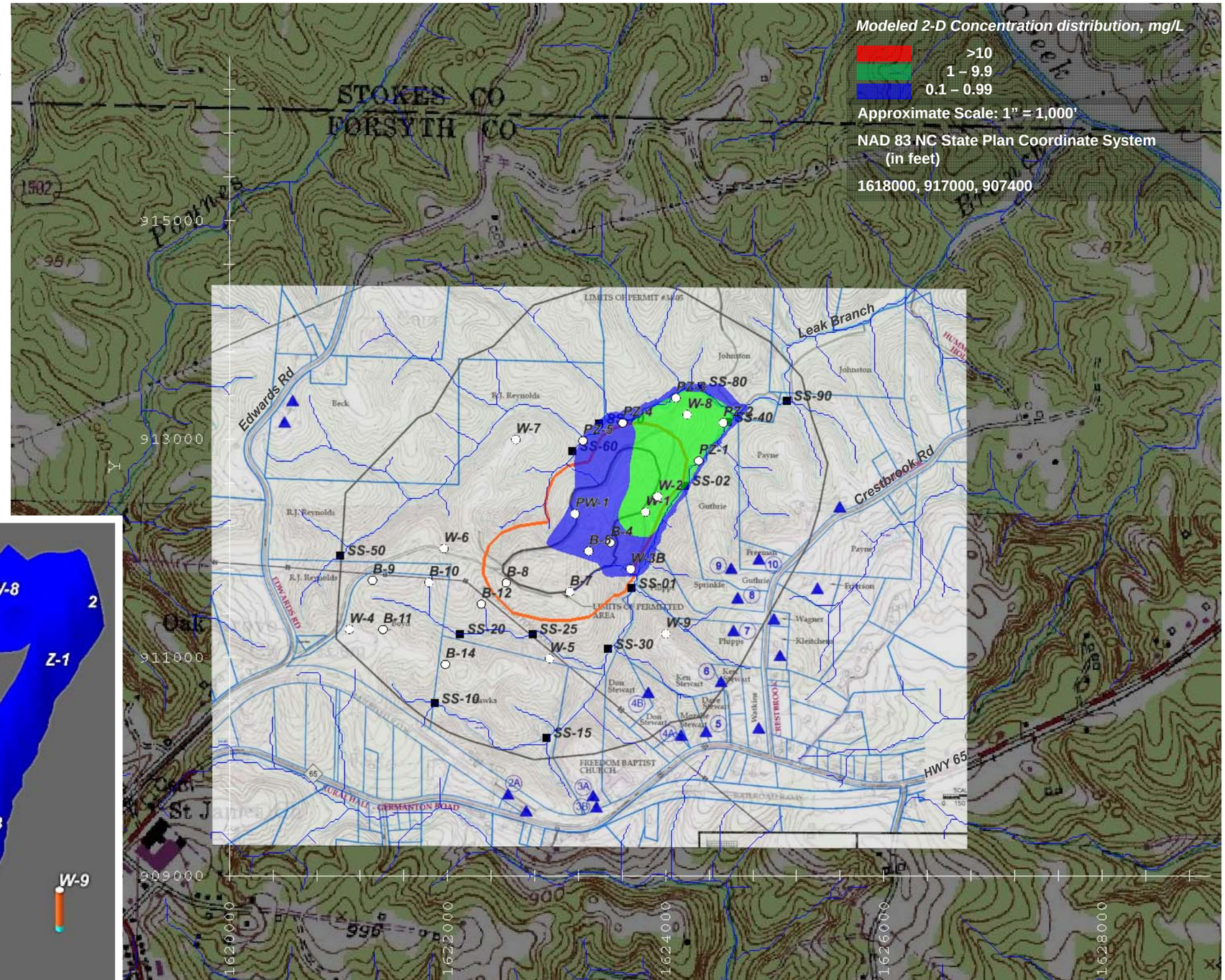
FIGURE
3B

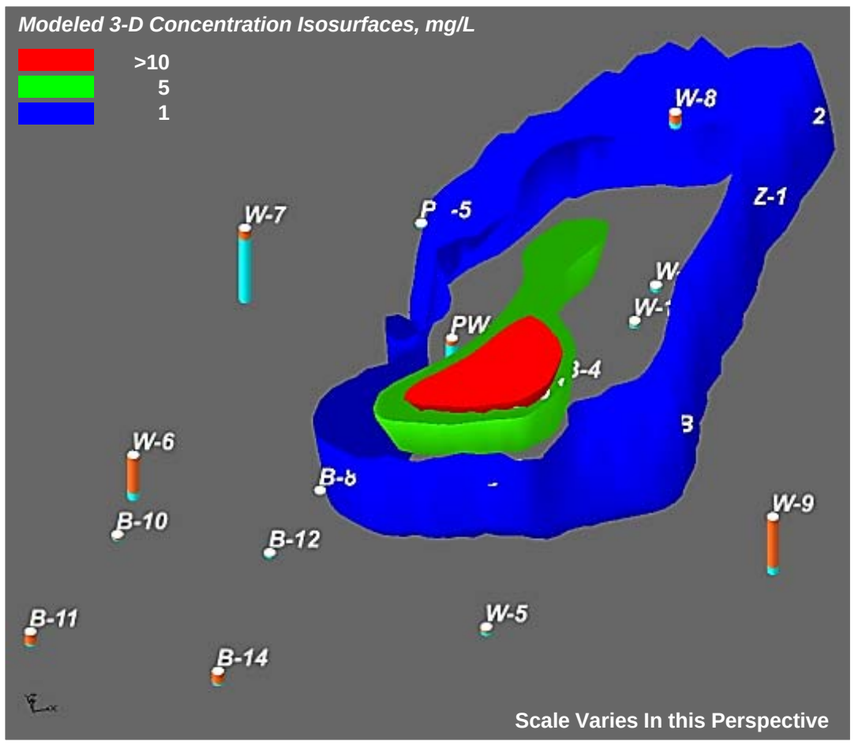
LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Manganese Concentration, mg/L			
Well	Year 25	Well	Year 25
PW-1	0.190	W-2	2.150
PZ-1	0.127	W-3	0.095
PZ-2	0.088	W-3B	0.096
PZ-3	0.053	W-6	0.030
PZ-4	0.047	W-7	0.030
PZ-5	0.056	W-8	0.030
W-1	2.750	W-9	0.030
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.150

* Historical average W-7 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 25 Years After Landfill Capping
Dissolved Manganese In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

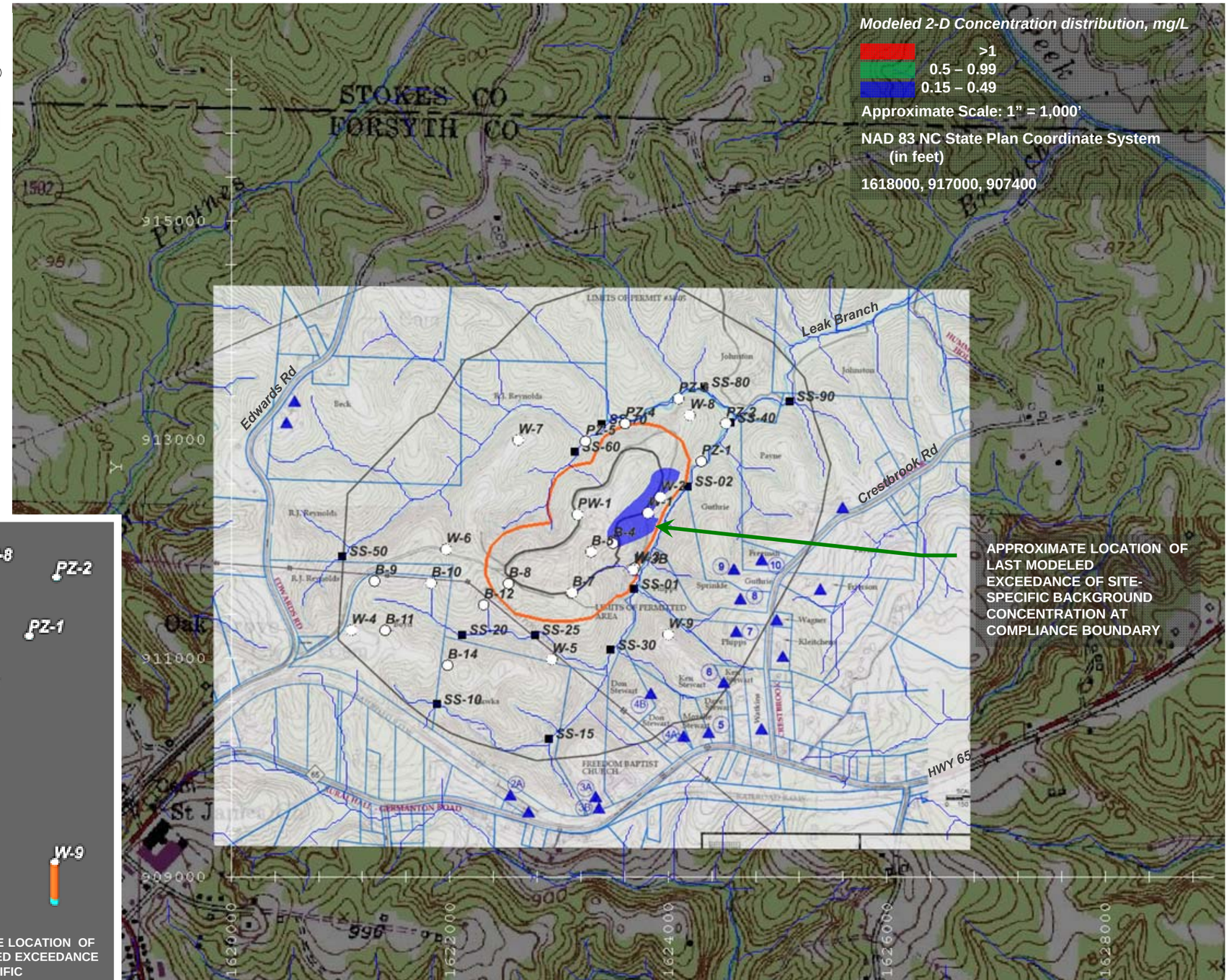
FIGURE 3C

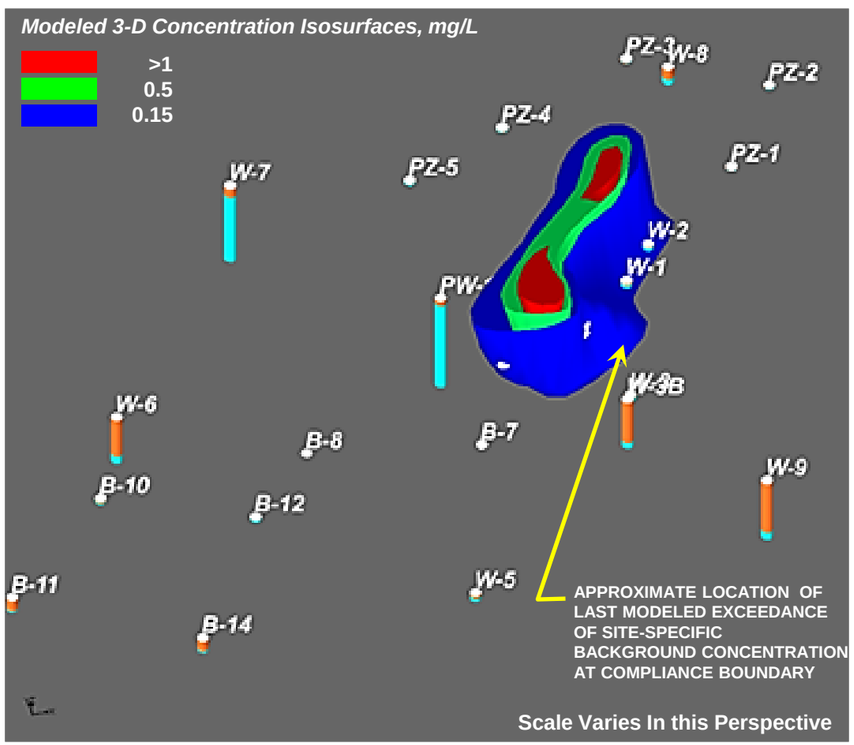
LEGEND

- Landfill Boundary
- Monitoring Wells
- Modeled Streams
- Off-site Residential Wells
- Stream Sampling Locations
- Compliance Boundary

Modeled Manganese Concentration, mg/L			
Well	Year 110	Well	Year 110
PW-1	0.030	W-2	0.162
PZ-1	0.030	W-3	0.042
PZ-2	0.030	W-3B	0.030
PZ-3	0.030	W-6	0.030
PZ-4	0.030	W-7	0.030
PZ-5	0.029	W-8	0.030
W-1	0.168	W-9	0.030
2L Standard	0.050	Modeled Regional Background	0.030
		Site-Specific Background *	0.150

* Historical average W-7 results (1/2011-4/2013)





ERM NC, Inc.

Modeled Future Distribution 110 Years After Landfill Capping
Dissolved Manganese In Deep Bedrock Zone
Edwards Road Landfill - Rural Hall, North Carolina

FIGURE 3D

Attachment B
NC Solid Waste .0500
Groundwater Corrective Action
Application & Supporting
Documentation

North Carolina Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section

North Carolina Solid Waste .0500 Groundwater Corrective Action Application

Post closure care monitoring of this .0500 solid waste management facility is required pursuant to the rules codified at 15A NCAC 13B Section .0500, *et. seq*., .0600, *et. seq*., and N.C.G.S. 130A-309.27. Groundwater quality at this solid waste management facility is also subject to the "Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina," 15A NCAC 2L.

Due to the detections of groundwater exceedances at this solid waste management facility, pursuant to 15A NCAC 2L .0106(d)(2), any person conducting or controlling an activity under the authority of a permit which results in an increase in concentration of a substance in excess of the standards at or beyond the compliance boundary is required to assess the nature and extent of the contamination and submit the results of the investigation and a plan for corrective action to the Division. In accordance with 15A NCAC 2L .0107, a compliance boundary (the relevant point of compliance) shall be established 250 feet from the waste boundary, or 50 feet within the property boundary, whichever point is closer to the source.

As a result, groundwater corrective action is required to be implemented at this solid waste management facility, and a remedy must be selected. Once the Division approves the selected remedy, a Corrective Action Plan (CAP) is required to be submitted. The Division highly recommends conducting a public meeting to discuss the selected remedy. Please complete the North Carolina Solid Waste .0500 Groundwater Corrective Action Application and please attach the following:

(1) a signed resolution/proclamation/document adopting the selected remedy,
(2) a site map designating the locations of the groundwater monitoring wells and surface water monitoring locations that will or may be impacted by the selected remedy,
(3) any draft conceptual schematics/figures/plans relating to the selected remedy,
(4) a list of any required registrations, permits, and approvals,
(5) a copy of the facility's permit issued by the Solid Waste Section,
(6) a copy of the facility's closure letter/permit issued by the Solid Waste Section, and
(7) a copy of the minutes from the public meeting discussing the selected remedy(if applicable)

Please send or email the completed application and the attachments to NCDENR-DWM, Solid Waste Section, Compliance Unit, 1646 Mail Service Center, Raleigh, NC 27699-1646. This application and any documents attached to this application are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC
General Statute 132-6).

Please type all information.

I. Site Identification

Permit Number: 34-05

Facility Name: Edwards Road Landfill

Facility Physical Address: Edwards Road (no street number assigned)

City: Rural Hall Zip: 27045

County: Forsyth

Waste Type: Industrial

II. Owner and Operator Information

☒ Check box, if owner and operator are the same.

Owner

Name: R.J. Reynolds Tobacco Company

Address: P.O. Box 2959, Winston-Salem, NC 27102

Phone Number: 336 741-1491

Operator

Name: Same

Address:

Phone Number:

III. Groundwater Corrective Action

Selected remedy (include additional lines if needed):

(1) Installation of LLDPE liner & drainage improvements to minimize infiltration & leachate generation (complete 9/20/12)

(2) Intrinsic remediation with performance monitoring

(3)

Contingency Plan A: In situ bioremediation via lactate injection & sulfate reducing bacteria, if required (subj. to pilot testing)

Contingency Plan B: Amendment of Contingency A with addition of zero valent iron (subj. to pilot testing)

IV. Project Schedule (upon Division approval)

Approximate Date of Remedy Construction Completion (if applicable):

Approximate Date of Implementation of Remedy: 04/01/2014

Approximate Date of MNA Baseline Sampling Completion (if applicable):

Approximate Date of Submittal of the Corrective Action Evaluation Report: 4/1/2019

V. Environmental Consultant

Consulting Company: ERM NC, Inc.

Address: 15720 John J. Delaney Drive, Suite 120, Charlotte, NC 28277

Phone Number: 704-541-8345

VI. Signatures

To the best of my knowledge, the information reported and statements made in this North Carolina Solid Waste .0500 Groundwater Corrective Action Application are true and correct. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of fine and imprisonment.

If Owner and Operator are the same, please sign for Owner and type or write SAME for Operator.

Owner

Owner Name (Printed or Typed): Mark A. Peters

Owner Signature: _____ Date: 10/01/2013

Operator

Operator Name (Printed or Typed): Same

Operator Signature: _____ Date: _____

NC Professional Geologist or NC Professional Engineer

Name (Printed or Typed): Alan D. Martin

Signature: _____ Date: 10/01/2013

Affix NC Professional Geologist or Engineer Seal:

NORTH CAROLINA LICENSED SEAL 1846 GEOLOGIST ALAN D. MARTIN

R.J. Reynolds Tobacco Company

October 1, 2013

NCDENR – Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Attention: Ms. Jackie Drummond – Compliance Hydrogeologist
Via E-Mail

Subject: Adoption of Selected Remedy
Groundwater Corrective Action Application
R.J. Reynolds Ash Landfill – Permit #34-05
Edwards Road Landfill
Rural Hall, Forsyth County, North Carolina

Dear Ms. Drummond:

R.J. Reynolds Tobacco Company (RJRT) is submitting the enclosed *North Carolina Solid Waste .0500 Groundwater Corrective Action Application* and associated supporting documents for the Edwards Road Landfill site in Rural Hall, North Carolina. The revised application is submitted in response to your July 2, 2013 letter to RJRT and your August 1, 2013 approval letter of ERM's request to extend the submittal date to October 1, 2013. The application and supporting documents present the corrective action selected by RJRT for groundwater and surface water quality remediation at the referenced site.

The selected remedy includes source area contaminant control and intrinsic remediation with performance monitoring as remedial technologies for restoration of water quality at and beyond the compliance boundary at the site. Details regarding these remedial technologies along with the required contingency alternatives are provided in the enclosed summary letter by ERM.

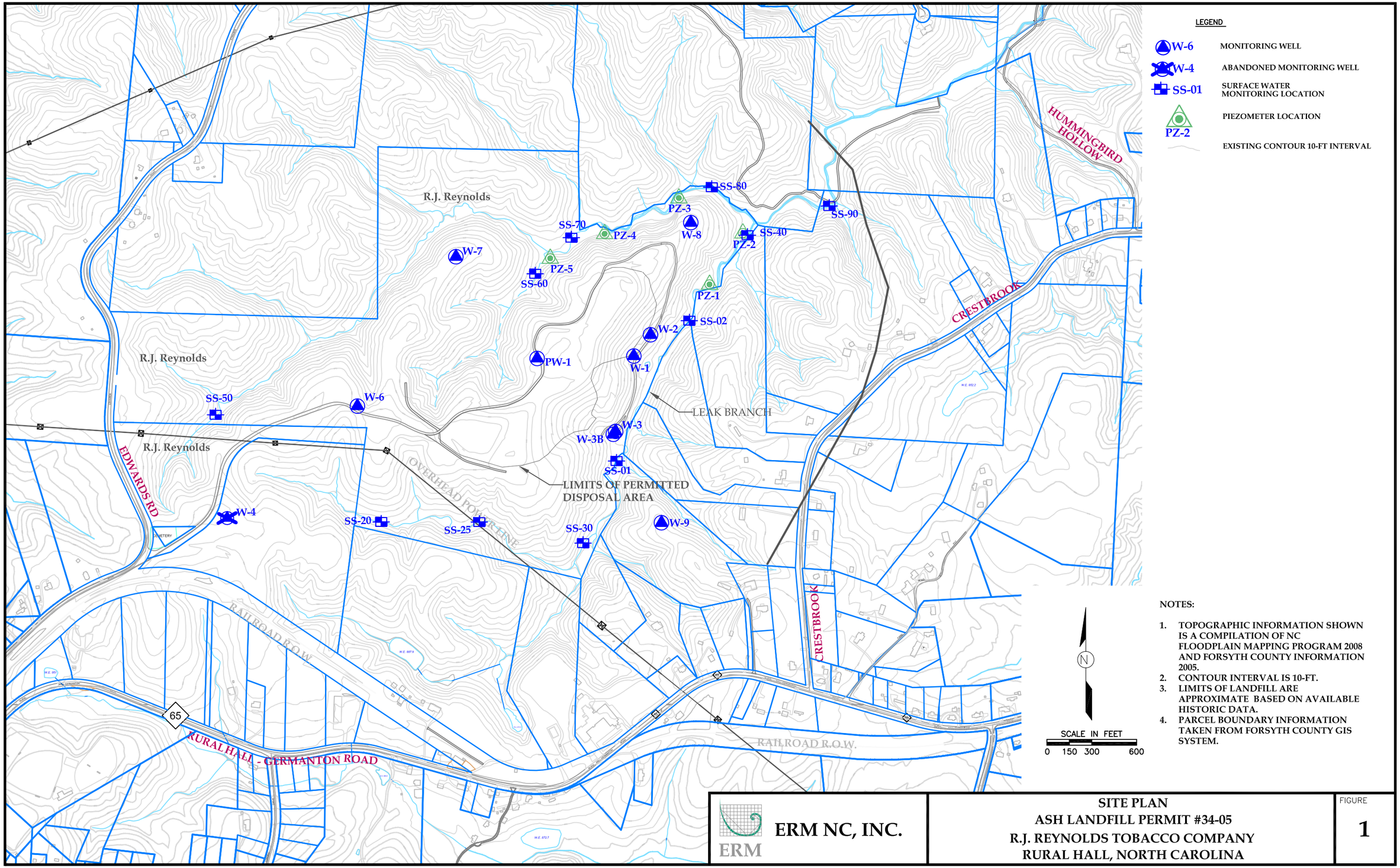
If you should have any questions or require additional information concerning this letter, please contact Ms. Yong Yi via email (YiY1@RJRT.com) or telephone at 336-741-1491 at your convenience.

Sincerely,

Mark A. Peters
Chief Financial Officer

Attachments:
Groundwater Corrective Action Application Package (ERM)

cc: Alan Martin, P.G. – ERM



NOTES:

1. TOPOGRAPHIC INFORMATION SHOWN IS A COMPILATION OF NC FLOODPLAIN MAPPING PROGRAM 2008 AND FORSYTH COUNTY INFORMATION 2005.
2. CONTOUR INTERVAL IS 10-FT.
3. LIMITS OF LANDFILL ARE APPROXIMATE BASED ON AVAILABLE HISTORIC DATA.
4. PARCEL BOUNDARY INFORMATION TAKEN FROM FORSYTH COUNTY GIS SYSTEM.

ERM NC, INC.	SITE PLAN ASH LANDFILL PERMIT #34-05 R.J. REYNOLDS TOBACCO COMPANY RURAL HALL, NORTH CAROLINA	FIGURE 1

North Carolina Department of Environment and Natural Resources
North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

Doc. ID No. 14847

August 16, 2011

Sent Via Email – YIY1@RJRT.com Dave.Wasiela@erm.com

Ms. Yongsheng Yi, Senior Area Manager
R.J. Reynolds Tobacco Company.
PO Box 2959
Winston-Salem, NC 27102

David W. Wasiela, P.E.
ERM NC, PC
8000 Corporate Center Drive, Suite 200
Charlotte, NC 28226

Re: R.J. Reynolds Rural Hall Ash Landfill
Revised Closure Plan
Forsyth County,
Solid Waste Permit Number 34-05

Dear Ms. Yongsheng Yi & Mr. David W. Wasiela:

The Solid Waste Section of the Division of Waste Management (the Division) has completed its review of your application for the R.J. Reynolds Rural Hall Ash Landfill, ".Revised Closure Plan."

In general, the new facility permit does not reiterate permit conditions which are included in the Solid Waste Management Rules, 15A NCAC 13B, nor does it restate specific conditions which are included within the approved plans, such as site specific operations.

If you have questions about this permit or require further clarification, please contact myself at (704) 235-2163 (john.murray@ncdenr.gov) or C. T. Gerstell who is the Solid Waste Section

Waste Management Specialist for your area and can be reached at (704) 235-2144 or charles.gerstell@ncdenr.gov.

Sincerely,

John Murray, P.E.
Regional Engineer
Solid Waste Section

cc. Jackie Drummond, DWM
C. T. Gerstell, DWM
Jason Watkins, DWM

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION

INDUSTRIAL SOLID WASTE LANDFILL FACILITY
Permit No. 34-05-Indus-1986

R.J. REYNOLDS TOBACCO CO.

(OWNER)

Is hereby issued a

LETTER OF CLOSURE MODIFICATION

R. J. REYNOLDS RURAL HALL ASH LANDFILL (CLOSED)

INDUSTRIAL PROCESS WASTE LANDFILL UNIT

Located on Edwards Road, North East of Rural Hall, Forsyth County, North Carolina in accordance with Article 9, Chapter 130A, of the General Statutes of North Carolina and all rules promulgated thereunder and subject to the conditions set forth in this permit. The facility is located and described by the legal description of the site or the property map contained within the approved application.

Edward F. Mussler, III, P.E.,
Permitting Branch Supervisor
Solid Waste Section

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Telephone 919-508-8400 \ *Fax* 919-733-4810 \ *Internet* http://wastenotnc.org
An Equal Opportunity / Affirmative Action Employer – Printed on Dual Purpose Paper

ATTACHMENT 1

PART I: PERMITTING HISTORY

Issuance	Date	Doc. ID No.
Permit to Operate	May 29, 1986	
Permit Expired	December 31, 2002	
Closure Modification	August12, 2011	14624

1. Stopped receiving waste ~ December 31, 2002.
2. Approval of the *Transition Plan ~ December, 1999*.
3. Approval of the *Permit Modification of the Transition Plan - February 8, 2001*.
4. R.J. Reynolds Tobacco Co requested closure of the site on June 6, 2004.
5. R.J. Reynolds Tobacco Co was issued a compliance order - April 17, 2009

PART II: PROPERTIES APPROVED FOR THE SOLID WASTE FACILITY

Description	Deed Book	Page No.	Acreage	Owner	PIN
Edwards Road	2975	2644	145.18	R J Reynolds Tobacco Co.	6921-22-4389.00
Total Site Acreage =			**145.18**		

PART III: LIST OF APPROVED DOCUMENTS

Closure Plan Modification

1. Letter from ERM NC, Inc. on behalf of R. J. Reynolds Tobacco Co., to NCDENR – Division of Waste Management seeking approval for modifications to landfill closure cap. May 27, 2011. DIN 14055.

2. *Proposed Closure Modification, Former Edwards Road Landfill, Rural Hall, North Carolina.* Including Plans, Technical Specs. & CQA Plan. Prepared by ERM NC, INC. Prepared for R.J. Reynolds Tobacco Company. March 10, 2011. DIN 14356. Revised July 15, 2011. DIN 14689.

Post-Closure Use Plan(s)

Ground Water Corrective Action Plan(s)

1. Letter from ERM NC, Inc. on behalf of R. J. Reynolds Tobacco Co., to NCDENR – Division of Waste Management seeking approval for Water Supply Well Survey and Sampling. June 30, 2009. DIN 7918.
2. *Preliminary Site Assessment Work Plan,* Rural Hall Ash Landfill Permit No. 34-05 Rural Hall, Forsyth County, North Carolina. Prepared by ERM NC, INC. Prepared for R.J. Reynolds Tobacco Company. July 2009. DIN 8020.
3. *Summary Report – Preliminary Site Assessment,* Ash Landfill Permit No. 34-05, Rural Hall, Forsyth County, North Carolina. Prepared by ERM NC, INC. Prepared for R.J. Reynolds Tobacco Company. October 29, 2009. DIN 8861.
4. *Monitor Well Permit Application,* Edwards Road Landfill - Permit #34-05. Prepared by ERM NC, INC. Prepared for R.J. Reynolds Tobacco Company. December 6, 2010. DIN 12616.
5. *Summary Report – Phase II Site Assessment*, R.J. Reynolds Edwards Road Landfill – Permit #34-05, Rural Hall, Forsyth County, North Carolina Prepared by ERM NC, INC. Prepared for R.J. Reynolds Tobacco Company. March 10, 2011. DIN 13410.
6. *Off-Site Access & Groundwater Modeling,* R.J. Reynolds Ash Landfill – Permit #34-05. Prepared by ERM NC, INC. Prepared for R.J. Reynolds Tobacco Company. July 6, 2011. DIN 14344.

PART IV: GENERAL FACILITY CONDITIONS

1. This permit is issued by the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section (Section). In accordance with North Carolina Solid Waste Management Rule 15A NCAC 13B.

2. The person(s) to whom this permit is issued ("permittee") are the owner(s) and operator(s) of the solid waste management facility.

3. (Intentionally Blank)

4. When this property is sold, leased, conveyed, or transferred in any manner, the deed or other instrument of transfer must contain in the description section in no smaller type than that used in the body of the deed or instrument, a statement that the property has been used as a sanitary landfill and a reference by book and page to the recordation of the permit.

5. (Intentionally Blank)

6. Construction and maintenance of this solid waste management facility must be in accordance with the Solid Waste Management Rules, 15A NCAC 13B, Article 9 of the Chapter 130A of the North Carolina General Statutes (NCGS 130A-290, et seq.), the conditions contained in this permit; and the approved plan. Should the approved plan and the rules conflict, the Solid Waste Management Rules shall take precedence unless specifically addressed by permit condition.

7. This permit is issued based on the documents submitted in support of the permit application for the facility including those identified in Attachment 1, "List of Documents for Approved Plan," which constitutes the approved plan for the facility. Where discrepancies exist, the most recent submittals and the Conditions of Permit shall govern.

8. This permit may be transferred only with the approval of the Section and through the issuance of a new or substantially amended permit in accordance with applicable statutes and rules. In accordance with NCGS 130A-295.2(g) the permittee shall notify the Section thirty (30) days prior to any significant change in the identity or business structure of either the owner or the operator, including but not limited to a proposed transfer of ownership of the facility or a change in the parent company of the owner or operator of the facility.

9. The permittee is responsible for obtaining all permits and approvals necessary for the Closure and Post Closure of this facility including approval from appropriate agencies for a General or Individual NPDES Stormwater Discharge Permit. Issuance of this permit does not remove the permittee's responsibilities for compliance with any other local, state or federal rule, regulation or statute.

- End of Section -

ATTACHMENT 2

CONDITIONS OF PERMIT TO CONSTRUCT

PART I: INDUSTRIAL SOLID WASTE LANDFILL UNIT SPECIFIC CONDITIONS

1. Construction of all solid waste management units within this facility must be in accordance with the pertinent approved plans and only for those phases of development approved for construction as described in Attachment I, Part III, List of Documents for the Approved Plan.

2. The permittee must conduct a preconstruction meeting at the facility prior to initiating construction of any unit and must notify the Section at least 10 days prior to the meeting.

3. Modifications or revisions of the approved documents or changes during construction of any landfill unit/cell require approval by the Section, and may constitute a permit modification and be subject to a permitting fee.

4. Construction Quality Assurance (CQA) documentation and a certification by the project engineer that the landfill was built in accordance with approved plans and the conditions of the permit must be submitted to the Section for review and approval.

5. Pursuant to the NC Solid Waste Management Rule (Rule) 15A NCAC 13B .1626(5) burning of land-clearing debris generated on site as a result of construction activities requires approval by the Section prior to initiating the burn. In addition, the Division of Air Quality and local fire department must approve the activity prior to burning.

6. The edge of the waste footprint must be identified with permanent physical markers.

Geologic, Ground Water and Monitoring Requirements

7. Groundwater quality at this facility is subject to the "Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina," 15A NCAC 2L. This includes, but is not limited to, the provisions for detection monitoring, assessment, and corrective action.

8. In areas where soil is to be undercut, abandoned piezometers, monitoring wells and borings must not be grouted to pregrade land surface, but to the proposed base grade surface to prevent having to cut excess grout and possibly damage the wells.

9. A Licensed Geologist must report any pertinent geological feature(s) exposed during phase, borrow area or cell excavation. The geologist must submit to the Section hydrogeologist a written

report that includes an accurate description of the exposed geological feature(s) and effect of the geological feature(s) on the design, construction, and operation of the cell, phase, or unit.

10. A Licensed Geologist must supervise installation of groundwater monitoring wells and surface water sampling stations.

11. Any modification to the approved water quality monitoring, sampling, and analysis plan must be submitted to the Section Hydrogeologist for review.

12. Within 30 days of completed construction of each new groundwater monitoring well, a well construction record (GW-1 form), typical well schematic, boring log, field log and notes, and description of well development activities must be submitted to the Section. Each monitoring well and gas probe must be surveyed for location and elevation.

13. The permittee must submit to the Section a plan sheet-sized, scaled topographical map, showing the location and identification of new, existing, and abandoned wells and piezometers after installation of groundwater monitoring wells.

14. Within thirty (30) days of the completed permanent abandonment of a groundwater monitoring well, the well abandonment record (GW-30 form) and any additional information included in the abandonment record must be submitted to the Section. The well abandonment records must be submitted to the Section consistent with 15A NCAC 2C .0114(b) and be certified by a Licensed Geologist.

15. Groundwater, surface water, and landfill gas monitoring locations must be established and monitored as identified in the approved plans. Any proposed modification to an approved plan must be submitted to the Section and approved prior to implementation.

16. Each groundwater monitoring well and landfill gas monitoring well must have an identification plate permanently attached to the well, in accordance with 15A NCAC 2C .0108(o).

17. All forms, reports, maps, plans and data submitted to the section must include an electric copy.

18. Monitoring reports of the analytical results for surface water and groundwater monitoring sampling events must be submitted to the Section within 120 days of the sample collection date. Analytical laboratory data must be submitted in electronic portable document format (pdf) and in a spreadsheet format in an Electronic Data Deliverable (EDD) Template. All monitoring reports must contain:

    a. a potentiometric surface map for the current sampling event,

    b. analytical laboratory reports and summary tables,

c. a completed Solid Waste Environment Monitoring Data Form, and

d. laboratory data submitted in accordance with the EDD Template.

Erosion and Sedimentation Control Requirements

19. All required sedimentation and erosion control measures must be installed and operable to mitigate excessive on-site erosion and to prevent silt from leaving the facility boundary.

20. All earth disturbing activities must be conducted in accordance with the Sedimentation Pollution Control Act of 1973 (15 NCAC 4) and consistent with any other local, state or federal requirements.

21. Facility construction, operations or practices must not cause or result in a discharge of pollution, dredged material, and/or fill material into waters of the state in violation of the requirements under Sections 401 and 404 of the Clean Water Act, as amended.

22. Modifications to the approved sedimentation and erosion control activities require approval by the North Carolina Land Quality Section. The Section must be notified of any sedimentation and erosion control plan modifications.

23. The permittee must maintain a record of all monitoring events and analytical data. Reports of the sampling events and analytical data must be submitted to the Section in a timely manner.

ATTACHMENT 3
POST-CLOSURE CONDITIONS

PART I: GENERAL CONDITIONS

24. The permittee must maintain the integrity and effectiveness of the cap system, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and prevent surface water from impounding over waste and run-on and run-off from eroding or otherwise damaging the cap system.

23. Post-closure use of the property is subject to review and approval by the Division and must not disturb the integrity of the cap system, or the function of the monitoring systems. The Division may approve any other disturbance if the owner or operator demonstrates that disturbance of the cap system, including any removal of waste, will not increase the potential threat to human health or the environment.

25. Any proposed expansion to the closed landfill shall be considered a new landfill for purposes of Solid Waste Management permitting if it is defined as a substantial change (N.C.G.S. 130A-294 (b1)(1).

- End of Section –

North Carolina Department of Environment and Natural Resources
Division of Land Resources
Land Quality Section

James D. Simons, PG, PE
Director and State Geologist

Beverly Eaves Perdue, Governor
Dee Freeman, Secretary

June 24, 2011

LETTER OF APPROVAL

RJ Reynolds Tob Co
ATTN :- Mark Peters, CFO
PO BOX 2959
Winston-Salem, NC 27102

RE: Project Name: RJ Reynolds Landfill
Project ID: FORSY-2011-032
County: Alamance, Edwards Rd, Rural Hall
River Basin: Broad
Submitted By: ERM
Date Received by LQS: June 21, 2011
Plan Type: Express New

Acres Approved: 22.88

Stream Classification: Other

Dear Sir or Madam:

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

Title 15A NCAC 4B .0118(a) requires that a copy of the approved erosion control plan be on file at the job site. Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to insure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State

water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please be aware that your project will be covered by the enclosed NPDES General Stormwater Permit NCG010000 (Construction Activities). You should first become familiar with all of the requirements for compliance with the enclosed general permit.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. In addition, it would be helpful if you notify this office of the proposed starting date for this project. Please notify us if you plan to have a preconstruction conference.

Your cooperation is appreciated.

Sincerely,

Scott Sink
Assistant Regional Engineer
Land Quality Section

Enclosures: Certificate of Approval
NPDES Permit

cc: ERM-Southwest, Inc.
8000 Corporate Center Dr., Suite 200
Charlotte, NC 28226

WSRO-DWQ

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Land Resources
Land Quality Section

James D. Simons, P.G., P.E.
Director and State Geologist

Beverly Eaves Perdue, Governor
Dee Freeman, Secretary

Announcement of Self-Inspection Program

The Sedimentation Pollution Control Act was amended in 2006 to require that persons responsible for land-disturbing activities inspect a project after each phase of the project to make sure that the approved erosion and sedimentation control plan is being followed.

Rules detailing the documentation of these inspections take effect October 1, 2010.

The self-inspection program is separate from the weekly self-monitoring program of the NPDES Stormwater Permit for Construction Activities. The focus of the self-inspection report is the installation and maintenance of erosion and sedimentation control measures according to the approved plan. The inspections should be conducted after each phase of the project, and continued until permanent ground cover is established.

Excerpts from the North Carolina General Statues and the North Carolina Administrative Code concerning self-inspections are enclosed. To better explain the requirements, a list of Frequently Asked Questions is also enclosed, along with a Self-Inspection Report form. The Self-Inspection Report form will also be available as an Excel spreadsheet from the Land Quality web site,

http://www.dlr.enr.state.nc.us/pages/sedimentation_new.html

Please take a moment to review the enclosed material. If you have questions, please contact the Land Quality Section at a DENR Regional Office.

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512 North Salisbury Street, Raleigh, North Carolina, 27604

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

GENERAL PERMIT – NCG 010000

TO DISCHARGE STORMWATER UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
For

CONSTRUCTION ACTIVITIES

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by North Carolina Environmental Management Commission and the Federal Water Pollution Control Act as amended:

All owners or operators of stormwater point source discharges associated with construction activities including clearing, grading and excavation activities resulting in the disturbance of land are hereby authorized to discharge stormwater to the surface waters of North Carolina or to a separate storm sewer system conveying stormwater to the surface waters in accordance with the terms and conditions set forth herein.

Failure to receive coverage under this permit or violations of any of the conditions listed may result in assessment of civil penalties of up to $25,000 per day per violation.

The General Permit shall become effective on January 1, 2010.
The General Permit shall expire at midnight on August 2, 2011.

Signed this day December 29, 2009

Coleen H. Sullins, Director
Division of Water Quality
By the Authority of the Environmental Management Commission

PERMITTED ACTIVITIES

Until this State of North Carolina General Permit expires or is modified or revoked, the permittee is authorized to discharge stormwater in accordance with the terms and conditions of this permit and in accordance with an approved Erosion and Sedimentation Control Plan by the North Carolina Division of Land Resources, Land Quality Section, or a delegated local program under the provisions and requirements of North Carolina General Statute 113A - 54.1 to the surface waters of North Carolina or to a separate storm sewer system. The permit, along with state statues (N.C.G.S. 143-215.1) and rules (NCAC 2H .0100) relating to stormwater permitting are designed to work together to assure compliance with the NPDES requirements of the Clean Water Act. Furthermore, North Carolina rules in Title 15A NCAC 2H .0126 adopt by reference the federal stormwater permitting requirements.

Any other point source discharge to surface waters of the state is prohibited unless covered by another permit, authorization or approval. The discharges allowed by this General Permit shall not cause or contribute to violations of North Carolina Water Quality Standards for surface waters and wetlands (15A NCAC 2B .0200). Discharges allowed by this permit must meet all applicable water quality certification or permit requirements as outlined in 15A NCAC 2H .0500 and 2H .1300. This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree.

General Permit Coverage

This General Permit is applicable to point source discharges from construction activities disturbing one or more acres of land. The submission of a proposed Erosion and Sedimentation Control Plan to the Division of Land Resources or delegated local program shall be considered to take the place of a Notice of Intent for coverage under this General Permit for those projects requiring this Permit coverage. Coverage under this General Permit shall become effective upon issuance of an approval for the Erosion and Sedimentation Control Plan by the Land Quality Section of the Division of Land Resources or delegated local program. Prior to the commencement of construction and land disturbing activities approval of the Erosion and Sedimentation Control Plan shall be obtained.

Any owner or operator not wishing to be covered or limited by this General Permit may make application for an individual NPDES permit in accordance with NPDES procedures in 15A NCAC 2H .0100, stating the reasons supporting the request. Any application for an individual permit should be made at least 180 days prior to the time the permit is needed.

This General Permit does not cover activities or discharges covered by an individual NPDES permit until the individual permit has expired or has been rescinded. Any person conducting an activity covered by an individual permit but which could be covered by this General Permit may request that the individual permit be rescinded and coverage under this General Permit be provided. Although the previous edition of this General Permit will expire with the acceptance of this updated version, activities permitted under the previous edition will be responsible for meeting those agreed-upon conditions until the individual project is completed or terminated.

PART I
MONITORING, CONTROLS, AND LIMITATIONS FOR PERMITTED DISCHARGES

SECTION A: FINAL LIMITATIONS AND CONTROLS FOR STORMWATER DISCHARGES

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge stormwater associated with construction activity including clearing, grading and excavation activities resulting in the disturbance of land and related support activities. Such discharges shall be controlled, limited and monitored as specified below.

1. Erosion and Sedimentation Control Plan Approval: Prior to the commencement of land disturbing activity, the permittee shall submit for approval an Erosion and Sedimentation Control Plan (hereafter referred to as 'plan') to the Department of Environment, and Natural Resources, Division of Land Resources, Land Quality Section, or a delegated local program, pursuant to the requirements of NC G.S. 113A-54.1 and in conformity with rules adopted by the North Carolina Sedimentation Control Commission.
2. Implementation of the Plan:
   a. The Permittee must implement the plan, which has been approved by the approval authority.
   b. The approved plan is considered a requirement or condition of this general permit.
   c. Deviation from the approved plan, or approved amendment to the plan, shall constitute a violation of the terms and conditions of this general permit except that deviation from the approved plan will be allowed:
      i. to correct an emergency situation where sediments are being discharged off the site, or
      ii. when minor modifications have been made for the purpose of improving the performance of the erosion and sedimentation control measures and notification of the minor modification has been made to the Division of Land Resources or approved local program.

      Allowed deviations from the approved plan must be noted on the approved plan maintained at the job site.
   d. Once land disturbance has begun onsite, a copy of the approved erosion and sediment control plan and this NPDES construction permit shall be maintained on the site.
3. Permittee must manage activities on the site such that no adverse impacts to water quality occur from site activities or allowed discharges. In addition to stream pollution from sediment discharge, other activities on construction and development sites can result in pollutants reaching the state's waters. The permittee must manage activities on the site such that no adverse impacts to water quality occur from any of these activities. EPA has prepared guidance documents that provide best management practices that address many activities:
   (See http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4)

   The following activities, and others on a site specific basis, require oversight throughout the construction and development process to assure that all water quality standards are protected:

   a. Equipment Operation and Maintenance: Equipment utilized during the construction activity on a site must be operated and maintained in such a manner as to prevent the potential or actual pollution of the surface or ground waters of the state. Fuels, lubricants, coolants, and hydraulic fluids, or any other petroleum products, shall not be discharged onto the ground or into surface waters. Spent fluids shall be disposed of in a manner so as not to enter the waters, surface or ground, of the state and in accordance with applicable state and federal disposal regulations. Any spilled fluids shall be cleaned up to the extent practicable and disposed of in a manner so as not to allow their entry into the waters, surface or ground, of the state.

b. Material Handling: Herbicide, pesticide, and fertilizer usage during the construction activity shall be consistent with the Federal Insecticide, Fungicide, and Rodenticide Act and shall be in accordance with label restrictions.
c. Building Material Waste Handling: All wastes composed of building materials shall be disposed of in accordance with North Carolina General Statutes, Chapter 130A, Article 9 - Solid Waste Management, and rules governing the disposal of solid waste (North Carolina Administrative Code Section 15A NCAC 13B).
d. Litter and Sanitary Waste: The permittee shall control the management and disposal of litter and sanitary waste from the site.
e. Concrete Handling: Concrete materials onsite, including excess concrete, must be controlled and managed to avoid contact with surface waters, wetlands or buffers. (note that discharges from onsite concrete plants may require coverage under a separate NPDES permit – NCG140000)

4 The permittee must select, install, implement and maintain best management practices (BMPs) and control measures that minimize pollutants in the discharge to meet the requirements of this permit.

5 If there is evidence indicating that the stormwater discharges from the site are impacting or have the potential to impact surface waters or wetlands, the Division of Water Quality may take appropriate actions including any or all of the following:
a. take compliance and enforcement action,
b. require the permittee to include and implement appropriate control and restoration measures,
c. require the permittee to develop and implement a site specific stormwater pollution prevention plan,
d. require the permittee to obtain an individual permit.

6 Disturbed areas in watersheds where available information indicates that federally-listed threatened or endangered aquatic species are present shall be limited at any time to a maximum total area within the boundaries of the tract of 20 acres. These project shall also use control measures that are designed, installed and maintained in accordance with criteria set forth in 15A NCAC 04B .0124 – Design Standards in Sensitive Watersheds. The permittee may propose alternative protection measures and seek coverage under an individual Construction NPDES Stormwater permit.

SECTION B: MINIMUM MONITORING AND REPORTING REQUIREMENTS

Minimum monitoring and reporting requirements are as follows unless otherwise approved in writing by the Director of the Division of Water Quality.

1. A rain gauge shall be maintained in good working order on the site.
2. A written record of the daily rainfall amounts shall be retained and all records shall be made available to DWQ or authorized agent upon request (note: if no rainfall occurred, the permittee must record "zero").
3. The control measures shall be inspected to ensure that they are operating correctly. Inspection records must be maintained for each inspection event and for each measure. Paragraph 6 of this Section outlines additional inspection record requirements. At a minimum inspection of measures must occur at the frequency indicated below.

a.	All erosion and sedimentation control measures must be inspected by or under the direction of the permittee at least once every seven calendar days, and
b.	All erosion and sediment control measures must be inspected by or under the direction of the permittee within 24 hours after any storm event of greater than 0.50 inches of rain per 24 hour period

4. Once land disturbance has begun on the site, stormwater runoff discharge outfalls shall be inspected by observation for erosion, sedimentation and other stormwater discharge characteristics such as clarity, floating solids, and oil sheens. Inspections of the outfalls shall be made at least once every seven

calendar days and within 24 hours after any storm event of greater than 0.50 inches of rain per 24 hour period.

Inspection records must be maintained for each inspection event and for each discharge location.

5. If any visible sedimentation is leaving the site or entering waters of the state, corrective on-site action shall be taken immediately to control the discharge of sediments. Where visible deposition of sediment has occurred in surface waters or wetlands, the permittee must contact the Division within 24 hours of becoming aware of the deposition. (See Section I of this permit for contact information.)
6. The permittee must keep a record of inspections and all records shall be made available to DWQ or authorized agent upon request. The records must provide the details of each inspection including observations, and actions taken in accordance with this permit. The permittee shall record the required rainfall and monitoring observations on the "Inspection Record for Activities Under Stormwater General Permit NCG010000" form provided by the Division or a similar inspection form that is inclusive of all of the elements contained in the Division's form. (See attached "Inspection Record" form.)

Inspection records must include, at a minimum, the following:

a) Control Measure Inspections: Inspection records must include at a minimum: 1) identification of the measures inspected, 2) date and time of the inspection, 3) name of the person performing the inspection, 4) indication of whether the measures were operating properly, 5) description of maintenance needs for the measure, 6) corrective actions taken and (7) date of actions taken.
b) Stormwater Discharge Inspections: Inspection records must include at a minimum: 1) identification of the discharge outfall inspected, 2) date and time of the inspection, 3) name of the person performing the inspection, 4) evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5) indication of visible sediment leaving the site, 6) actions taken to correct/prevent sedimentation and 7) date of actions taken.
c) Visible Sedimentation Found Outside the Site Limits: Inspection records must include 1) an explanation as to the actions taken to control future releases, 2) actions taken to clean up or stabilize the sediment that has left the site limits and 3) the date of actions taken.
d) Visible Sedimentation Found in Streams or Wetlands: All inspections should include evaluation of streams or wetlands onsite or offsite (where accessible) to determine if visible sedimentation has occurred.
e) Visible Stream Turbidity: If the discharge from a site results in visible stream turbidity, inspection records must record that evidence and actions taken to reduce sediment contributions.

7. Sites discharging to streams named on the state's 303(d) list as impaired for sediment-related causes may be required to perform additional monitoring, inspections or application of more-stringent management practices if it is determined that the additional requirements are needed to assure compliance with the federal or state impaired-waters conditions. If a discharge covered by this permit enters a stream segment that is listed on the Impaired Stream List for sediment-related causes, and a Total Maximum Daily Load (TMDL) has been prepared for those pollutants, the permittee must implement measures to ensure that the discharge of pollutants from the site is consistent with the assumptions and meets the requirements of the approved TMDL. The DWQ 303(d) list can be found at: http://h2o.enr.state.nc.us/tmdl/General_303d.htm/

SECTION C: SCHEDULE OF COMPLIANCE

1. The permittee shall comply with Final Limitations and Controls specified for stormwater discharges once disturbance has begun on the site and until completion of construction or development and the establishment of a permanent ground cover. Documentation from the Division of Land Resources or a locally-delegated program can be used to signify the completion of the project.

2. During construction and until the completion of construction or development and the establishment of permanent ground cover, the permittee shall provide the operation and maintenance necessary to operate the storm water control measures and all erosion and sedimentation control measures at optimum efficiency. (note: Completion of construction may be signified by the Division of Land Resources or approved local program closing the site or certifying that the site is complete).
3. If inspections required by the Minimum Monitoring and Reporting Requirements in Section B identify a need for maintenance of control measures, modifications or additions to control measures, or corrective actions to control sediment or other pollutants these actions must be performed as soon as possible and before the next storm event to maintain the effectiveness of the control measures.

PART II
STANDARD CONDITIONS

SECTION A: DEFINITIONS

1. Act or "the Act" or CWA - The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251, et. seq.
2. Best Management Practices (BMPs) - Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operation procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
3. Control Measures - Refers to any BMP or other structural or non-structural practices and procedures used to prevent or reduce the discharge of pollutants including practices to control erosion and sedimentation.
4. DWQ or Division - The Division of Water Quality, Department of Environment, and Natural Resources.
5. Director - The Director of the Division of Water Quality, the permit issuing authority.
6. EMC - The North Carolina Environmental Management Commission.
7. Permittee - The person, firm or organizational entity that signed as the financially responsible party on the Erosion and Sedimentation Control Plan.
8. Point Source Discharge - Any discernible, confined and discrete conveyance, including but specifically not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or concentrated animal feeding operation from which pollutants are or may be discharged to waters of the state.
9. Administrator - The Administrator of the U. S. Environmental Protection Agency.
10. Stormwater Pollution Prevention Plan – A document which describes the best management practices and control measures and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters. Where sites exist that involve multiple or complex sources of pollution or sensitive environmental conditions that may not be addressed in the standard sediment and erosion control plan, the Division may require that an individual Stormwater Pollution Prevention Plan be prepared for that site. This plan would include all standard and additional control measures necessary to assure that water quality is protected.
11. Erosion and Sediment Control Plan - A plan developed in compliance with the North Carolina Sediment Pollution Control Act of 1973 to prevent the erosion and deposition of sediment and other materials into the waters of the State from construction or other land-disturbing activities that disturb

one or more acres of land. Each plan must be approved by the NC Sedimentation Control Commission or a program delegated by the Commission to a local government.

SECTION B: GENERAL CONDITIONS

1. Duty to Comply.
The permittee must comply with all conditions of this general permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for: enforcement action; certificate of coverage termination, revocation and reissuance, or modification; or denial of a certificate of coverage upon renewal application.
   (a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
   (b) The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $27,000 per day for each violation. The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.
   (c) Under state law, a daily civil penalty of not more than ten thousand dollars ($10,000) per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [Ref: NC General Statute 143-215.6A].
   (d) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $27,500. Penalties for Class II violations are not to exceed $11,000

per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $137,500.

2. Duty to Mitigate
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this general permit that has a reasonable likelihood of adversely affecting human health or the environment.

3. Civil and Criminal Liability
Except as provided in Section C. of this permit regarding bypassing of stormwater control facilities, nothing in this general permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6A, 143-215.6B, 143-215.6C or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

4. Oil and Hazardous Substance Liability
Nothing in this general permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USC 1321. Furthermore, the permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

5. Property Rights
The issuance of this general permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

6. Severability
The provisions of this general permit are severable, and if any provision of this general permit, or the application of any provision of this general permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this general permit, shall not be affected thereby.

7. Duty to Provide Information
The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the certificate of coverage issued pursuant to this general permit or to determine compliance with this general permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this general permit.

8. When an Individual Permit may be Required
The Director may require any owner/operator authorized to discharge under a certificate of coverage issued pursuant to this general permit to apply for and obtain an individual permit or an alternative general permit. Any interested person may petition the Director to require an individual permit pursuant to 15A NCAC 2H .0127. Cases where an individual permit may be required include, but are not limited to, the following:
   a. The discharger is a significant contributor of pollutants;
   b. Conditions at the permitted site change, altering the constituents and/or characteristics of the discharge such that the discharge no longer qualifies for a General Permit;
   c. The discharge violates the terms or conditions of this general permit;

d. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
e. Effluent limitations are promulgated for the point sources covered by this general permit;
f. A water quality management plan containing requirements applicable to such point sources is approved after the issuance of this general permit.
g. The Director determines at his own discretion that an individual permit is required.

9. When an Individual Permit may be Requested
Any permittee operating under this general permit may request to be excluded from the coverage of this general permit by applying for an individual permit. When an individual permit is issued to an owner/operator the applicability of this general permit is automatically terminated on the effective date of the individual permit.

10. Signatory Requirements
a. All applications, reports, or information submitted to the Director shall be signed and certified as follows:
(1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) 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, or (b) the manager of one or more manufacturing production or operating facilities provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
b. All reports required by the general permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
(1) The authorization is made in writing by a person described above;
(2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
(3) The written authorization is submitted to the Director.
c. Any person signing a document under paragraphs a. or b. of this section shall make the following 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 fines and imprisonment for knowing violations."

11. General Permit Modification, Revocation and Reissuance, or Termination
The issuance of this general permit does not prohibit the Director from reopening and modifying the general permit, revoking and reissuing the general permit, or terminating the general permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 2H .0100; and North Carolina General Statute 143-215.1 et. seq.

12 Continuation of Previously Permitted Projects
Projects and their corresponding activities permitted under the previous version of the NC general permit for construction activities are covered under this general permit. The requirements for these projects are the same as those previously required in the general permit until the project is completed or terminated.

SECTION C: OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance
The permittee shall at all times properly operate and maintain all control measures and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this general permit.

2. Need to Halt or Reduce not a Defense
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this general permit.

3. Bypassing of Stormwater Control Facilities
   a. Definitions
      (l) "Bypass" means the intentional diversion of stormwater from any portion of a stormwater control facility including the collection system, which is not a designed or established or operating mode for the facility.
      (2) "Severe property damage" means substantial physical damage to property, damage to the control measures that cause them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
   b. Bypass Not Exceeding Limitations.
      The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs c. and d. of this section.
   c. Notice
      (l) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.
      (2) Unanticipated bypass. The permittee shall submit notice within 24 hours of an unanticipated bypass as required in Part II, E. 3.(b)(1) of this general permit. (24-hour notice).
   d. Prohibition of Bypass
      Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
(2) There were no feasible alternatives to the bypass, such as the use of auxiliary control facilities, retention of stormwater or maintenance during normal periods of equipment downtime or dry weather. This condition is not satisfied if adequate backup controls should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(3) The permittee submitted notices as required under Paragraph c. of this section.

The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Paragraph d. of this section.

4. Upsets

a. Definition - "Upset "means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment or control facilities, inadequate treatment or control facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an Upset.
An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph c. of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions Necessary for a Demonstration of Upset
A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The permittee submitted notice of the upset as required in Part II, E.3.(b)(2) of this general permit.
(4) The permittee complied with any remedial measures required under Part II, A.2.of this general permit.

d. Burden of Proof
In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

SECTION D: MONITORING AND RECORDS

1. Representative Sampling
Samples collected and measurements taken, as required herein, shall be characteristic of the volume and nature of the permitted discharge. Samples shall be taken on a day and time that is characteristic of the discharge.

2. Penalties for Tampering
The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this general permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

3. Records Retention
The permittee shall retain records of all monitoring information and copies of all reports required by this general permit for a period of at least one year from the date of the final inspection by the Division

of Land Resources, or the designated permitting agency, determining that the site is in compliance and has been stabilized with permanent ground cover. This period may be extended by request of the Director at any time.

4. Recording Results
For each measurement, sample, inspection or maintenance activity performed or taken pursuant to the requirements of this general permit, the permittee shall record the following information:
   a. The date, exact place, and time of sampling, measurements, inspection or maintenance activity;
   b. The individual(s) who performed the sampling, measurements, inspection or maintenance activity;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

5. Inspection and Entry
The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), or in the case of a facility which discharges through a municipal separate storm sewer system, an authorized representative of a municipal operator or the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to;
   a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this general permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this general permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this general permit; and
   d. Sample or monitor at reasonable times, for the purposes of assuring general permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION E: REPORTING REQUIREMENTS

1. Planned Changes
The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
   a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29 (b); or
   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the general permit, nor to notification requirements under 40 CFR Part 122.42 (a) (l).

2. Anticipated Noncompliance
The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with the general permit requirements.

3. Twenty-four Hour Reporting
   a. The permittee shall report to the central office or the appropriate regional office any discharge of stormwater that has resulted in visible sediment being deposited in any stream or wetland or

any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. (See Section I for contact information.)

b. The written submission shall contain a description of the sediment deposition or the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

c. The Director may waive the written report on a case-by-case basis for reports under paragraph b. above of this condition if the oral report has been received within 24 hours.

4. Other Information
Where the permittee becomes aware that it failed to submit any relevant facts in any report to the Director, it shall promptly submit such facts or information.

5. Availability of Reports
Except for data determined to be confidential under NCGS 143-215.3(a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division of Water Quality. As required by the Act, discharge data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.6B or in Section 309 of the Federal Act.

6. Penalties for Falsification of Reports
The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this general permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both.

SECTION F: LIMITATIONS REOPENER

This general permit shall be modified or alternatively, revoked and reissued, to comply with any applicable effluent guideline or water quality standard issued or approved under Sections 302(b) (2) (c), and (d), 304(b) (2) and 307(a) of the Clean Water Act, if the effluent guideline or water quality standard so issued or approved:

a. contains different conditions or is otherwise more stringent than any effluent limitation in the general permit; or

b. controls any pollutant not limited in the general permit.

The general permit as modified or reissued under this paragraph shall also contain any other requirements in the Act then applicable.

SECTION G: EROSION AND SEDIMENTATION CONTROL PLAN

The Clean Water Act requirements mandate that stormwater runoff from various industrial activities are regulated by the EPA's designated state NPDES agency. The Division of Water Quality has been delegated responsibility for implementing this program in North Carolina. One area covered is construction site stormwater runoff for project disturbing one or more acres of land. North Carolina has had a statewide sediment control program since 1974. This program is implemented by the Division of Land Resources. The Division of Water Quality partners with the Division of Land

Resources to implement a complete program for construction site coverage that includes state sedimentation control and NPDES stormwater control. The Division of Land Resources implements their control programs through an Erosion and Sedimentation Control Plan (the Plan) issued for each construction site in the state disturbing one or more acres of land. A plan is required for each site by the Division of Land Resources or a delegated local government program. The NPDES Construction Stormwater permit (NCG010000) is attached to erosion and sedimentation control plan approvals. The permittee is responsible for abiding by the conditions of both of these documents.

The Erosion and Sedimentation Control Plan serves as a blueprint for the location, installation, and maintenance of practices to controls erosion and sedimentation. Erosion and Sedimentation Control Plans are designed to meet the following basic objectives:

1) limit exposed areas,
2) limit time of exposure,
3) limit runoff originating upgrade,
4) identify critical areas that need additional protection
5) control sedimentation to prevent off-site sedimentation, and
6) manage stormwater runoff to prevent accelerated erosion of the receiving watercourse.

The Sedimentation Pollution Control Act of 1973 places a duty upon the Sedimentation Control Commission to "develop recommended methods of control of sedimentation and prepare and make available for distribution publications and other materials dealing with sedimentation control techniques appropriate for use by persons engaged in land-disturbing activities." The Sedimentation Control Commission and the Division of Land Resources have adopted the North Carolina Erosion and Sediment Control Planning and Design Manual as the document to provide that guidance for use at all constructions sites in the state. The individual Erosion and Sedimentation Control Plans are developed based on this guidance and become a condition of the Division of Water Quality's Construction Stormwater General Permit. As provided in this permit, "Deviation from the approved plan, or approved amendment to the plan, shall constitute a violation of the terms and conditions of this general permit."

Please note that this construction NPDES Stormwater permit contains controls and requirements similar to the erosion and sediment control plan, but also contains additional requirements. The permittee is responsible for all requirements.

SECTION H: NUMERIC EFFLUENT LIMITATIONS:

This General Permit does not include requirements for numeric limits for discharges from construction sites. However, as specified in the Effluent Limitations Guidelines (ELG) published in the December 1, 2009, Federal Register, any general permit for construction issued after the February 2, 2010 implementation date must include the numeric effluent limitations provided in those Guidelines. Those Guidelines require effluent limits of 280 NTUs for construction sites with 20 or more acres by August 2, 2011 and for sites with 10 or more acres by February 2, 2014. (Those guidelines also require immediate application of soil stabilization measures where activity on a site is not resumed for a period exceeding 14 days.) When this permit expires on August 2, 2011, the new construction general permit developed must contain these effluent limitations as established in the EPA ELG.

SECTION I: NC DIVISION OF WATER QUALITY CONTACTS

Asheville Regional Office
2090 U.S. Highway 70
Swannanoa, NC 28778
828/296-4500
FAX 828/299-7043

Fayetteville Regional Office
Systel Building,
225 Green St., Suite 714
Fayetteville, NC 28301-5094
910/433-3300
FAX 910/486-0707

Mooresville Regional Office
610 East Center Ave.
Mooresville, NC 28115
704/663-1699
FAX 704/663-6040

Raleigh Regional Office
Mail to:
1628 Mail Service Center
Raleigh, NC 27699-1628
Location:
3800 Barrett Drive
Raleigh, NC 27609
919/791-4200
FAX 919/571-4718

Washington Regional Office
943 Washington Square Mall
Washington, NC 27889
252/946-6481
FAX 252/975-3716

Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, NC 28405
910/796-7215
FAX 910/350-2004

Winston-Salem Regional Office
585 Waughtown Street
Winston-Salem, NC 27107
336/771-5000
FAX 336/771-4630
(Water Quality)

ATTACHMENT: "INSPECTION RECORD" FORM