City of Auburn Maine

Riverside Drive Reconstruction SPECIFICATIONS

MaineDOT WIN: 016612.00

Federal Project No: STP-1661(200)X

In Accordance with Maine Department of Transportation Standard Specifications

Notice to Contractors

Special Provisions

Schedule of Items/Bid

Contract Agreement, Offer and Award Document

Bonds

41 Hutchins Drive
Portland, Maine 04102
207.774.2112 | 207.774.6635

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

203970.19
City of Auburn
April 2015

Updated 11/05/14

FEDERAL PROJECT

Effective November 05, 2014
Supersedes January 19, 2012

BIDDING INSTRUCTIONS

FOR ALL PROJECTS:

1. Use pen and ink to complete all paper Bids.
2. As a minimum, the following must be received prior to the time of Bid opening:

For a Paper Bid:

a) a copy of the Notice to Contractors, b) the completed Acknowledgement of Bid Amendments form, c) the completed Schedule of Items, d) two copies of the completed and signed Contract Offer, Agreement & Award form, e) a Bid Guaranty, (if required), and f) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

For an Electronic Bid:

a) a completed Bid using Expedite® software and submitted via the Bid Express™ web-based service, b) an electronic Bid Guaranty (if required) or a faxed copy of a Bid Bond (with original to be delivered within 72 hours), and c) any other Certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

3. Include prices for all items in the Schedule of Items (<u>excluding non-selected alternates</u>).
4. Bid Guaranty acceptable forms are:
   a) a properly completed and signed Bid Bond on the Department's prescribed form (or on a form that does not contain any significant variations from the Department's form as determined by the Department) for 5% of the Bid Amount or
   b) an Official Bank Check, Cashier's Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors or
   c) an electronic bid bond submitted with an electronic bid.

5. If a paper Bid is to be sent, "FedEx First Overnight" delivery is suggested as the package is delivered directly to the DOT Headquarters Building located at 16 Child Street in Augusta. Other means, such as U.S. Postal Service's Express Mail has proven not to be reliable.

IN ADDITION, FOR FEDERAL AID PROJECTS:

6. Complete the DBE Proposed Utilization form, and submit with your bid. If you are submitting your bid electronically, you must FAX the form to (207) 624-3431. This is a curable defect.

If you need further information regarding Bid preparation, call the DOT Contracts Section at (207) 624-3410.

For complete bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, November 2014 Edition.

November 05, 2014
Supersedes January 19, 2012

NOTICE

The Maine Department of Transportation is attempting to improve the way Bid Amendments/Addendums are handled, and allow for an electronic downloading of bid packages from our website, while continuing to maintain an optional plan holders list.

Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments must fill out the on-line plan holder registration form and provide an email address to the MDOT Contracts mailbox at: MDOT.contracts@maine.gov. Each bid package will require a separate request.

Additionally, interested parties will be responsible for reviewing and retrieving the Bid Amendments from our web site, and acknowledging receipt and incorporating those Bid Amendments in their bids using the Acknowledgement of Bid Amendment Form.

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via http://www.BIDX.com. For information on electronic bidding contact Patrick Corum at patrick.corum@maine.gov , Rebecca Snowden at rebecca.snowden@maine.gov or Diane Barnes at diane.barnes@maine.gov.

NOTICE

For security and other reasons, all Bid Packages which are mailed, shall be provided in double (one envelope inside the other) envelopes. The *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open
PIN:
Town:
Date of Bid Opening:
Name of Contractor with mailing address and telephone number:

In Addition to the usual address information, the *Outer Envelope* should have written or typed on it:

Double Envelope: Bid Enclosed
PIN:
Town:
Date of Bid Opening:
Name of Contractor:
This should not be much of a change for those of you who use Federal Express or similar services.

Hand-carried Bids may be in one envelope as before, and should be marked with the following infrormation:

Bid Enclosed: Do Not Open
PIN:
Town:
Name of Contractor:

STATE OF MAINE DEPARTMENT OF TRANSPORTATION

Bid Guaranty-Bid Bond Form

KNOW ALL MEN BY THESE PRESENTS THAT_____

_____, of the City/Town of _____and State of_____

as Principal, and _____as Surety, a

Corporation duly organized under the laws of the State of_____and having a usual place of

Business in _____and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of_____,for payment which Principal and Surety bind

themselves, their heirs, executers, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a part herein, to enter into a written contract for the construction of _____

_____

_____and if the Department shall accept said bid and the Principal shall execute and deliver a contract in the form attached hereto (properly completed in accordance with said bid) and shall furnish bonds for this faithful performance of said contract, and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void; otherwise it shall remain in full force, and effect.

Signed and sealed this_____day of _____20_____

WITNESS:

_____

_____

_____

WITNESS

_____

_____

_____

PRINCIPAL:

By_____

By:_____

By:_____

SURETY:

By_____

By:_____

Name of Local Agency: _____

SAMPLE

NOTICE

Bidders:

Please use the attached "Request for Information" form when submitting questions concerning specific Contracts that have been advertised for Bid, include additional numbered pages as required. RFI's may be faxed to 207-624-3431, submitted electronically through the Departments web page of advertised projects by selecting the RFI tab on the project details page or via e-mail to RFI-Contracts.MDOT@maine.gov.

These are the only allowable mechanisms for answering Project specific questions. Maine DOT will not be bound to any answers to Project specific questions received during the Bidding phase through other processes.

When submitting RFIs by Email please follow the same guidelines as stated on the "Request for Information" form and include the word "RFI" along with the Project name and Identification number in the subject line.

State of Maine
Department of Transportation

RFI No: _____

REQUEST FOR INFORMATION

Date _____ Time _____

Information Requested for:

WIN(S): _____ Town(s): _____ Bid Date: _____

Question(s):_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Request by:

Company Name:_____**Phone:(_____)**_____

Email: _____ Fax: (_____)_____

Complete this form and fax to 207-624-3431, Attn: Project Manager (name listed on the "Notice to Contractors"), or Email questions to RFI-Contracts.MDOT@maine.gov, Please include the word "RFI" along with the Project Name and Identification Number in the Subject line, or electronically by using the RFI Tab located on the Individual Projects Detail page.

NOTICE

Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder shall submit the Disadvantaged Business Enterprise Proposed Utilization form with their bid. This is a curable bid defect.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains additional information that is required by USDOT.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form should be used.

A copy of the new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan and instructions for completing it are attached.

Note: Questions about DBE firms, or to obtain a printed copy of the DBE Directory, contact The Office of Civil Rights at (207) 624-3066.

MDOTs DBE Directory of Certified firms can also be obtained at http://www.maine.gov/mdot/civilrights/dbe.htm

INSTRUCTIONS FOR PREPARING THE MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR UTILIZATION FORM

The Contractor Shall Extend equal opportunity to MaineDOT certified DBE firms (as listed in MaineDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Insert Contractor name, the name of the person(s) preparing the form, and that person(s) telephone, fax number and e-mail address.

Calculate and provide percentage of your bid that will be allocated to DBE firms, Federal Project Identification Number, and location of the Project work.

In the columns, name each subcontractor, DBE and non-DBE firm to be used, provide the Unit/Item cost of the work/product to be provided by the subcontractor, give a brief description and the dollar value of the work.

Revised 1/12

FHWA DBE GOAL NOTICE FFY 2013-15
Maine Department of Transportation
Disadvantaged Business Enterprise Program

Notice is hereby given that in accordance with US DOT regulation 49 CFR Part 26, the Maine Department of Transportation has established a DBE Program for disadvantaged business participation in the federal-aid highway and bridge construction program; MaineDOT contracts covered by the program include consulting, construction, supplies, manufacturing, and service contracts.

For FFY 2013-15 (October 1, 2012 through September 30, 2015) MaineDOT has established an annual DBE participation goal of **4.0%** to be achieved through race/gender neutral means. This goal has been approved by the Federal Highway Administration and remains in effect through September 30, 2015. Maine DOT must meet this goal each federal fiscal year. If the goal is not met, MaineDOT must provide a justification for not meeting the goal and provide a plan to ensure the goal is met, which may include contract goals on certain projects that contractors will be required to meet.

MaineDOT asks all contractors, consultants and subcontractors to seek certified DBE firms for projects and to work to meet the determined 4.0% goal without the need to impose contract goals. DBE firms are listed on the MaineDOT website at:

http://www.maine.gov/mdot/civilrights/dbe.htm

Interested parties may view MaineDOT's DBE goal setting methodology also posted on this website. If you have questions regarding this goal or the DBE program you may contact Sherry Tompkins at the Maine Department of Transportation, Civil Rights Office by telephone at (207) 624-3066 or by e-mail at: sherry.tompkins@maine.gov

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MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR PROPOSED UTILIZATION FORM

All Bidders must furnish this form with their bid on Bid Opening day

Contractor: _____ **Telephone:** _____ **Ext** _____

Contact Person: _____ **Fax:** _____

E-mail: _____

BID DATE: _____

FEDERAL PROJECT PIN # _____ **PROJECT LOCATION:** _____

TOTAL ANTICIPATED DBE ____ % PARTICIPATION FOR THIS CONTRACT

WBE	DBE	Non DBE	Firm Name	Item Number & Description of Work	Quantity	Cost Per Unit/Item	Anticipated $ Value
						Subcontractor Total>	
						DBE Total >	

NOTE: THIS INFORMATION IS USED TO TRACK AND REPORT ANTICIPATED DBE PARTICIPATION IN ALL FEDERALLY FUNDED MAINE DOT CONTRACTS. THE ANTICIPATED DBE AMOUNT IS VOLUNTARY AND WILL NOT BECOME A PART OF THE CONTRACTUAL TERMS.

Equal Opportunity Use:

Form received: ___/___/___ Verified by: _____

FHWA ☐ FTA ☐ FAA ☐

For a complete list of certified firms and company designation (WBE/DBE) go to http://www.maine.gov/mdot

Rev. 05/13

Maine Department of Transportation Civil Rights Office

Directory of Certified Disadvantaged Business Enterprises

Listing can be found at:

http://www.maine.gov/mdot/civilrights/dbe.htm

For additional information and guidance contact:

Civil Rights Office at (207) 624-3066

It is the responsibility of the Contractor to access the DBE Directory at this site in order to have the most current listing.

September 14, 2007

Vendor Registration

Prospective Bidders must register as a vendor with the Department of Administrative & Financial Services if the vendor is awarded a contract. Vendors will not be able to receive payment without first being registered. Vendors/Contractors will find information and register through the following link –
http://www.maine.gov/purchases/venbid/index.shtml

NOTICE TO CONTRACTORS

CITY OF AUBURN, MAINE
RIVERSIDE DRIVE RECONSTRUCTION

Maine Department of Transportation WIN: 016612.00
Federal Project No: STP-1661(200)X

1. RECEIPT OF BIDS
The City of Auburn will receive sealed Bids plainly marked to indicate the name of the bidder along with "Bids for Riverside Drive Reconstruction, Auburn, ME" addressed to City of Auburn, 60 Court Street, Suite 114, Auburn, ME 04210 until **2:00 pm** prevailing local time on **April 23rd, 2015** at which time the Bids will be publicly opened and read aloud at Auburn City Hall located at 60 Court Street, Suite 114, Auburn, ME.

2. GENERAL INFORMATION
All questions shall be directed in writing ONLY to Dan Goyette, City Engineer, at the above address and be received at least five business days prior to the bid opening date (Fax 207.333.6625, or e-mail dgoyette@auburnmaine.gov). Questions received after this time will not be addressed. Responses from the City that substantially alter this bid will be issued in the form of a written addendum to all bid holders registered in the City Manager's/Engineer's Office. Oral explanations or interpretations given before the award of the contract will not be binding.

3. PRE-BID MEETING
A mandatory pre-bid meeting shall be held at Auburn City Hall, Suite 114, at **10:00 am** on **April 14th, 2015** Attendance will be taken at the pre-bid meeting. Bids received from Contractors not in attendance at the mandatory pre-bid meeting shall be rejected.

4. PROJECT
The Riverside Drive Reconstruction project (WIN 016612.00) consists of both reconstruction and overlay of Riverside Drive in Auburn, Maine, from the intersection of Dunn Street to the intersection of Vickery Street and Carrier Court. This project includes approximately 0.45 miles of roadway and sidewalk reconstruction with associated drainage and finish improvements and 1.25 miles of overlay as outlined and implied in the Plans and Specifications.

5. CONTRACT TIME
The Bidder agrees to final completion of the Work within the time limits given in the Special Provisions and that the Owner may retain liquidated damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, November 2014 Edition and related Special Provisions.

6. PLANS AND SPECIFICATIONS
Copies of plans, specifications, and bid forms may be obtained from the City of Auburn website. They are only available electronically at http://www.auburnmaine.gov/Pages/Government/Bid-Notices at no cost. They may be viewed at the City between the hours of 8:00 a.m. and 4:30 p.m. The bid documents cannot be purchased at the City.

7. BID BOND
A certified check or bank draft payable to the City of Auburn, Maine or a satisfactory Bid Bond executed by the Bidder and a Surety Company in the amount equal to five percent (5%) of the Bid shall be submitted with each bid. No bid may be withdrawn for at least 60 days after receipt of bids unless released by the City of Auburn.

8. BASIS OF AWARD
The basis of award will be the sum of the bid amount for each item in the Schedule of Items.

9. AWARD OF CONTRACT
The City reserves the right to reject any or all Bids and to waive any informalities or irregularities in Bidding. The Successful Bidder shall be required to furnish the necessary Bonds and Insurance Certificates prior to Award of Contract.

10. QUALIFICATIONS
Bids will be accepted from all bidders. The lowest responsible bidder must demonstrate successful completion of projects of similar size and scope to be considered for the award of this contract.

11. DISADVANTAGED BUSINESS ENTERPRISES REQUIRMENTS
Each bidder shall take special notice of the Disadvantaged Business Enterprises (DBE) requirements in sub-agreements. Failure to complete the requirements of this program may result in finding that the bidder is non-responsible and therefore, not entitled to award of this contract. Complete requirements are detailed in the Bid Documents.

12. REQUIRED WAGE RATES AND LABOR PROVISIONS
The Project is funded under a Federal Grant and the Contractor shall be required to comply with the Davis Bacon standard wage rates and labor provisions as outlined in the Contract Documents.

13. BUY AMERICA
The Contractor must comply with all of the Buy America Certification requirements.

April 2015
Dan Goyette, P.E.
City Engineer

STATE OF MAINE
DAVID
A.
SENUS
10791
LICENSED
PROFESSIONAL ENGINEER

4/2/2015

ACKNOWLEDGEMENT OF BID AMENDMENTS

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For this project, Amendments will be sent directly to the identified plan holders using the email address or fax number provided by the Bidder when they receive the Construction Documents.

It is the responsibility of the Bidder to incorporate the Amendments into their Bid Package, and to reference the Amendment number and the date on the form below.

Amendment Number	Date

The Contractor, for itself, its successors and assigns, hereby acknowledges that it has received all of the above referenced Amendments to the Bid Package.

CONTRACTOR

_____
Date

_____
Signature of authorized representative

_____
(Name and Title Printed)

SCHEDULE OF ITEMS

RIVERSIDE DRIVE RECONSTRUCTION PROJECT

AUBURN, MAINE

			UNIT PRICE		TOTAL PRICE	
Item No	Quantity	Item with Unit Bid Price Written in Words	Dollars	Cents	Dollars	Cents
201.23	EA 2	Removing Single Tree Top Only @_____ Per Each				
201.24	EA 4	Removing Stump @_____ Each				
202.128	LS 1	Removing of Existing Concrete Curbs & Sidewalks @_____ Per Lump Sum				
202.15	EA 8	Removing Existing Manhole or Catch Basin @_____ Per Each				
202.16	LF 330	Removing Existing Storm/Sewer Pipe @_____ Per Linear Foot				
202.20	SY 14,720	Removing Bituminous Concrete Pavement @_____ Per Square Yard				
202.203	SY 700	Pavement Butt Joints @_____ Per Square Yard				
203.20	CY 11,650	Common Excavation @_____ Per Cubic Yard				
203.2312	LS 1	Health and Safety Plan (HASP) @_____ Per Lump Sum				
203.2333	TON 16	Disposal/Treatment of Special Excavation @_____ Per Ton				
203.25	CY 100	Granular Borrow @_____ Per Cubic Yard				
203.29	CY 100	Crushed Stone (Over depth) @_____ Per Cubic Yard				

SCHEDULE OF ITEMS

RIVERSIDE DRIVE RECONSTRUCTION PROJECT

AUBURN, MAINE

			UNIT PRICE		TOTAL PRICE	
Item No	Quantity	Item with Unit Bid Price Written in Words	Dollars	Cents	Dollars	Cents
204.20	SY 3,270	Add Shoulder Aggregate to Existing Shoulder, Plan @_____ Per Square Yard				
206.06	CY 100	Earth Excavation, Below Grade (Over depth) @_____ Per Cubic Yard				
206.07	CY 50	Structural Rock Excavation-Drainage & Minor Structures @_____ Per Cubic Yard				
304.10	CY 10,040	Aggregate Subbase Course - Gravel @_____ Per Cubic Yard				
403.208	TON 3,430	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size @_____ Per Ton				
403.209	TON 300	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals) @_____ Per Ton				
403.211	TON 850	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming) @_____ Per Ton				
403.213	TON 1,930	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base Course) @_____ Per Ton				
409.15	GAL 2,000	Bituminous Tack Coat, Applied @_____ Per Gallon				
534.04	LS 1	Precast Concrete Stair @_____ Per Lump Sum				
603.04	LF 20	4" PVC Drain Service @_____ Per Linear Foot				

SCHEDULE OF ITEMS

RIVERSIDE DRIVE RECONSTRUCTION PROJECT

AUBURN, MAINE

			UNIT PRICE		TOTAL PRICE	
Item No	Quantity	Item with Unit Bid Price Written in Words	Dollars	Cents	Dollars	Cents
603.05	LF	6" PVC Pipe @_____				
	27	_____ Per Linear Foot				
603.159	LF	12" Culvert Pipe Option III @_____				
	227	_____ Per Linear Foot				
603.169	LF	15" Culvert Pipe Option III @_____				
	71	_____ Per Linear Foot				
603.179	LF	18" Culvert Pipe Option III @_____				
	201	_____ Per Linear Foot				
603.189	LF	21" Culvert Pipe Option III @_____				
	7	_____ Per Linear Foot				
603.199	LF	24" Culvert Pipe Option III @_____				
	191	_____ Per Linear Foot				
604.15	EA	Manhole @_____				
	1	_____ Per Each				
604.161	EA	Altering Catch Basin @_____				
	1	_____ Per Each				
604.18	EA	Adjusting Manhole or Catch Basin to Grade @_____				
	11	_____ Per Each				
604.249	EA	Catch Basin Type F6-C @_____				
	1	_____ Per Each				
604.252	EA	Catch Basin Type A5-C @_____				
	20	_____ Per Each				
605.09	LF	6" Underdrain Type B @_____				
	1,070	_____ Per Linear Foot				

SCHEDULE OF ITEMS

RIVERSIDE DRIVE RECONSTRUCTION PROJECT

AUBURN, MAINE

			UNIT PRICE		TOTAL PRICE	
Item No	Quantity	Item with Unit Bid Price Written in Words	Dollars	Cents	Dollars	Cents
605.11	LF	12" Underdrain Type C @_____				
	260	_____ Per Linear Foot				
605.12	LF	15" Underdrain Type C @_____				
	810	_____ Per Linear Foot				
605.13	LF	18" Underdrain Type C @_____				
	140	_____ Per Linear Foot				
608.26	SF	Curb Ramp Detectable Warning Field @_____				
	40	_____ Per Square Foot				
609.11	LF	Vertical Curb Type 1 @_____				
	1,770	_____ Per Linear Foot				
609.12	LF	Vertical Curb Type 1 - Circular @_____				
	40	_____ Per Linear Foot				
609.237	EA	Terminal Curb Type 1 - 7 Foot @_____				
	60	_____ Per Each				
609.238	EA	Terminal Curb Type 1 - 8 Foot @_____				
	8	_____ Per Each				
609.31	LF	Curb Type 3 @_____				
	3,000	_____ Per Linear Foot				
610.08	CY	Plain Riprap @_____				
	4	_____ Per Cubic Yard				
611.14	EA	Masonry Plug >= 8" @_____				
	1	_____ Per Each				
615.07	CY	Loam @_____				
	640	_____ Per Cubic Yard				

SCHEDULE OF ITEMS

RIVERSIDE DRIVE RECONSTRUCTION PROJECT
AUBURN, MAINE

			UNIT PRICE		TOTAL PRICE	
Item No	Quantity	Item with Unit Bid Price Written in Words	Dollars	Cents	Dollars	Cents
618.13	UNIT 45	Seeding Method Number 1 @_____ Per Unit				
618.14	UNIT 7	Seeding Method Number 2 @_____ Per Unit				
619.1201	UNIT 52	Mulch @_____ Per Unit				
620.58	SY 20	Erosion Control Geotextile @_____ Per Square Yard				
627.733	LF 28,930	4" White or Yellow Painted Pavement Marking Line @_____ Per Linear Foot				
627.75	SF 380	White or Yellow Pavement & Curb Marking @_____ Per Square Foot				
629.05	HR 20	Hand Labor, Straight Time @_____ Per Hour				
631.12	HR 20	All Purpose Excavator (including operator) @_____ Per Hour				
631.13	HR 20	Bulldozer (including operator) @_____ Per Hour				
631.15	HR 20	Roller, Earth and Base (including operator) @_____ Per Hour				
631.22	HR 20	Front End Loader (including operator) @_____ Per Hour				
637.071	LS 1	Dust Control @_____ Per Lump Sum				

SCHEDULE OF ITEMS

RIVERSIDE DRIVE RECONSTRUCTION PROJECT

AUBURN, MAINE

			UNIT PRICE		TOTAL PRICE	
Item No	Quantity	Item with Unit Bid Price Written in Words	Dollars	Cents	Dollars	Cents
645.106	EA 3	Demount Regulatory, Warning, Confirmation and Route Marker Assembly @_____ Per Each				
645.108	EA 3	Demount Pole @_____ Per Each				
645.116	EA 3	Reinstall Regulatory, Warning, Confirmation and Route @_____ Per Each				
645.118	EA 3	Reinstall Pole @_____ Per Each				
645.291	SF 6	Roadside Guide Signs, Type II @_____ Per Square Foot				
652.33	EA 25	Drum @_____ Per Each				
652.34	EA 50	Cone @_____ Per Each				
652.35	SF 180	Construction Signs @_____ Per Square Foot				
652.36	DAY 180	Maintenance of Traffic Control Devices @_____ Per Calendar Day				
652.38	HR 3,840	Flaggers @_____ Per Hour				
659.10	LS 1	Mobilization @_____ Per Lump Sum				
803.01	EA 1	Test Pit @_____ Per Each				

SCHEDULE OF ITEMS

RIVERSIDE DRIVE RECONSTRUCTION PROJECT
AUBURN, MAINE

			UNIT PRICE		TOTAL PRICE	
Item No	Quantity	Item with Unit Bid Price Written in Words	Dollars	Cents	Dollars	Cents
803.136	LF 100	Sewer Service Relocation @_____ Per Linear Foot				
812.162	EA 8	Adjust Sewer Manhole to Grade @_____ Per Each				
823.334	EA 1	Relocating Curb Stop or Gate Valve @_____ Per Each				
824.29	EA 1	Demolishing Hydrant @_____ Per Each				
824.30	EA 1	Fire Hydrant @_____ Per Each				
824.321	EA 1	Removing and Relocating Hydrant @_____ Per Each				
830.102	LF 100	Water Service Replacement @_____ Per Linear Foot				

Total Cost in Figures

Total Amount of Base Bid, Written In Words	
_____ _____	

(BASIS OF AWARD)

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the City of Auburn, Maine, acting through and by its City Engineer an agency of state government with its principal administrative offices located at 60 Court Street, Auburn, Maine, with a mailing address at 60 Court Street, Suite 114, Auburn , Maine 04210, and _____

_____

a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at _____

_____

The City and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, WIN No. **016612.00** for the **Riverside Drive Reconstruction** in the City of **Auburn,** County of **Androscoggin**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The City shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **October 15, 2015.** Further, the City may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, November 2014 Edition and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

_____

$_____

Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans and Specifications, including Plans; Maine Department of Transportation (MDOT) Standard Specifications, November 2014 Edition; Standard Details, November 2014 Edition; Supplemental Specifications; Special Provisions; Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the MDOT Standard Specifications November 2014 Edition (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans; MDOT Standard Specifications, November 2014 Edition; Standard Details, November 2014 Edition; Supplemental Specifications; Special Provisions; Contract Agreement; and Contract Bonds contained herein for construction of: **WIN 016621.00 Riverside Drive Reconstruction,** City of Auburn, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offerer agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offerer also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Engineer, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, November 2014 Edition, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check,

certificate of deposit or U.S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the City of Auburn, and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications, November 2014 Edition and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the City.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	_____
Date	
_____	_____
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

CITY OF AUBURN, MAINE

_____	_____
Date	By: Dan Goyette, City Engineer
_____	
(Witness)	

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the City of Auburn, Maine, acting through and by its City Engineer an agency of state government with its principal administrative offices located at 60 Court Street, Auburn, Maine, with a mailing address at 60 Court Street, Suite 114, Auburn , Maine 04210, and _____

_____

a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at _____

_____

The City and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, WIN No. **016612.00** for the **Riverside Drive Reconstruction** in the City of **Auburn,** County of **Androscoggin**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The City shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **October 15, 2015.** Further, the City may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, November 2014 Edition and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

_____

$_____

Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans and Specifications, including Plans; Maine Department of Transportation (MDOT) Standard Specifications, November 2014 Edition; Standard Details, November 2014 Edition; Supplemental Specifications; Special Provisions; Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the MDOT Standard Specifications November 2014 Edition (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans; MDOT Standard Specifications, November 2014 Edition; Standard Details, November 2014 Edition; Supplemental Specifications; Special Provisions; Contract Agreement; and Contract Bonds contained herein for construction of: **WIN 016621.00 Riverside Drive Reconstruction,** City of Auburn, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offerer agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offerer also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Engineer, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, November 2014 Edition, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check,

certificate of deposit or U.S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the City of Auburn, and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications, November 2014 Edition, and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the City.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	_____
Date	
_____	_____
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

CITY OF AUBURN, MAINE

_____	_____
Date	By: Dan Goyette, City Engineer
_____	
(Witness)	

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and **(Name of the firm bidding the job)** a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at **(address of the firm bidding the job)**

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

SAMPLE

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No.**1224.00**, for the **Hot Mix Asphalt Overlay** in the town/city of **South Nowhere,** County of **Washington**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **November 15, 2006.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, November 2014 Edition and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is ____(**Place bid here in alphabetical form such as One Hundred and Two dollars and 10 cents**) _____ **$_ (repeat bid here in numerical terms, such as $102.10**)_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, November 2014 Edition, Standard Details, Novemeber 2014 Edition, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

SAMPLE

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications, November 2014 Edition, Standard Details, November 2014 Edition, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN 1234.00 South Nowhere, Hot Mix Asphalt Overlay,

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, November 2014 Edition, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications November 2014 Edition and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

SAMPLE

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	**(Sign Here)**
Date	(Signature of Legally Authorized Representative of the Contractor)
____(**Witness Sign Here)**_____	**(Print Name Here)**
Witness	(Name and Title Printed)

SAMPLE

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

_____	_____
Date	By: David Bernhardt, Commissioner

_____
(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ **_____ and the City of _____**, as principal, and……....., a corporation duly organized under the laws of the State of ..... and having a usual place of business ....,
as Surety, are held and firmly bound unto the Treasurer of the City of Auburn in the sum of **_____ and 00/100 Dollars ($)**, to be paid said Treasurer of the City of Auburn or his successors in office, for which payment well and truly to be made, Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly and faithfully performs the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the City of Auburn.

Signed and sealed this ..... day of ....., 20….. .

WITNESSES:

Signature.....
Print Name Legibly .....

Signature .....
Print Name Legibly .....

SURETY ADDRESS:
.....
.....
.....
TELEPHONE.....

SIGNATURES:
CONTRACTOR:
.....….....
Print Name Legibly ...…….....

SURETY:
.....…….....
Print Name Legibly .....

NAME OF LOCAL AGENCY:
ADDRESS .....
...…….....
.....…….....
.....…….....

SAMPLE

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ **_____ and the City of _____**, as principal, and.....…..... a corporation duly organized under the laws of the State of ..... and having a usual place of business in .....……., as Surety, are held and firmly bound unto the Treasurer of the City of Auburn for the use and benefit of claimants as herein below defined, in the sum of **_____ and 00/100 Dollars ($)** for the payment whereof Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly satisfies all claims and demands incurred for all labor and material, used or required by him in connection with the work contemplated by said Contract, and fully reimburses the obligee for all outlay and expense which the obligee may incur in making good any default of said Principal, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material or both, used or reasonably required for use in the performance of the contract.

Signed and sealed this ..... day of ...……......, 20 ... .

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature……..... .....….....

Print Name Legibly .....…….. Print Name Legibly ….....

SURETY:

Signature..... ...….....

Print Name Legibly ..... Print Name Legibly ….....

SURETY ADDRESS:

...….....

.....

TELEPHONE .....

NAME OF LOCAL AGENCY:

ADDRESS ….....

…….....

…….....

SAMPLE

General Decision Number: ME150049 01/02/2015 ME49

Superseded General Decision Number: ME20140049

State: Maine

Construction Type: Highway

County: Androscoggin County in Maine.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of $10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015

* ENGI0004-006 04/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Milling Machine	$ 20.75	10.84

IRON0007-008 03/16/2014

	Rates	Fringes
IRONWORKER, REINFORCING	$ 22.65	20.17

SUME2011-044 09/14/2011

	Rates	Fringes
CARPENTER, Includes Form Work	$ 16.99	1.95
CEMENT MASON/CONCRETE FINISHER	$ 16.94	0.00
ELECTRICIAN	$ 21.41	3.40
INSTALLER - GUARDRAIL	$ 15.91	2.85

IRONWORKER, STRUCTURAL	$ 18.75	4.56
LABORER: Asphalt Raker	$ 14.75	0.42
LABORER: Common or General	$ 12.58	1.27
LABORER: Flagger	$ 9.06	0.00
LABORER: Landscape	$ 15.43	2.09
LABORER: Wheelman	$ 18.76	4.93
OPERATOR: Backhoe	$ 17.92	2.44
OPERATOR: Bobcat/Skid Steer/Skid Loader	$ 16.98	4.65
OPERATOR: Broom/Sweeper	$ 14.08	0.00
OPERATOR: Bulldozer	$ 17.09	3.71
OPERATOR: Crane	$ 20.08	0.00
OPERATOR: Excavator	$ 18.14	5.20
OPERATOR: Grader/Blade	$ 27.40	8.46
OPERATOR: Loader	$ 17.46	5.80
OPERATOR: Mechanic	$ 21.39	6.24
OPERATOR: Milling Machine Reclaimer Combo	$ 24.77	8.39
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)	$ 17.49	4.26
OPERATOR: Roller, Base (Ride Along)	$ 13.00	1.54
OPERATOR: Screed	$ 19.58	5.95
PILEDRIVERMAN	$ 19.95	5.26
TRUCK DRIVER, Includes all axles including Dump Trucks	$ 13.95	2.01
TRUCK DRIVER: Lowboy Truck	$ 15.15	5.62

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within

the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SPECIAL PROVISION
SECTION 102.3
DEFINITIONS

This subsection shall be amended by the addition of the following paragraph:

Demolish: Remove and dispose of properly.

SPECIAL PROVISION
SECTION 102.3
EXAMINATION OF DOCUMENTS, SITE AND OTHER INFORMATION

The subsection shall be revised to read as follows: Plans, Specifications and Proposal Forms are only available electronically at http://www.auburnmaine.gov/Pages/Government/Bid-Notices.

SPECIAL PROVISIONS
SECTION 104
UTILITIES

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Municipality for utility work to be undertaken in conjunction with this project. The following list identifies all known utilities having facilities presently located within the limits of this project or intending to install facilities during project construction.

Overview:

Utility	Aerial	Underground
Auburn Water & Sewerage Districts		X
Central Maine Power Company	X	
Fairpoint Communications	X	
Oxford Networks	X	
Time Warner Cable	X	
Unitil Corporation		X

Utility Contact Information:

Electric:
Central Maine Power Company
162 Canco Road
Portland ME 04103
Attention:
Gerry Norton

Telephone:
Oxford Networks
491 Lisbon Street
Lewiston, ME 04240
Attention:
Scot Crockett

Telephone:
Fairpoint Communications
P.O. Box 11560
Portland, ME 04104
Attention:
Martin Pease

Gas:
Unitil Corporation
1075 Forest Avenue
Portland ME 04103
Attention:
Sam Murray

Water:
Auburn Water & Sewer District
P.O. Box 414
Auburn, ME 04212
Attention:
Sid Hazelton

Fire Alarm:
Auburn Fire Department
550 Minot Avenue
Auburn, ME 04210
Attention:
Geoff Low, Deputy Fire Chief

Drainage and Street Infrastructure:
City of Auburn
Department of Public Works
296 Gracelawn Road
Auburn, ME 04210
Attention:
Bob Belz

Cable TV:
Time Warner Cable
37 Alfred Plourde Parkway
Lewiston, ME 04240
Attention:
Paul Ouellette

Sewer:
Auburn Water & Sewer District
P.O. Box 414
Auburn, ME 04212
Attention:
Sid Hazelton

All adjustments are to be made by the respective utility unless otherwise specified herein.

All clearing and tree removal in areas where utilities are involved must be completed before the utilities are able to relocate their facilities.

Aerial
The Aerial Utility Companies have four pole adjustments along the project. Contractor shall coordinate adjustment of utility poles with utilities by providing a minimum two week notice. If additional utility relocations become necessary, they will be scheduled in compliance with Section 104 of the Standard Specifications and will be done by the utilities in conjunction with the Contractor schedule.

Underground
Unless otherwise specified, any underground utility facilities shown on the project plans represent approximate locations gathered from available information. The City cannot certify the level of accuracy of this data. Underground facilities indicated on the topographic sheets (plan views) have been collected from historical records and/or on-site designations provided by the respective utility companies. Underground facilities indicated on the cross-sections have been carried over from the plan view data and may also include further approximations of the elevations (depths) based upon straight-line interpolation from the nearest manholes, gate valves, or test pits.

Fire hydrants shall not be disturbed until all necessary work has been accomplished to provide proper fire protection.

SAFE PRACTICES AROUND UTILITY FACILITIES
The Contractor shall be responsible for complying with M.R.S.A Title 35-A, Chapter 7-A Sections 751 – 761 Overhead High-Voltage Line Safety Act. Prior to commencing any work that may come within ten feet of any aerial electric line, the Contractor shall notify the aerial utilities as per Section 757 of the above act.

The Contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate utility or their designated representative.

DIG SAFE
The Contractor shall be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with M.R.S.A. Title 23 Section 3360-A, Maine "Dig Safe" System.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

December 17, 2010
Supersedes December 30, 2009

SPECIAL PROVISION
SECTION 104
GENERAL RIGHTS AND RESPONSIBILITIES
(Electronic Payroll Submission)
(Payment Tracking)

104.3.8.1 Electronic Payroll Submission The prime contractor and all subcontractors and lower-tier subcontractors will submit their certified payrolls electronically on this contract utilizing the Elation System web based reporting. There is no charge to the contracting community for the use of this service. The submission of paper payrolls will not be allowed or accepted. Additional information can be found at http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php under the first "Notice".

104.3.8.2 Payment Tracking The prime contractor and all subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System

May 18, 2012

SPECIAL PROVISION
SECTION 104.5.5
GENERAL RIGHTS AND RESPONSIBILITIES
Prompt Payment of Subcontractors

104.5.5

104.5.5 Prompt Payment of Subcontractors

A. Pay When Paid The Contractor shall pay Subcontractors for all Work satisfactorily performed and Invoiced by the Subcontractor no later than 30 Days from the date the Contractor receives payment from the Department for such Subcontractor's Work.

B. Payment Tracking Federal Projects On federally funded projects, the prime contractor, subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System. They will be responsible for entering all payments to all sub and lower tier contractors. MaineDOT will run a query monthly to ensure that contractors are complying and generate an e-mail to contractors who have not responded to confirm receipt of MaineDOT payment or contractor payment to lower tier subcontractors.

C. Retainage The Contractor shall return to the Subcontractor all retainage withheld from the Subcontractor within 30 Days after the date the Subcontractor's Work is satisfactorily completed. If there is a Delay in such return of retainage, the Subcontractor may pursue all rights it may have under the claims procedure referenced in Section 104.5.6 - Subcontractor Claims for Payment.

December 5, 2011
Supersedes December 1, 2010

SPECIAL PROVISION
SECTION 105
GENERAL SCOPE OF WORK
(Buy America Certification)

105.11 Federal Requirements Add the following as the third and subsequent paragraphs:

"Prior to payment by the Department, the Contractor shall provide a certification from the producer of steel or iron, or any product containing steel or iron as a component, stating that all steel or iron furnished or incorporated into the furnished product was manufactured in the United States in accordance with the requirements of the Buy America provisions of 23 CFR 635.410, as amended. Such certification shall also include (1) a statement that the iron or steel product or component was produced entirely within the United States, or (2) a statement that the iron or steel product or component was produced within the United States except for minimal quantities of foreign steel and iron valued at $ (actual value).

All manufacturing processes must take place domestically. Manufacturing begins with the initial melting and mixing, and continues through the coating stage. Any process which modifies the chemical content, the physical size and shape, or the final finish is considered a manufacturing process. These processes include rolling, extruding, machining, bending, grinding, drilling, and coating. "Coating" includes epoxy coating, galvanizing, painting, or any other coating that protects or enhances the value of the material.

A Buy America Certification is required from each manufacturer, fabricator, supplier, subcontractor, etc. that meets the "manufacturing" definition above.

Buy America does not apply to raw materials (iron ore and alloys), scrap, pig iron, or processed, pelletized, and reduced iron ore."

SPECIAL PROVISION 105
GENERAL SCOPE OF WORK
Equal Opportunity and Civil Rights
(Disadvantaged Business Enterprises Program)

105.10.1.1 Disadvantaged Business Enterprises Program The Maine Department of Transportation (MaineDOT) has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the United States Department of Transportation (USDOT), 49 CFR Part 26. The MaineDOT receives federal financial assistance from USDOT, and as a condition of receiving this assistance, the Department has signed an assurance that it will comply with 49 CFR Part 26.The MaineDOT is responsible for determining the eligibility of and certifying DBE firms in Maine.

A DBE is defined as a for-profit business that is owned and controlled by one or more socially and economically disadvantaged person(s). For the purpose of this definition:

1. "Socially and economically disadvantaged person" means an individual who is a citizen or lawful permanent resident of the United States and who is Black, Hispanic, Native American, Asian, Female; or a member of another group or an individual found to be disadvantaged by the Small Business Administration pursuant to Section 3 of the Small Business Act.
2. "Owned and controlled" means a business which is:
   a. A sole proprietorship legitimately owned and controlled by an individual who is a disadvantaged person.
   b. A partnership or limited liability company in which at least 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).
   c. A corporation or other entity in which at least 51% of the voting interest and 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).

The disadvantaged group owner(s) or stockholder(s) must possess control over management, interest in capital, and interest in earnings commensurate with the percentage of ownership. If the disadvantaged group ownership interests are real, substantial and continuing and not created solely to meet the requirements of this program, a firm is considered a bona fide DBE.

105.10.1.2 Commercially Useful Function MaineDOT will count expenditures of a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. Credit will only be given when the DBE meets all conditions for a CUF. Credit for labor will be in accordance with the responsibilities outlined in the contract. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the Contract, for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, MaineDOT will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the Contract is commensurate with the work it is actually performing and DBE credit claimed for its performance of the work, and other relevant factors.

Rented equipment used by the DBE must not be rented from the Prime Contractor on a job that the DBE is subcontracted with that Prime Contractor for regular course of business.

A current listing of certified DBEs that may wish to participate in the highway construction program and the scope of work for which they are certified can be found at http://www.maine.gov/mdot/disadvantaged-business-enterprises/pdf/directory.pdf. Credit will be given for the value described by a DBE performing as:

A. A prime contractor; 100% of actual value of work performed by own workforces.
B. An approved subcontractor; 100% of work performed by own workforces.
C. An owner-operator of construction equipment; 100% of expenditures committed.
D. A manufacturer; 100% of expenditures committed. The manufacturer must be a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor. Brokers and packagers shall not be regarded as manufacturers.
E. A regular dealer; 60% of expenditures committed. A regular dealer is defined as a firm that owns, operates, or maintains a store, warehouse or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public. For purposes of this provision a "Broker" is a DBE that has entered into a legally binding relationship to provide goods or services delivered or performed by a third party. Brokers and packagers shall not be regarded as regular dealers.
F. A bona fide service provider; 100% of reasonable fees or commissions. Eligible services include professional, technical, consultant, or managerial, services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of the contract. Eligible services also include agencies providing bonding and insurance specifically required for the performance of the contract.
G. A trucking, hauling or delivery operation. 100% of expenditures committed when trucks are owned, operated, licensed and insured by the DBE and used on the contract and, if applicable, includes the cost of the self supplied materials and supplies.100% of expenditures committed when the DBE leases trucks from another DBE firm including an owner-operator. 100% of reasonable fees or commissions the DBE receives as a result of a lease arrangement for trucks from a non-DBE, including an owner-operator.
H. Any combination of the above.

105.10.1.3 Race-neutral Goals The Maine DOT is required to set an annual goal (approved on a three year basis) for DBE participation in Federal-aid projects. In order to fulfill that goal, bidders are encouraged to utilize DBE businesses certified by the MaineDOT. MaineDOT seeks to meet the established DBE goal solely through race-neutral means. *Race-neutral* DBE participation occurs when a DBE is awarded a prime contract through customary competitive procurement procedures, is awarded a subcontract on a contract that does not carry a DBE contract goal, or wins a subcontract from a prime contractor that did not consider its DBE status in making the award. A DBE/subcontractor Utilization Proposed Form is required to be included in bid documents.

MaineDOT will analyze each project and create a Project Availability Target (PAT), based on a number of factors including project scope, available DBE firms, firms certified in particular project work, etc. Each bid will request that the contractor attempt to meet the PAT. This PAT is developed to assist contractors to better understand what the MaineDOT expectations are for a

specific project. The PAT is NOT a mandate but an assessment of what this particular project can bear for DBE participation. The Department anticipates that each contractor will make the best effort to reach or exceed this PAT for the project.

105.10.1.4 Race-conscious Project Goals If it is determined by the Department that the annual DBE goal will not be met through *race-neutral* means, the Department may implement *race-conscious contract goals* on some projects. Race-conscious contract goals are goals that are enforceable by the Department and require that the prime contractor use good faith effort to achieve the goal set by the Department for that particular project. If race conscious means are implemented on a project, the Prime must comply with the requirements of 49 CFR.

At the time of the bid opening, all Bidders shall submit with their bid a Disadvantaged Business Enterprise (DBE) Commitment Form provided by the Department. This form will list the DBE and non-DBE firms that are proposed to be used during the execution of the Work. The list shall show the name of the firm, the item/material/type of work involved and the dollar amount of work to be performed. The dollar total of each commitment shall be totaled and a percentage determined.

If the project goal is not met, acceptable documentation showing all good faith efforts made to obtain participation may be required in order to award the project. Failure to provide the required listing with the dollar participation total or acceptable documentation of good faith efforts to obtain DBE participation within 3 days after the bid opening date will be considered a lack of responsiveness on the part of the low bidder. Rejection of the low bid under these circumstances will require the low bidder to surrender the Proposal Guaranty to the Department. The submission and approval of the above forms does not constitute a formal subcontract.

If for any reason during the progress of the Work the Contractor finds that DBEs included on the list are unable to perform the proposed work, the Contractor, with written release by the committed DBE or approval of the Department, may substitute other DBE firms for those named on the list. If the Contractor is able to clearly document their inability to find qualified substitute firms to meet the project goal, the Contractor may request in writing approval to substitute the DBE with a non-DBE firm. If at any time during the life of the Contract it is determined that the Contractor is not fulfilling the goal or commitment(s) and is not making a good faith effort to fulfill the DBE requirement, the Department may withhold progress payments. If good faith effort is determined by the Department, failure to meet the DBE contract goal will not be a detriment to the bid award. Fulfillment of the goal percentage shall be determined by dividing the dollars committed to the DBEs by the actual contract dollars. These requirements are in addition to all other Equal Employment Opportunity requirements on Federal-aid contracts.

105.10.1.5 Certification of DBE attainment on Contracts The MaineDOT must certify that it has conducted post-award monitoring of all contracts to ensure that DBEs had done the work for which credit was claimed. The certification is for the purpose of ensuring accountability for monitoring which the regulation already requires. The MaineDOT will certify these contracts through review of CUF forms, Elations sub-contract payment tracking as well as occasional on-site reviews of projects and through the project's final closeout documentation provided by our Contracts Section.

105.10.1.6 Bidders' List Survey Pursuant to 49 CFR 26.11 the MaineDOT is required to "create and maintain" a bidders list and gather bidder information on our construction/consultant projects, Contractors will maintain information on all subcontract bids submitted by DBE and Non-DBE firms and provide that information to the Department. The Following information is required:

Firm Name
Firm Address
Firm status (DBE or non-DBE)
Age of firm (years)
And the annual gross receipts amount as indicated by defined brackets, i.e. $500,000 to $800,000, rather than requesting exact figures.

Not only is this information critical in determining the availability of DBE businesses relative to other businesses that do similar work, but the Federal Highway Administration requires that we obtain this information.

SPECIAL PROVISION 105
OVERLIMIT PERMITS

Title 29-A § 2382 MRSA Overlimit Movement Permits.

1. Overlimit movement permits issued by State. The Secretary of State, acting under guidelines and advice of the Commissioner of Transportation, may grant permits to move nondivisible objects having a length, width, height or weight greater than specified in this Title over a way or bridge maintained by the Department of Transportation

2. Permit fee. The Secretary of State, with the advice of the Commissioner of Transportation, may set the fee for single trip permits, at not less than $6, nor more than $30, based on weight, height, length and width. The Secretary of State may, by rule, implement fees that have been set by the Commissioner of Transportation for multiple trip, long-term overweight movement permits. Rules established pursuant to this section are routine technical rules pursuant to Title 5, chapter 375, subchapter II-A.

3. County and municipal permits. A county commissioner or municipal officer may grant a permit, for a reasonable fee, for travel over a way or bridge maintained by that county or municipality

4. Permits for weight. A vehicle granted a permit for excess weight must first be registered for the maximum gross vehicle weight allowed for that vehicle.

5. Special mobile equipment. The Secretary of State may grant a permit, for no more than one year, to move pneumatic-tire equipment under its own power, including Class A and Class B special mobile equipment, over ways and bridges maintained by the Department of Transportation. The fee for that permit is $15 for each 30-day period.

6. Scope of permit. A permit is limited to the particular vehicle or object to be moved, the trailer or semitrailer hauling the overlimit object and particular ways and bridges.

7. Construction permits. A permit for a stated period of time may be issued for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:

A. Must be procured from the municipal officers for a construction area within that municipality;

B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:

(1) Withholding by the agency contracting the work of final payment under contract; or

(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.

The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;

C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and

D. For construction areas, carries no fee and does not come within the scope of this section.

8. Gross vehicle weight permits. The following may grant permits to operate a vehicle having a gross vehicle weight exceeding the prescribed limit:

A. The Secretary of State, with the consent of the Department of Transportation, for state and state aid highways and bridges within city or compact village limits;

B. Municipal officers, for all other ways and bridges within that city and compact village limits; and

C. The county commissioners, for county roads and bridges located in unorganized territory.

9. Pilot vehicles. The following restrictions apply to pilot vehicles.

A. Pilot vehicles required by a permit must be equipped with warning lights and signs as required by the Secretary of State with the advice of the Department of Transportation.

B. Warning lights may be operated and lettering on the signs may be visible on a pilot vehicle only while it is escorting a vehicle with a permit on a public way.

With the advice of the Commissioner of Transportation and the Chief of the State Police, the Secretary of State shall establish rules for the operation of pilot vehicles.

9-A. Police escort. A person may not operate a single vehicle or a combination of vehicles of 125 feet or more in length or 16 feet or more in width on a public way unless the vehicle or combination of vehicles is accompanied by a police escort. The Secretary of State, with the advice of the Commissioner of Transportation, may require a police escort for vehicles of lesser dimensions.

A. The Bureau of State Police shall establish a fee for state police escorts to defray the costs of providing a police escort. A county sheriff or municipal police department may establish a fee to defray the costs of providing police escorts.

B. The Bureau of State Police shall provide a police escort if a request is made by a permittee. A county sheriff or municipal police department may refuse a permittee's request for a police escort.

C. A vehicle or combination of vehicles for which a police escort is required must be accompanied by a state police escort when operating on the interstate highway system.

10. Taxes paid. A permit for a mobile home may not be granted unless the applicant provides reasonable assurance that all property taxes, sewage disposal charges and drain and sewer assessments applicable to the mobile home, including those for the current tax year, have been paid or that the mobile home is exempt from those taxes. A municipality may waive the requirement that those taxes be paid before the issuance of a permit if the mobile home is to be moved from one location in the municipality to another location in the same municipality for purposes not related to the sale of the mobile home.

11. Violation. A person who moves an object over the public way in violation of this section commits a traffic infraction.

Section History:
PL 1993, Ch. 683, §A2 (NEW).
PL 1993, Ch. 683, §B5 (AFF).
PL 1997, Ch. 144, §1,2 (AMD).
PL 1999, Ch. 117, §2 (AMD).
PL 1999, Ch. 125, §1 (AMD).
PL 1999, Ch. 580, §13 (AMD).
PL 2001, Ch. 671, §30 (AMD).
PL 2003, Ch. 166, §13 (AMD).
PL 2003, Ch. 452, §Q73,74 (AMD).
PL 2003, Ch. 452, §X2 (AFF).

SPECIAL PROVISION
SECTION 105
GENERAL SCOPE OF WORK
(Limitations of Operations)

1. The Permitted Work Days are Monday through Friday (work hours 7AM to 6 PM). The Contractor shall not work on Saturdays, Sundays and the Holidays listed below without advanced permission by the City.
    - Veterans Day – 11/11/14
    - Thanksgiving Day – 11/27/14
    - Christmas Day – 12/25/14
    - New Year's Day – 1/1/15
    - Memorial Day – 5/25/15
    - Independence Day – 7/4/15
    - Labor Day – 8/7/15
    - Columbus Day – 10/12/15

    Once work begins, it shall be continuous through to completion.

2. No nighttime weekend work will be permitted.

3. The Contractor shall conduct his operations in such a manner that South Main Street is open to traffic with alternating one way traffic minimum, except during weekdays from 6am-9am and 3pm-6pm when two 11 ft. wide travel lanes shall be maintained (1 lane in each direction).

4. All roadways and driveway entrances shall remain open at all times unless otherwise noted herein or approved

City of Auburn
WIN 16612.00
November 2014

SPECIAL PROVISIONS
SECTION 107
PROSECUTION AND PROGRESS
(CONTRACT TIME)

The contractor will be allowed to commence work on this project as long as all applicable plans as required under this contract have been submitted and approved and required notice has been provided.

The completion date for this contract is **October 15, 2015**.

For every weekday not worked once operations commence, the Contractor will be charged Supplemental Liquidated Damages per calendar day at the rate stated in Section 107.7.2 of the Supplemental Standard Specifications (excluding days lost to inclement weather).

The contractor shall not carry on construction operations on Sundays or Holidays as per Section 107.3.3.

All travel lanes shall be open to traffic and the roadway in safe operating condition when the contractor suspends work for holidays or extended periods of time as directed.

All work schedule changes must be submitted for approval to the Department a minimum of 10 calendar days prior to the requested change.

SPECIAL PROVISION
SECTION 107
Control of Work

The Contractor shall notify the Engineer three (3) working days prior to the commencement of construction activities.

The work shall not commence until the traffic control plan has been approved. Once the Contractor begins work at one project location, the Contractor shall continue to work at that location until the project is complete, unless otherwise approved by the Engineer.

SPECIAL PROVISION
SECTION 107
TIME
(Scheduling of Work – Projected Payment Schedule)

Description The Contractor shall also provide the Department with a Quarterly Projected Payment Schedule that estimates the value of the Work as scheduled, including requests for payment of Delivered Materials. The Projected Payment Schedule must be in accordance with the Contractor's Schedule of Work and prices submitted by the Contractor's Bid. The Contractor shall submit the Projected Payment Schedule as a condition of Award.

SPECIAL PROVISION
SECTION 107
SCHEDULING OF WORK

Replace Section 107.4.2 with the following:

"107.4.2 Schedule of Work Required Within 21 Days of Contract Execution and before beginning any on-site activities, the Contractor shall provide the City with its Schedule of Work. The Contractor shall plan the Work, including the activity of Subcontractors, vendors, and suppliers, such that all Work will be performed in Substantial Conformity with its Schedule of Work. The Schedule must include sufficient time for the City to perform its functions as indicated in this Contract, including QA inspection and testing, approval of the Contractor's TCP, SEWPCP and QCP, and review of Working Drawings.

At a minimum, the Schedule of Work shall include a bar chart which shows the major Work activities, milestones, durations, **submittals and approvals**, and a timeline. Milestones to be included in the schedule include: (A) start of Work, (B) beginning and ending of planned Work suspensions, (C) Completion of Physical Work, and (D) Completion. If the Contractor Plans to Complete the Work before the specified Completion date, the Schedule shall so indicate.

Any restrictions that affect the Schedule of Work such as paving restrictions or In-Stream Work windows must be charted with the related activities to demonstrate that the Schedule of Work complies with the Contract.

The City will review the Schedule of Work and provide comments to the Contractor within 20 days of receipt of the schedule. The Contractor will make the requested changes to the schedule and issue the finalized version to the City."

SPECIAL PROVISION
SECTION 108
PAYMENT
(Asphalt Escalator)

108.4.1 Price Adjustment for Hot Mix Asphalt: For all contracts with hot mix asphalt in excess of 500 tons total, a price adjustment for performance graded binder will be made for the following pay items:

Item 403.102 Mot Mix Asphalt – Special Areas
Item 403.206 Hot Mix Asphalt - 25 mm
Item 403.207 Hot Mix Asphalt - 19 mm
Item 403.2071 Hot Mix Asphalt - 19 mm (Polymer Modified)
Item 403.2072 Hot Mix Asphalt - 19 mm (Asphalt Rich Base)
Item 403.2073 Warm Mix Asphalt - 19 mm
Item 403.208 Hot Mix Asphalt - 12.5 mm
Item 403.2081 Hot Mix Asphalt - 12.5 mm (Polymer Modified)
Item 403.20813 Warm Mix Asphalt - 12.5 mm (Polymer Modified)
Item 403.2083 Warm Mix Asphalt - 12.5 mm
Item 403.209 Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
Item 403.210 Hot Mix Asphalt - 9.5 mm
Item 403.2101 Hot Mix Asphalt - 9.5 mm (Polymer Modified)
Item 403.2102 Hot Mix Asphalt - 9.5 mm (Asphalt Rich Base)
Item 403.2103 Warm Mix Asphalt - 9.5 mm
Item 403.2104 Hot Mix Asphalt - 9.5 mm (3/4" Surface)
Item 403.211 Hot Mix Asphalt – Shim
Item 403.2111 Hot Mix Asphalt – Shim (Polymer Modified)
Item 403.2113 Warm Mix Asphalt - Shim
Item 403.212 Hot Mix Asphalt - 4.75 mm (Shim)
Item 403.2123 Warm Mix Asphalt - 4.75 mm (Shim)
Item 403.213 Hot Mix Asphalt - 12.5 mm (base and intermediate course)
Item 403.2131 Hot Mix Asphalt - 12.5 mm (base and intermediate course Polymer Modified)
Item 403.2132 Hot Mix Asphalt - 12.5 mm (Asphalt Rich Base and intermediate course)
Item 403.2133 Warm Mix Asphalt - 12.5 mm (base and intermediate course)
Item 403.214 Hot Mix Asphalt - 4.75 mm (Surface)
Item 403.2143 Warm Mix Asphalt - 4.75 mm (Surface)
Item 403.301 Hot Mix Asphalt (Asphalt Rubber Gap-Graded)
Item 404.70 Colored Hot Mix Asphalt – 9.5mm (Surface)
Item 404.72 Colored Hot Mix Asphalt – 9.5mm (Islands, sidewalks, & incidentals)
Item 461.13 Maintenance Surface Treatment

Price adjustments will be based on the variance in costs for the performance graded binder component of hot mix asphalt. They will be determined as follows:

The quantity of hot mix asphalt for each pay item will be multiplied by the performance graded binder percentages given in the table below times the difference in price between the base price and the period price of asphalt cement. Adjustments will be made upward or downward, as prices increase or decrease.

Item 403.102–6.2%			
Item 403.206–4.8%			
Item 403.207–5.2%	Item 403.2071–5.2%	Item 403.2072–5.8%	Item 403.2073–5.2%
Item 403.208–5.6%	Item 403.2081–5.6%	Item 403.20813–5.6%	Item 403.2083–5.6%
Item 403.209–6.2%			
Item 403.210–6.2%	Item 403.2101–6.2%	Item 403.2102–6.8%	Item 403.2103–6.2%
Item 403.2104–6.2%			
Item 403.211–6.2%	Item 403.2111–6.2%		Item 403.2113–6.2%
Item 403.212–6.8%			Item 403.2123–6.8%
Item 403.213–5.6%	Item 403.2131–5.6%	Item 403.2132–6.2%	Item 403.2133–5.6%
Item 403.214–6.8%			Item 403.2143–6.8%
Item 403.301–6.2%			
Item 404.70–6.2%			
Item 404.72–6.2%			
Item 461.13–6.4%			

Hot Mix Asphalt**:** The quantity of hot mix asphalt will be determined from the quantity shown on the progress estimate for each pay period.

Base Price: The base price of performance graded binder to be used is the price per standard ton current with the bid opening date. This price is determined by using the average New England Selling Price (Excluding the Connecticut market area), as listed in the Asphalt Weekly Monitor.

Period Price: The period price of performance graded binder will be determined by the Department by using the average New England Selling Price (Excluding the Connecticut market area), listed in the Asphalt Weekly Monitor current with the paving date. The maximum Period Price for paving after the adjusted Contract Completion Date will be the Period Price on the adjusted Contract Completion Date.

SPECIAL PROVISION
SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS

The provisions of Section 202 of the Standard Specifications shall apply with the following additions and modifications:

202.07 Method of Measurement
Removing existing storm and sewer pipes shall be measured per linear foot.

202.08 Basis of Payment
The accepted quantity of removal of existing storm and sewer pipe shall be at the contract unit price per linear foot, which will be full compensation for removal of a pipe outside the horizontal limits of excavation for a proposed pipe or structure by four or more feet. Removal of existing pipe within four feet of the horizontal limits of excavation for a proposed pipe will be considered incidental to that applicable pipe pay item.

Payment will be made under:

Pay Item		Pay Unit
202.16	Removing Existing Storm/Sewer Pipe	Linear Foot

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT)

General

The work under this specification, shall be performed in conformance with all the procedures and requirements described herein for the following activities: contaminated soil handling, reuse, temporary stockpiling, transportation, storage and disposal and, contaminated water handling, storage, treatment and disposal. This specification also addresses contaminated soil location, identification, and classification. The intent of this specification is to ensure that any contaminated soil and/or water encountered during construction will be managed in a manner that protects worker health and safety, public welfare and the environment.

Environmental Site Conditions

The Maine Department of Transportation's Environmental Office (MaineDOT's-ENV.) has conducted a series of assessments related to the Auburn Riverside Drive Improvement Project. An initial Phase I Environmental Assessment for the project area was completed to obtain a general understanding of the environmental conditions along the project corridor. Data garnered from this assessment was used to design a Modified, Phase II Contamination Assessment for the project. The primary focus of the assessments was to evaluate the type and extent of subsurface contamination along the project corridor. The Phase I Assessment included a review of relevant Maine Department of Environmental Protection's (MaineDEP's) and Environmental Protection Agency's (EPA's) databases and field reconnaissance of the project area. During Phase II, borings were advanced along the project's length for investigative purposes. During the advancement of these borings, three areas with impacted soil were identified. A photo-ionization detector (PID) was used to test soil grab samples from select explorations for volatile organic compound (VOC) concentrations indicative of petroleum products. (See *Identified Areas Of Contamination* below). Select samples for laboratory testing were also taken to further aid in evaluating subsurface conditions. The results of these investigations are available for review from the Hydrogeologist at MaineDOT's Environmental Office in Augusta (207-624-3100).

Identified Area of Contamination

MaineDOT's-ENV investigation identified four areas of soil contamination associated with the Riverside Drive (Route 2) Highway Improvement Project. For reference, these areas are designated as "**Area A", "Area B", "Area C"** and **"Area D"** respectively. **Area A, Area B and Area C are not included in this Contract.**

The location of **Area D** is defined as along Riverside Drive (Route 2) located roughly between MaineDOT stations 40+00 to 41+10 left of center line. The laboratory results for EPH; C11-C22 Aromatic hydrocarbons at 160 to 1400 ppm, C9-C18 Aliphatic Hydrocarbons at BDL to 50 ppm, C19-C36 Aliphatic Hydrocarbons at 83 to 160 ppm, Naphthalene at 1.2 to 3.3 ppm, and 2-methylnaphthalene at 1.1 to 5.1 ppm, Phenanthrene at 8.4 to 78 ppm, Acenaphthene at 0.63 to 1.8 ppm, Acenaphthylene at 0.92 to 10 ppm, Fluorene at 1.2 to 58 ppm, Anthracene at 1.5 to 9 ppm, Fluoranthene at 7.1 to 58 ppm, Pyrene at 2.6 to 72 ppm, Benzo(a)anthracene at 4.3 to 30 ppm, Chrysene at 3.7 to 27 ppm, Benzo(b)fluoranthene at 0.26 to 29 ppm, Benzo(k) fluoranthene at 2.7 to 21 ppm, Benzo(a)pyrene at 3.0 to 25 ppm, Benzo(g,h,j)perylene at 2 to 21 ppm, Dibenz(a,h)anthracene at 0.41 to 3.8 ppm and Indeno(1,2,3,cd)Pyrene at 2.2 to 20ppm; for VPH; BDL. VOCs were detected; Naphthalene at 170 to 6800 ppb. Total lead was detected at 7.5 to 14.2 ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in **Area D** appears to be related to the past use and storage of gasoline.

Identifying and Screening Contaminated Soil and Groundwater

Within the contaminated section designated as **Area D,** excavated soils will be classified by the Resident (or a MaineDOT-ENV representative/City of Auburn representative) based on photo-ionization detector (PID) field screening measurements. Field screening with a PID shall be performed according to the MDEP SOP No. TS004, Compendium of Field Testing of Soil Samples for Gasoline and Fuel Oil dated April 20, 2011.

The excavated soils shall be classified as Group 1 or Group 2.

Group 1 soils shall have PID field screening measurements indicating relative concentrations of volatile organic compounds (VOCs) less than or equal to 20 parts per million (ppm) as measured in the soil headspace.
Group 2 soils shall have PID field screening measurements indicating relative concentrations of volatile organic compounds (VOCs) in parts per million (ppm) as measured in the soil headspace less than the value indicated on Table 1 of SOP TS-004 when screened in accordance with the "Outdoor Commercial Worker/Excavation-Construction Worker".
Group 3 soils shall have PID field screening measurements indicating VOC concentrations in ppm greater than the value indicated on Table 1 of the SOP-TS004 when screened in accordance with the "Outdoor Commercial Worker/Excavation-Construction Worker".

Handling and Disposition of Soil Materials. Within **Area D** soil material excavated during construction shall be handled as follows:

Group 1 soils are not considered contaminated. Thus, special handling and disposal are not required for Group 1 soils.

Group 2 soils shall be placed back into their excavation section of origin. The Contractor shall make every attempt to side cast any Group 2 soils next to their excavation site. Upon completion of the given constructional feature, the Group 2 soils shall be placed back into the excavation. Group 2 materials not handled in this manner shall be considered Surplus Group 2 soils. Surplus Group 2 soils must be disposed of or treated at a facility licensed by the MDEP to accept petroleum contaminated special waste. The Contractor is solely responsible for obtaining the associated permits and approvals for the disposal or treatment of the Surplus Group 2 soils from all relevant Municipal, State, and Federal agencies at no additional cost to the State. Notification shall be given to the Resident once approval is granted for the acceptance of this material at the off-site facility. No removal of Surplus Group 2 soils from the project shall occur without prior approval by the Resident. If any Surplus Group 2 soils cannot be transported to the pre-approved, properly licensed facility within 8 hours of their excavation, they must be placed in a Temporary Secure Stockpile Area somewhere within the project limits (See Temporary Secured Stockpile Area below).

Group 3 soils shall not be excavated without prior approval by the Resident. The Contractor shall arrange and undertake disposal of all Group 3 soils at a landfill or treatment facility licensed to accept petroleum contaminated special waste. The Contractor is responsible for all additional testing required by the receiving facility. Group 3 soils that cannot be disposed of within 8 hours of excavation shall be stored in a Temporary Secured Stockpile area. If the Contractor proposes other disposal or treatment options, the Contractor is solely responsible for obtaining the associated permits and approvals from all relevant Municipal, State, and Federal agencies at no additional cost to the State.

The Resident is responsible for signing any manifests or bills of lading required to transport and dispose of contaminated soil. The Resident will send all manifests and bills of lading to MaineDOT, Environmental Office, Station 16, Augusta, Maine 04333.

Trench and Underdrain/Storm drain Design in Contaminated Sections

In **Area D** solid, Option III, non-perforated pipe shall be used instead of perforated underdrain pipe to help prevent the infiltration and transportation of potentially contaminated groundwater within the underdrain/storm drain system. The Contractor shall backfill around the pipe and trenches in this section with uncontaminated material. Backfilling of the trench shall be in accordance with Section 206.03. All stones larger than 3 inches, frozen lumps, dry chunks of clay or any other objectionable matter shall be removed before backfilling.

Seepage control dikes (SCD) shall be installed roughly every 60 feet along the stormwater pipe trench within the contaminated sections designated **Area D** .

The SCDs shall consist of a mineral clay material with a liquid limit of equal to or greater than 24 and a natural moisture content of at least 20 percent. The clay should be placed in dry excavations in 6 inch maximum, thick lifts and compacted to 90% of the maximum dry unit weight as determined by AASHTO T99 (Standard Proctor). The SCDs shall be 5 feet long, be in intimate contact with the trench floor, trench walls and circumference of the pipe and extend up to the bottom of the road base. The excavated existing road base or similar material may be placed on top of the SCDs. The Contractor shall take care to ensure that no voids or uncompacted soil is left beside or beneath the Option III culvert pipe.

Secured Stockpile Area

Direct transport of Surplus Group 2 or Group 3 soils to a pre-approved management facility is recommended. However, should the Contractor temporarily store any Surplus Group 2 or Group 3 soils at the site for more than 8 hours following excavation, they must be placed into a properly constructed Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area must be constructed as defined herein and must be approved by the Resident prior to its use.

Should the Contractor utilize a Temporary Secured Stockpile Area, they shall install a continuous 0.3 meter high compacted soil berm around the Secured Stockpile. The Secured Stockpile shall be placed on a liner of 20-mil polyethylene and securely covered with 20-mil polyethylene. The polyethylene liner and cover shall be placed over the soil berm and be installed to ensure that precipitation water drains directly to the outside of the berm perimeter while leachate from the contaminated soil is retained within the stockpile. The Secured Stockpile and soil berm shall be enclosed within a perimeter of concrete Jersey barriers or wooden barricades. The area within the Jersey barriers (or wooden barricades) shall be identified as a "restricted area" to prevent unauthorized access to the contaminated soils.

Secured Stockpile Area - Materials

A. Polyethylene. Polyethylene used for liner in the Secured Stockpile Area shall have a minimum of 20-mil thickness and shall meet the requirements of ASTM D3020.
B. Common Borrow. Fill used in the construction of the Temporary Secured
Stockpile Area soil berm shall consist of Common Borrow and meet the requirements of Section 703.18
C. Concrete Barriers or Wooden Barricades. Concrete barriers or Wooden Barricades to form the sides of the Temporary Secured Stockpile Area shall meet the requirements of Section 526 or 652.05.

Health and Safety/Right-to-Know

Contractors and subcontractors are required to notify their workers of the history of the site and contamination that may be present and to be alert for evidence of contaminated soil and groundwater. The Contractor shall notify the Resident at least three business days prior to commencing any excavation in **Area D**.

The Contractor shall prepare a site specific Health and Safety Plan (HASP) for its workers and subcontractors who may work in the contaminated areas of the site. A Qualified Health and Safety Professional shall complete the HASP. The Qualified Health and Safety Professional will be an expert in field implementation of the following federal regulations:

29 CFR 1910.120 or Hazardous Waste Operations and
29 CFR 1926.65 Emergency Response
29 CFR 1910.134 Respiratory Protection
29 CFR 1926.650 Subpart D - Excavations
29 CFR 1926.651 General Requirements
29 CFR 1926.652 Requirements for Protective Systems

MaineDOT is voluntarily ameliorating the contamination in **Area D.** The remedial efforts defined herein have been reviewed and approved by MaineDEP. Given that this is a voluntary clean-up effort approved by a regulatory agency, the OSHA requirements as defined in 29 CFR 1910.120 apply. These requirements mandate that workers and any subcontractors working in the contaminated areas shall comply with all OSHA regulations for Hazardous Waste Operations and Emergency Response including a 40 hour initial hazardous waste operations certification [OSHA 1910.120(e)], annual 8 hour refresher course within the last 12 months and medical surveillance [OSHA 1910.120(f)] within the last 12 months.

The Contractor shall designate a person to provide direct on-site supervision of the work in the contaminated areas. This person shall have the training under OSHA 1910.120 (e) as above and in addition be qualified as a construction Competent Person. It is the responsibility of the competent person to make those inspections necessary to identify situations that could result in hazardous conditions (e.g., possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions), and then to insure that corrective measures are taken.

Submittals

The Contractor shall submit a site specific Health and Safety Plan (HASP) to the Resident at least two weeks in advance of any excavation work on the project. The Contractor shall not proceed with work until MaineDOT has reviewed the plan and notified the Contractor that it is acceptable.

Health and Safety Monitoring

Within the contaminated areas of the project, the Contractor's designated on-site person shall monitor the worker breathing zone for those constituents specified in the Contractor's HASP. The Contractor shall provide all required health and safety monitoring equipment.

Dewatering

Groundwater may be encountered and its removal necessary to complete work within **Area A, Area B, Area C** and **Area D.** It will be treated as "contaminated" water. The Contractor shall inform the Resident before any dewatering commences. The "contaminated" water shall be pumped into a temporary holding tank(s). The Contractor will be responsible for the procurement of any holding tank(s). Any testing, treatment and/or disposal of the stored, petroleum-contaminated water shall be undertaken by the Contractor in accordance with applicable Federal, State and local regulatory requirements.

On-Site Water Storage Tanks – Materials

If dewatering within the identified contaminated area becomes necessary the holding tanks used for temporary storage of contaminated water pumped from excavations shall be contamination free and have a minimum capacity of 2,000 gallons.

Dust Control

The Contractor shall employ dust control measures to minimize the creation of airborne dust during the construction process in potentially contaminated areas. As a minimum, standard dust control techniques shall be employed where heavy equipment and the public will be traveling. These may include techniques such as watering-down the site or spreading hygroscopic salts.

Unanticipated Contamination

If the Contractor encounters previously undiscovered contamination or potentially hazardous conditions related to contamination, the Contractor shall immediately suspend work and secure the area. The Contractor will then notify the Resident immediately. These potentially hazardous conditions include, but are not limited to, buried containers, drums, tanks, "oil saturated soils", strong odors, or the presence of petroleum sufficient to cause a sheen on the groundwater. The area of potential hazard shall be secured to minimize health risks to workers and the public and to

prevent a release of contaminants into the environment. The source of any suspected contamination shall be evaluated by the Resident (or MaineDOT's -ENV representative). As appropriate, the Resident will notify the MDEP's Response Services Unit in Portland and MaineDOT's Environmental Office. The Auburn Fire Department must also be notified prior to removal of buried storage tanks and associated piping. The Contractor will evaluate the impact of the hazard on construction, amend the HASP if necessary, and with the Resident's approval, recommence work in accordance with the procedures of this Special Provision.

Method of Measurement

There will be no measurement for identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Measurement for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by lump sum.

Measurement of the off-site treatment or disposal of Surplus Group 2 and all Group 3 soils will be by the ton of Special Excavation.

There will be no measurement for construction of a Temporary Secured Stockpile Area. Construction of a Temporary Secured Stockpile Area, if necessary, is considered incidental to project construction. There will be no measurement for hauling Surplus Group 2 material or Group 3 soils to the Temporary Secure Stockpile area or placement and removal of Surplus Group 2 or Group 3 soils in or out of the Temporary Secure Stockpile area. All hauling and any subsequent management/placement of contaminated soils are considered incidental to project construction.

There will be no measurement for additional laboratory testing of contaminated soil that is required by the landfill or treatment facility. Testing is incidental to the disposal of Special Excavation.

Measurement for the following items shall be according to Subsection 109:04 ("Change Order"/Force Account): any necessary contaminated water holding tank(s); and treatment or disposal of any contaminated groundwater.

Basis of Payment

There will be no payment for the identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Payment for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by the lump sum

Payment for off-site disposal or treatment of contaminated Surplus Group 2 and all Group 3 soils at a MaineDEP licensed facility shall be by the ton of Special Excavation.

There will be no payment for the construction of the Temporary Secured Stockpile Area or hauling/management/placement of contaminated soils to the Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area shall be considered incidental to project construction.

Payment for the following items shall be according to Subsection 109:04 ("Change Order"/Force Account): any necessary contaminated water holding tank(s); and treatment or disposal of any contaminated groundwater.

Payment will be made under:

Pay Item		**Pay Unit**
203.2312	Health and Safety Plan (HASP)	Lump Sum
203.2333	Disposal/Treatment of Special Excavation	Ton

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT

The provisions of Section 203 of the Standard Specifications shall apply with the following additions and modifications:

203.02 Materials
MDOT 703.31 - Crushed Stone.

203.18 Method of Measurement
Crushed Stone will be measured by the number of cubic yards measured in its original position by cross sectional elevations of the area excavated. Refer to MDOT Standard Specifications

203.19 Basis of Payment
The accepted quantities of crushed stone will be paid for by the measured number of cubic yards in its original position

Payment will be made under:

Pay Item		Pay Unit
203.29	Crushed Stone (Over depth)	Cubic Yard

SPECIAL PROVISION
SECTION 206
STRUCTURAL EXCAVATION

The provisions of Section 206 of the Standard Specifications shall apply with the following additions and modifications:

206.04 Method of Measurement
Paragraph (a) of the Standard Specifications shall be deleted and the following paragraphs added:

There will be no measurement for earth excavation except for excavation required below the subgrade elevation as defined on the plans, details or specifications.

206.05 Basis of Payment
The accepted quantity of Earth Excavation, Below Grade, will be paid for at the contract unit price per cubic yard.

Payment will be made under:

Pay Item		Pay Unit
206.06	Earth Excavation, Below Grade (Over depth)	Cubic Yard

SPECIAL PROVISION
DIVISION 400
PAVEMENTS

SECTION 401 - HOT MIX ASPHALT PAVEMENT

401.01 Description The Contractor shall furnish and place one or more courses of Hot Mix Asphalt Pavement (HMA) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

401.02 Materials Materials shall meet the requirements specified in Section 700 - Materials:

Asphalt Cement	702.01
Aggregates for HMA Pavement	703.07
HMA Mixture Composition	703.09

401.021 Recycled Asphalt Materials Recycled Asphalt Pavement (RAP) may be introduced into the mixture at percentages approved by the Department according to the Maine DOT Policies and Procedures for HMA Sampling and Testing. If approved by the Department, the Contractor shall provide documentation stating the source, test results for average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to its use.

For specification purposes, RAP will be categorized as follows:

Class III – The Contractor may use a maximum of 10 percent Class III RAP in any base, binder, surface, or shim course. Class III RAP will be allowed in hand-placed mixes for item 403.209 at a rate of up to 20 percent.

Class II – The Contractor may use a maximum of 20 percent Class II RAP in any base, binder, surface, or shim course.

Class I – The Contractor may use a maximum of 30 percent Class I RAP in any base, binder, surface, or shim course provided that PG 58-34 asphalt binder is used in the mixture. A PG 52-34 may be used when approved by the Department.

In the event that RAP source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

401.03 Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF).

The Contractor shall submit for Department approval a JMF to the Central Laboratory in Bangor for each mixture to be supplied. The Department may approve 1 active design per nominal maximum size, per traffic level, per plant, plus a 9.5mm "fine" mix for shimming and where required, a non-RAP design for bridge decks. The Department shall then have 15 calendar days in which to process a new design before approval. The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in section 703.09. The mixture shall be designed and produced, including all production tolerances, to comply with the allowable control points for the particular type of mixture as outlined in 703.09. The JMF shall state the original source, gradation, and percentage to be used of each portion of the aggregate including RAP when utilized, and mineral filler if required. It shall also state the proposed PGAB content, the name and location of the refiner, the supplier, the source of PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

In addition, the Contractor shall provide the following information with the proposed JMF:

- Properly completed JMF indicating all mix properties (Gmm, VMA, VFB, etc.)
- Stockpile Gradation Summary
- Design Aggregate Structure Consensus Property Summary
- Design Aggregate Structure Trial Blend Gradation Plots (0.45 power chart)
- Trial Blend Test Results for at least three different asphalt contents
- Design Aggregate Structure for at least three trial blends
- Test results for the selected aggregate blend at a minimum of three binder contents
- Specific Gravity and temperature/viscosity charts for the PGAB to be used
- Recommended mixing and compaction temperatures from the PGAB supplier
- Material Safety Data Sheets (MSDS) For PGAB
- Asphalt Content vs. Air Voids trial blend curve
- Test report for Contractor's Verification sample
- Summary of RAP test results (if used), including count, average and standard deviation of binder content and gradation

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 Mg [150 ton] for stone stockpiles, 75 Mg [75 ton] for sand stockpiles, and 50 Mg [50 ton] of blend sand before the Department will sample. The Department shall obtain samples for laboratory testing. The Contractor shall also make available to the Department the PGAB proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Department shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements of the Department's written policy for mix design verification (See Maine DOT Policies and Procedures for HMA Sampling and Testing available at the Central Laboratory in Bangor). If the results are found to be acceptable, the Contractor will forward their results to the Department's Lab, which will test the Department's split of the sample. The results of the two split samples will be compared and shared between the Department and the Contractor. If the Department finds the mixture acceptable, an approved JMF will be forwarded to the Contractor and paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement.

The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result. Should all of the Acceptance samples of a Lot be obtained prior to the receipt of the first Acceptance result, the Department will not allow the aim changes to be applied to that Lot. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2%. Adjustments will be allowed on GMM of up to 0.010.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. The cold feed percentage for RAP may be reduced up to 10 percentage points from the amount listed on the JMF and shall not exceed the percentage of RAP approved in the JMF or for the specific application under any circumstances.

TABLE 1: VOLUMETRIC DESIGN CRITERIA

Design ESAL's (Millions)	Required Density (Percent of G_{mm})			Voids in the Mineral Aggregate (VMA)(Minimum Percent)					Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	$N_{initial}$	N_{design}	N_{max}	25	19	12.5	9.5	4.75		
<0.3	≤91.5	96.0	≤98.0	13.0	14.0	15.0	16.0	16.0	70-80	0.6-1.2**
0.3 to <3	≤90.5								65-80	
3 to <10	≤89.0								65-80*	
10 to <30										
≥ 30										

*For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82.
*For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.
**For 4.75 mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4.

401.04 Temperature Requirements After the JMF is established, the temperatures of the mixture shall conform to the following tolerances:

In the truck at the mixing plant – allowable range 135° to 163°C [275 to 325°F]
At the Paver – allowable range 135° to 163°C [275 to 325°F]

The JMF and the mix subsequently produced shall meet the requirements of Tables 1 and Section 703.07.

401.05 Performance Graded Asphalt Binder Unless otherwise noted in Special Provision 403 - Hot Mix Asphalt Pavement, the Contractor may utilize either a 64-28 or 58-28 PGAB. The Contractor must stipulate which PGAB grading will be used to construct the entire HMA pavement structure prior to starting work. For mixtures containing greater than 20 percent but no more than 30 percent RAP the PGAB shall be PG 58-34 (or PG 52-34 when approved by the Department). The PGAB shall meet the applicable requirements of AASHTO M320 - Standard Specification for PGAB. The Contractor shall provide the Department with an approved copy of the Quality Control Plan for PGAB in accordance with AASHTO R 26 Certifying Suppliers of PGAB. The Contractor shall request approval from the Department for a change in PGAB supplier or source by submitting documentation stating the new supplier or source a minimum of 24 hours prior to the change. In the event that the PGAB supplier or source is changed, the Contractor shall make efforts to minimize the occurrence of PGAB co-mingling.

401.06 Weather and Seasonal Limitations The State is divided into two paving zones as follows:

a. Zone 1 Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.
b. Zone 2 Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.

The Contractor may place Hot Mix Asphalt Pavement for use other than a traveled way wearing course in either Zone between the dates of April 15th and November 15th, provided that the air temperature as determined by an approved thermometer (placed in the shade at the paving location) is 4°C [40°F] or higher and the area to

be paved is not frozen. The Contractor may place Hot Mix Asphalt Pavement as traveled way wearing course in Zone 1 between the dates of May 1st and the Saturday following October 1st and in Zone 2 between the dates of April 15th and the Saturday following October 15th, provided the air temperature determined as above is 10°C [50°F] or higher. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads and auxiliary lanes. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

Hot Mix Asphalt Pavement used for curb, driveways, sidewalks, islands, or other incidentals is not subject to seasonal limitations, except that conditions shall be satisfactory for proper handling and finishing of the mixture. All mixtures used for curb, driveways, sidewalks, islands, or other incidentals shall conform to section 401.04 - Temperature Requirements. Unless otherwise specified, the Contractor shall not place Hot Mix Asphalt Pavement on a wet or frozen surface and the air temperature shall be 4°C [40°F] or higher.

On all sections of overlay with wearing courses less than 25 mm [1 in] thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of May 15th and the Saturday following September 15th.

On all sections of overlay with wearing courses less than 1 inch thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of June 1st and the Saturday following September 1st if the work is to be performed, either by contract requirement, or Contractor option, during conditions defined as "night work".

401.07 Hot Mix Asphalt Plant

401.071 General Requirements HMA plants shall conform to AASHTO M156.

a. Truck Scales When the hot mix asphalt is to be weighed on scales meeting the requirements of Section 108 - Payment, the scales shall be inspected and sealed by the State Sealer as often as the Department deems necessary to verify their accuracy.

Plant scales shall be checked prior to the start of the paving season, and each time a plant is moved to a new location. Subsequent checks will be made as determined by the Resident. The Contractor will have at least ten 20 Kg [50 pound] masses for scale testing.

401.072 Automation of Batching Batch plants shall be automated for weighing, recycling, and monitoring the system. In the case of a malfunction of the printing system, the requirements of Section 401.074 c. of this specification will apply.

The batch plant shall accurately proportion the various materials in the proper order by weight. The entire batching and mixing cycle shall be continuous and shall not require any manual operations. The batch plant shall use auxiliary interlock circuits to trigger an audible alarm whenever an error exceeding the acceptable tolerance occurs. Along with the alarm, the printer shall print an asterisk on the delivery slip in the same row containing the out-of-tolerance weight. The automatic proportioning system shall be capable of consistently delivering material within the full range of batch sizes. When RAP is being used, the plant must be capable of automatically compensating for the moisture content of the RAP.

All plants shall be equipped with an approved digital recording device. The delivery slip load ticket shall contain information required under Section 108.1.3 - Provisions Relating to Certain Measurements, Mass and paragraphs a, b, and c of Section 401.073

401.073 Automatic Ticket Printer System on Automatic HMA Plant An approved automatic ticket printer system shall be used with all approved automatic HMA plants. The requirements for delivery slips for payment of materials measured by weight, as given in the following Sections, shall be waived: 108.1.3 a., 108.1.3 b., 108.1.3 c., and 108.1.3 d. The automatic printed ticket will be considered as the Weight Certificate.

The requirements of Section 108.1.3 f. - Delivery Slips, shall be met by the weigh slip or ticket, printed by the automatic system, which accompanies each truckload, except for the following changes:

a. The quantity information required shall be individual weights of each batch or total net weight of each truckload.
b. Signatures (legible initials acceptable) of Weighmaster (required only in the event of a malfunction as described in 401.074 c.).
c. The MDOT designation for the JMF.

401.074 Weight Checks on Automatic HMA Plant At least twice during each 5 days of production either of the following checks will be performed:

a. A loaded truck may be intercepted and weighed on a platform scale that has been sealed by the State Sealer of Weights and Measures within the past 12 months. The inspector will notify the producer to take corrective action on any discrepancy over 1.0%. The producer may continue to operate for 48 hours under the following conditions.

1. If the discrepancy does not exceed 1.5%; payment will still be governed by the printed ticket.
2. If the discrepancy exceeds 1.5%, the plant will be allowed to operate as long as payment is determined by truck platform scale net weight.

If, after 48 hours the discrepancy has not been addressed and reduced below 1.0%, than plant operations will cease. Plant operation may resume after the discrepancy has been brought within 1.0%.

b. Where platform scales are not readily available, a check will be made to verify the accuracy and sensitivity of each scale within the normal weighing range and to assure that the interlocking devices and automatic printer system are functioning properly.

c. In the event of a malfunction of the automatic printer system, production may be continued without the use of platform truck scales for a period not to exceed the next two working days, providing total weights of each batch are recorded on weight tickets and certified by a Licensed Public Weighmaster.

401.08 Hauling Equipment Trucks for hauling Hot Mix Asphalt Pavement shall have tight, clean, and smooth metal dump bodies, which have been thinly coated with a small amount of approved release agent to prevent the mixture from adhering to the bodies. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

All truck dump bodies shall have a cover of canvas or other water repellent material capable of heat retention, which completely covers the mixture. The cover shall be securely fastened on the truck, unless unloading.

All truck bodies shall have an opening on both sides, which will accommodate a thermometer stem. The opening shall be located near the midpoint of the body, at least 300 mm [12 in] above the bed.

401.09 Pavers Pavers shall be self-contained, self-propelled units with an activated screed (heated if necessary) capable of placing courses of Hot Mix Asphalt Pavement in full lane widths specified in the contract on the main line, shoulder, or similar construction.

On projects with no price adjustment for smoothness, pavers shall be of sufficient class and size to place Hot Mix Asphalt Pavement over the full width of the mainline travel way with a 3 m [10 ft] minimum main screed with activated extensions.

The Contractor shall place Hot Mix Asphalt Pavement on the main line with a paver using an automatic grade and slope controlled screed, unless otherwise authorized by the Department. The controls shall automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. The controls shall maintain the proper transverse slope and be readily adjustable so that transitions and superelevated curves can be properly paved. The controls shall operate from a fixed or moving reference such as a grade wire or ski type device (floating beam) with a minimum length of 10 m [30 ft], a non-contact grade control with a minimum span of 7.3 m [24 ft], except that a 12 m [40 ft] reference shall be used on Expressway projects.

The Contractor shall operate the paver in such a manner as to produce a visually uniform surface texture and a thickness within the requirements of Section 401.101 - Surface Tolerances. The paver shall have a receiving hopper with sufficient capacity for a uniform spreading operation and a distribution system to place the mixture uniformly, without segregation in front of the screed. The screed assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. Pavers with extendible screeds shall have auger extensions and tunnel extenders as per the manufacturer's recommendations, a copy of which shall be available if requested.

The Contractor shall have the paver at the project site sufficiently before the start of paving operations to be inspected and approved by the Department. The Contractor shall repair or replace any paver found worn or defective, either before or during placement, to the satisfaction of the Department. Pavers that produce an unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.
On a daily basis, the Contractor shall perform nuclear density testing across the mat being placed, prior to being compacted by equipment., at 300 mm [12 in] intervals, If the density values vary by more than 2.0% from the mean, the Contractor shall make adjustments to the screed until the inconsistencies are remedied.

Failure to replace or repair defective placement equipment may result in a letter of suspension of work and notification of a quality control violation resulting in possible monetary penalties as governed by Section 106 - Quality

401.10 Rollers Rollers shall be static steel, pneumatic tire, oscillatory, or approved vibrator type. Rollers shall be in good mechanical condition, capable of starting and stopping smoothly, and be free from backlash when reversing direction. Rollers shall be equipped and operated in such a way as to prevent the picking up of hot mixed material by the roller surface. The use of rollers, which result in crushing of the aggregate or in displacement of the HMA will not be permitted. Any Hot Mix Asphalt Pavement that becomes loose, broken, contaminated, shows an excess or deficiency of Performance Graded Asphalt Binder, or is in any other way defective shall be removed and replaced at no additional cost with fresh Hot Mix Asphalt Pavement, which shall be immediately compacted to conform to the adjacent area.

The Contractor shall repair or replace any roller found to be worn or defective, either before or during placement, to the satisfaction of the Department. Rollers that produce grooved, unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided specification densities are attained and with the following requirements:

a. On variable-depth courses, the first lift of pavement over gravel, reclaimed pavement, on irregular or milled surfaces, or on bridges, at least one roller shall be 14.5 Mg [16 ton] pneumatic-tired. Unless otherwise allowed by the Resident, pneumatic-tired rollers shall be equipped with skirting to minimize the pickup of HMA materials from the paved surface. When required by the Resident, the roller shall be ballasted to 18.1 Mg [20 ton].

b. Compaction with a vibratory or steel wheel roller shall precede pneumatic-tired rolling, unless otherwise authorized by the Department.

c. Vibratory rollers shall not be operated in the vibratory mode when checking or cracking of the mat occurs, or on bridge decks.

d. Any method, which results in cracking or checking of the mat, will be discontinued and corrective action taken.

The maximum operating speed for a steel wheel or pneumatic roller shall not exceed the manufacturer's recommendations, a copy of which shall be available if requested.

401.101 Surface Tolerances The Department will check surface tolerance utilizing the following methods :

a.) A 5 m [16 ft] straightedge or string line placed directly on the surface, parallel to the centerline of pavement.
b.) A 3 m [10 ft] straightedge or string line placed directly on the surface, transverse to the centerline of pavement.

The Contractor shall correct variations exceeding 6 mm [¼ in] by removing defective work and replacing it with new material as directed by the Department. The Contractor shall furnish a 10 foot straightedge for the Departments use.

401.11 Preparation of Existing Surface The Contractor shall thoroughly clean the surface upon which Hot Mix Asphalt Pavement is to be placed of all objectionable material. When the surface of the existing base or pavement is irregular, the Contractor shall bring it to uniform grade and cross section. All surfaces shall have a tack coat applied prior to placing any new HMA course. Tack coat shall conform to the requirements of Section 409 – Bituminous Tack Coat, Section 702 – Bituminous Material, and all applicable sections of the contract.

401.12 Hot Mix Asphalt Documentation The Contractor and the Department shall agree on the amount of Hot Mix Asphalt Pavement that has been placed each day.

401.13 Preparation of Aggregates The Contractor shall dry and heat the aggregates for the HMA to the required temperature. The Contractor shall properly adjust flames to avoid physical damage to the aggregate and to avoid depositing soot on the aggregate.

401.14 Mixing The Contractor shall combine the dried aggregate in the mixer in the amount of each fraction of aggregate required to meet the JMF. The Contractor shall measure the amount of PGAB and introduce it into the mixer in the amount specified by the JMF.

The Contractor shall produce the HMA at the temperature established by the JMF.

The Contractor shall dry the aggregate sufficiently so that the HMA will not flush, foam excessively, or displace excessively under the action of the rollers. The Contractor shall introduce the aggregate into the mixer at a temperature of not more than 14°C [25°F] above the temperature at which the viscosity of the PGAB being used is 0.150 Pa•s.

The Contractor shall store and introduce into the mixer the Performance Graded Asphalt Binder at a uniformly maintained temperature at which the viscosity of the PGAB is between 0.150 Pa•s and 0.300 Pa•s. The aggregate shall be coated completely and uniformly with a thorough distribution of the PGAB. The Contractor shall determine the wet mixing time for each plant and for each type of aggregate used.

<u>401.15 Spreading and Finishing</u> On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable, the Contractor shall spread, rake, and lute the HMA with hand tools to provide the required compacted thickness. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

On roadways with adjoining lanes carrying traffic, the Contractor shall place each course over the full width of the traveled way section being paved that day, unless otherwise noted by the Department in Section 403 - Hot Bituminous Pavement.

<u>401.16 Compaction</u> Immediately after the Hot Mix Asphalt Pavement has been spread, struck off, and any surface irregularities adjusted, the Contractor shall thoroughly and uniformly compact the HMA by rolling.

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum based release agents. Solvents designed to strip asphalt binders from aggregates will not be permitted as release agents on equipment, tools, or pavement surfaces.
The Contractor shall immediately correct any displacement occurring as a result of the reversing of the direction of a roller or from other causes to the satisfaction of the Department. Any operation other than placement of variable depth shim course that results in breakdown of the aggregate shall be discontinued. Any new pavement that shows obvious cracking, checking, or displacement shall be removed and replaced for the full lane width as directed by the Resident at no cost to the Department.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the Contractor shall thoroughly compact the HMA with mechanical vibrating compactors. The Contractor shall only use hand tamping in areas inaccessible to all other compaction equipment. On depressed areas, the Contractor may use a trench roller or cleated compression strips under a roller to transmit compression to the depressed area.

Any HMA that becomes unacceptable due to cooling, cracking, checking, segregation or deformation as a result of an interruption in mix delivery shall be removed and replaced, with material that meets contract specifications at no cost to the Department.

<u>401.17 Joints</u> The Contractor shall construct wearing course transverse joints in such a manner that minimum tolerances shown in Section 401.101 - Surface Tolerances are met when measured with a straightedge.

The paver shall maintain a uniform head of HMA during transverse and longitudinal joint construction.

The HMA shall be free of segregation and meet temperature requirements outlined in section 401.04. Transverse joints of the wearing course shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Department may allow feathered or "lap" joints on lower base courses or when matching existing base type pavements.

Longitudinal joints shall be generally straight to the line of travel, and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 75 mm [3 in] of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

Where pavement under this contract joins an existing pavement, or when the Department directs, the Contractor shall cut the existing pavement along a smooth line, producing a neat, even, vertical joint. The Department will not permit broken or raveled edges. The cost of all work necessary for the preparation of joints is incidental to related contract pay items.

401.18 Quality Control Method A, B & C The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.6 - Acceptance and this Section. The Contractor shall not begin paving operations until the Department approves the QCP in writing.

Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the QC random numbers to be used on the project shall be provided to The Resident. The Departments' random numbers for Acceptance testing shall be generated and on file with the Resident and the Project Manager. All field and plant supervisors including the responsible onsite paving supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement including, but not limited to, the following:

a. JMF(s)
b. Hot mix asphalt plant details
c. Stockpile Management (to include provisions for a minimum 2 day stockpile)
d. Make and type of paver(s)
e. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers
f. Name of QCP Administrator, and certification number
g. Name of Process Control Technician(s) and certification number(s)
h. Name of Quality Control Technicians(s) and certification number(s)
i. Mixing & transportation including process for ensuring that truck bodies are clean and free of debris or contamination that could adversely affect the finished pavement
j. Testing Plan
k. Laydown operations including longitudinal joint construction, procedures for avoiding paving in inclement weather, type of release agent to be used on trucks tools and rollers, compaction of

shoulders, tacking of all joints, methods to ensure that segregation is minimized, procedures to determine the maximum rolling and paving speeds based on best engineering practices as well as past experience in achieving the best possible smoothness of the pavement. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

l. Examples of Quality Control forms including a daily plant report and a daily paving report
m. Silo management and details (can show storage for use on project of up to 36 hours)
n. Provisions for varying mix temperature due to extraordinary conditions.
o. Name and responsibilities of the Responsible onsite Paving Supervisor.
p. Method for calibration/verification of Density Gauge
q. A note that all testing will be done in accordance with AASHTO and the Maine DOT Policies and Procedures for HMA Sampling and Testing.
r. A detailed description of RAP processing, stockpiling and introduction into the plant as well as a note detailing conditions under which the percent of RAP will vary from that specified on the JMF.
s. A detailed procedure outlining when production will be halted due to QC or Acceptance testing results.
t. A plan to address the change in PGAB source or supplier and the potential co-mingling of differing PGAB's.
u. A procedure to take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.
v. Provisions for how the QCP will be communicated to the Contractor's field personnel

The QCP shall include the following technicians together with following minimum requirements:

a. QCP Administrator - A qualified individual shall administer the QCP. The QCP Administrator must be a full-time employee of or a consultant engaged by the Contractor or paving subcontractor. The QCP Administrator shall have full authority to institute any and all actions necessary for the successful operation of the QCP. The QCP Administrator (or its designee in the QCP Administrator's absence) shall be available to communicate with the Department at all times. The QCP Administrator shall be certified as a Quality Assurance Technologist certified by the New England Transportation Technician Certification Program (NETTCP).

b. Process Control Technician(s) (PCT) shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the JMF(s). The PCT shall inspect all equipment used in mixing to assure it is operating properly and that mixing conforms to the mix design(s) and other Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one PCT is required. The Plan shall include the criteria to be utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the NETTCP.

c. Quality Control Technician(s) (QCT) shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the JMF(s). The QCT shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is required. The QCP shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a Paving Inspector by the NETTCP.

The QCP shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with the following minimum frequencies:

TABLE 2 : MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Temperature of mix	6 per day at street and plant	-
Temperature of mat	4 per day	-
%TMD (Surface)	1 per 125 Mg [125 ton] (As noted in QC Plan)	ASTM D2950
%TMD (Base)	1 per 250 Mg [250 ton] (As noted in QC Plan)	AASHTO T269
Fines / Effective Binder	1 per 500 Mg [500 ton]	AASHTO T 312*
Gradation	1 per 500 Mg [500 ton]	AASHTO T30
PGAB content	1 per 500 Mg [500 ton]	AASHTO T164 or T308
Voids at N_{design}	1 per 500 Mg [500 ton]	AASHTO T 312*
Voids in Mineral Aggregate at N_{design}	1 per 500 Mg [500 ton]	AASHTO T 312*
Rice Specific Gravity	1 per 500 Mg [500 ton]	AASHTO T209
Coarse Aggregate Angularity	1 per 5000 Mg [5000 ton]	ASTM D5821
Flat and Elongated Particles	1 Per 5000 Mg [5000 ton]	ASTM D4791
Fine Aggregate Angularity	1 Per 5000 Mg [5000 ton]	AASHTO T304

*Method A and B only

The Contractor may utilize innovative equipment or techniques not addressed by the Contract documents to produce or monitor the production of the mix, subject to approval by the Department.

The Contractor shall submit all Hot Mix Asphalt Pavement plant test reports, inspection reports and updated pay factors in writing, signed by the appropriate technician and present them to the Department by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall also retain splits of the previous 5 QC tests, with QC results enclosed for random selection and testing by The Department during QA inspections of the HMA production facility. Test results of splits that do not meet the Dispute Resolution Variance Limits in Table 10 shall trigger an investigation by the MDOT Independent Assurance Unit, and may result in that lab losing NETTCP certification and the ability to request a dispute [Section 401.223 - Process for Dispute Resolution (Methods A , B and C only)].

The Contractor shall make density test results, including randomly sampled densities, available to the Department onsite. Summaries of each day's results, including a daily paving report, shall be recorded and signed by the QCT and presented to the Department by 1:00 p.m. the next working day.

The Contractor shall have a testing lab at the plant site, equipped with all testing equipment necessary to complete the tests in Table 2. The Contractor shall locate an approved Gyratory Compactor at the plant testing lab or within 30 minutes of the plant site.

The Contractor shall fill all holes in the pavement resulting from cutting cores by the Contractor or the Department with a properly compacted, acceptable mixture no later than the <u>following working day</u>. Before filling, the Contractor shall carefully clean the holes and apply a coating of emulsified asphalt. On surface

courses, cores shall not be cut except for Verification of the Nuclear Density Gauge, at a rate not to exceed 3 per day or 2 per 1000 Mg [1000 ton] placed.
The Contractor shall monitor plant production using running average of three control charts as specified in Section 106 - Quality. Control limits shall be as noted in Table 3 below. The UCL and LCL, shall not exceed the allowable gradation control points for the particular type of mixture as outlined in Table 1 of section 703.09

TABLE 3: Control Limits

Property	UCL and LCL
Passing 4.75 mm and larger sieves	Target +/-4.0
Passing 2.36 mm sieve	Target +/-2.5
Passing .075 mm sieve	Target +/-1.2
PGAB Content*	Target +/-0.3
Voids in the Mineral Aggregate	LCL = LSL + 0.2
% Voids at N_{design}	JMF Target +/-1.3

*Based on AASHTO T 308

The Contractor shall cease paving operations whenever one of the following occurs on a lot in progress:

a. Method A: The Pay Factor for VMA, Voids @ N_d, Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.85.
b. Method B: The Pay Factor for VMA, Voids @ N_d, Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.90.
c. Method C: The Pay Factor for VMA, Voids @ $N_{d,}$ Percent PGAB, percent passing the nominal maximum sieve, percent passing 2.36 mm sieve, percent passing 0.300 mm sieve, percent passing 0.075 mm sieve or density using all Acceptance or all available Quality Control tests for the current lot is less than 0.85.
d. The Coarse Aggregate Angularity or Fine Aggregate Angularity value falls below the requirements of Table 3: Aggregate Consensus Properties Criteria in Section 703.07 for the design traffic level.
e. Each of the first 2 control tests for a Method A or B lot fall outside the upper or lower limits for VMA, Voids @ Nd, or Percent PGAB; or under Method C, each of the first 2 control tests for the lot fall outside the upper or lower limits for the nominal maximum, 2.36 mm, 0.300 mm or 0.075 mm sieves, or percent PGAB.
f. The Flat and Elongated Particles value exceeds 10% by ASTM D4791.
g. There is any visible damage to the aggregate due to over-densification other than on variable depth shim courses.
h. The Contractor fails to follow the approved QCP.

The Contractor shall notify the Resident in writing as to the reason for shutdown, as well as the proposed corrective action, by the end of the work day. Failure to do so will be treated as a second incident under 106.4.6 QCP Non-compliance. The Department will consider corrective action acceptable if the pay factor for the failing property increases, based on samples already in transit, or a verification sample is tested and the property falls within the specification limits.

In cases where the corrective action can be accomplished immediately, such as batch weight or cold feed changes, the Contractor may elect to resume production once the corrective action is completed. Additional QC testing shall be performed to verify the effectiveness of the corrective action. Subsequent occurrences of shutdown for the same property in a Lot in progress will require paving operations to cease. Paving operations

shall not resume until the Contactor and the Department determines that material meeting the Contract requirements will be produced. The Department may allow the Contractor to resume production based upon a passing QC sample, with a split of the sample being sent to the Department for verification testing. If the submitted verification sample test results fall outside the specification limits, the Contractor shall cease production until a verification sample is submitted to the Department has been tested by the Department and found to be within specification limits.
If the Contractor's control chart shows the process to be out of control (defined as a single point outside of the control limits on the running average of three chart) on any property listed in Table 3: Control Limits, the Contractor shall notify the Resident in writing of any proposed corrective action by 1:00 PM the next working day.

The Department retains the exclusive right, with the exception of the first day's production of a new JMF, to determine whether the resumption of production involves a significant change to the production process. If the Department so determines, then the current lot will be terminated, a pay factor established, and a new lot will begin.

401.19 Quality Control Method D For Items covered under Method D, the Contractor shall submit a modified QC Plan detailing, how the mix is to be placed, what equipment is to be used, and what HMA plant is to be used. All mix designs (JMF) shall be approved and verified by MDOT prior to use. Certified QC personnel shall not be required. The Contractor shall certify the mix and the test results for each item by a Certificate of Compliance.

401.20 Acceptance Method A, B & C These methods utilizes Quality Level Analysis and pay factor specifications.
For Hot Mix Asphalt Pavement designated for acceptance under Quality Assurance provisions, the Department will sample once per sublot on a statistically random basis, test, and evaluate in accordance with the following Acceptance Criteria:

TABLE 4: ACCEPTANCE CRITERIA

PROPERTIES	POINT OF SAMPLING	TEST METHOD
Gradation	Paver Hopper	AASHTO T30
PGAB Content	Paver Hopper	AASHTO T308
%TMD (Surface)	Mat behind all Rollers	AASHTO T269
%TMD (Base or Binder)	Mat behind all Rollers	AASHTO T269
Air Voids at N_d	Paver Hopper	AASHTO T 312
%VMA at N_d	Paver Hopper	AASHTO T 312
Fines to Effective Binder	Paver Hopper	AASHTO T 312
%VFB	Paver Hopper	AASHTO T 312

In the event the Department terminates a Lot prematurely but fails to obtain the required number of acceptance samples to calculate the volumetric property pay factor under the test method specified in the contract, the pay factor shall be calculated using the number of samples actually obtained from the contract. Should the number of acceptance samples taken total less than three, the resulting pay factor shall be 1.0 for volumetric properties. A minimum of three cores will be used for a density pay factor, if applicable, for quantities placed to date.

Should the Contractor request a termination of the Lot in progress prior to three acceptance samples being obtained, and the Department agrees to terminate the Lot, then the pay factor for mixture properties shall be 0.80. A minimum of three cores will be used to determine a density pay factor, if applicable, for quantities placed to date.

Lot Size For purposes of evaluating all acceptance test properties, a lot shall consist of the total quantity represented by each item listed under the lot size heading.

Sublot size - Refer to section 401.201, 401.202, and 401.203 for minimum size and number of sublots. The quantity represented by each sample will constitute a sublot.

If there is less than one-half of a sublot remaining at the end, then it shall be combined with the previous sublot. If there is more than one-half sublot remaining at the end, then it shall constitute the last sublot and shall be represented by test results. If it becomes apparent partway through a Lot that, due to an underrun, there will be insufficient mix quantity to obtain the minimum number of sublots needed, the Resident may adjust the size of the remaining sublots and select new sample locations based on the estimated quantity of material remaining in the Lot.

Acceptance Testing The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO T168 Sampling Bituminous Paving Mixtures, and the Maine DOT Policies and Procedures for HMA Sampling and Testing, which will then be transported by the Contractor to the designated MDOT Laboratory within 48 hours (except when otherwise noted in the project specific QCP due to local restrictions), as directed by MDOT in approved transport containers to be provided by the Department, unless otherwise directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance.

The Department will take the sample randomly within each sublot. Target values shall be as specified in the JMF. The Department will use Table 5 for calculating pay factors for gradation, PGAB Content, Air Voids at N_{design}, VMA, Fines to Effective Binder and VFB. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split. Upon conclusion of each lot, where there is a minimum of four sublots, results shall be examined for statistical outliers, as stated in Section 106.7.2 - Statistical Outliers.

Isolated Areas During the course of inspection, should it appear that there is an isolated area that is not representative of the lot based on a lack of observed compactive effort, excessive segregation or any other questionable practice, that area may be isolated and tested separately. An area so isolated that has a calculated pay factor below 0.80, based on three random tests shall be removed and replaced at the expense of the Contractor for the full lane width and a length not to be less than 50 m [150 ft].

Pavement Density The Department will measure pavement density using core samples tested according to AASHTO T-166. The Department will randomly determine core locations. The Contractor shall cut 6 inch diameter cores at no additional cost to the Department by the end of the working day following the day the pavement is placed, and immediately give them to the Department. Cores for Acceptance testing shall be cut such that the nearest edge is never within 0.225 m (9 inches) of any joint. The cores will be placed in a transport container provided by the Department and transported by the Contractor to the designated MDOT Lab as directed by the Department. Pre-testing of the cores will not be allowed.

At the time of sampling, the Contractor and the Department shall mutually determine if a core is damaged. If it is determined that the core(s) is damaged, the Contractor shall cut new core(s) at the same offset and within 1 m [3 ft] of the initial sample. At the time the core is cut, the Contractor and the Department will mutually determine if saw cutting of the core is needed, and will mark the core at the point where sawing is needed. The core may be saw cut by the Contractor in the Department's presence onsite, or in an MDOT Lab by The Department, without disturbing the layer being tested to remove lower layers of Hot Mix Asphalt Pavement, gravel, or RAP. No recuts are allowed at a test location after the core has been tested. Upon conclusion of each lot, density results shall be examined for statistical outliers as stated in Section 106.7.2.

On all sections of overlay with wearing courses designed to be 19 mm [3/4 in] or less in thickness, there shall be no pay adjustment for density otherwise noted in Section 403 - Hot Bituminous Pavement. For overlays designed to be 19 mm [3/4 in] or less in thickness, density shall be obtained by the same rolling train and methods as used on mainline travelway surface courses with a pay adjustments for density, unless otherwise directed by the Department.

There shall be no pay adjustment for density on shoulders unless otherwise noted in Section 403 - Hot Bituminous Pavement. Density for shoulders shall be obtained by the same rolling train and methods as used on mainline travelway, unless otherwise directed by the Department. Efforts to obtain optimum compaction will not be waived by the Department unless it is apparent during construction that local conditions make densification to this point detrimental to the finished pavement surface course.

401.201 Method A Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 5: METHOD A ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%
Fines to Effective Binder	0.9 +/-0.3
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

**For 4.75 mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4.

401.202 Method B Lot Size will be the entire production per JMF for the project and shall be divided into 3 equal sublots for Mixture Properties and 3 equal sublots for density.

TABLE 6: METHOD B ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
Air Voids	4.0% +/-2.0
Fines to Effective Binder	0.9 +/-0.3
Voids in the Mineral Aggregate	LSL from Table 1
Voids Filled with Binder	Table1 plus a 4% production tolerance for USL.
% TMD (In-place Density)	95.0% +/- 2.5%

401.203 Testing Method C Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 7: METHOD C ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-5%
Passing 0.60 mm	Target +/-4%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%
Fines to Effective Binder	0.9 +/-0.3
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

**For 4.75 mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4.

401.204 Testing Method D For hot mix asphalt items designated as Method D in Section 403 - Hot Bituminous Pavement, one sample will be taken from the paver hopper or the truck body per 250 Mg [250 ton] per pay item. The mix will be tested for gradation and PGAB content. Disputes will not be allowed. If the mix is within the tolerances listed in Table 8: Method D Acceptance Limits, the Department will pay the contract unit price. Contractor shall cut two 150 mm [6 in] cores, which shall be tested for percent TMD per AASHTO T-269 unless otherwise noted in Section 403 - Hot Bituminous Pavement. If the average for the two tests falls below 92.5% the disincentive shall apply. If the test results for each 250 Mg [250 ton] increment are outside these limits, the following deductions (Table 8b) shall apply to the HMA quantity represented by the test.

TABLE 8: METHOD D ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
% TMD (In-place Density)	95.0% +/- 2.5%

TABLE 8b Method "D" Price Adjustments

PGAB Content	-5%
2.36 mm sieve	-2%
0.30 mm sieve	-1%
0.075 mm sieve	-2%
Density	-10%

401.21 Method of Measurement The Department will measure Hot Mix Asphalt Pavement by the Mg [ton] in accordance with Section 108.1 - Measurement of Quantities for Payment.

401.22 Basis of Payment The Department will pay for the work, in place and accepted, in accordance with the applicable sections of this Section, for each type of HMA specified.

The Department will pay for the work specified in Section 401.11, for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental.

Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment.
The Department will make a pay adjustment for quality as specified below.

401.221 Pay Adjustment The Department will sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with Section 106 - Quality and Section 401.20 - Acceptance, of this Specification.

401.222 Pay Factor (PF) The Department will use the following criteria for pay adjustment using the pay adjustment factors under Section 106.7 - Quality Level Analysis:

Density If the pay factor for Density falls below 0.80 for Method A or C or 0.86 for Method B, all of the cores will be randomly re-cut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.80 for Method A or C or below 0.86 for Method B, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department, except that the Department may, when it appears that there is a distinct pattern of defective material, isolate any defective material by investigating each mix sample sublot and require removal of defective mix sample sublots only, leaving any acceptable material in place if it is found to be free of defective material. Pay factors equal to or greater than the reject level will be paid accordingly.

Gradation For HMA evaluated under Acceptance Method A or B, the Department will determine a composite pay factor (CPF) using applicable price adjustment factors “f“ from Table 9: Table of Gradation Composite “f” Factors, and Acceptance limits from Table 5: Method A Acceptance Limits, for Method A or Table 6: Method B Acceptance Limits, for Method B. The Department will not make price adjustments for gradation on Methods A and B, but will monitor them as shutdown criteria.

TABLE 9: TABLE OF GRADATION COMPOSITE " f " FACTORS (Methods A and B)

Constituent		"f" Factor			
		19 mm	12.5 mm	9.5 mm	4.75 mm
Gradation	25 mm	-	-	-	-
	19 mm	4	-	-	-
	12.5 mm		4	4	-
	9.50 mm				4
	2.36 mm	6	6	6	8
	1.18 mm				
	0.60 mm	2	2	2	2
	0.30 mm	2	2	2	2
	0.075 mm	6	6	6	8

For HMA evaluated under Acceptance Method C, the Department will determine a pay factor using acceptance limits from Table **7**: Method C Acceptance Limits.

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using the applicable Acceptance Limits.

The following variables will be used for pay adjustment:

PA = Pay Adjustment
Q = Quantity represented by PF in Mg [ton]
P = Contract price per Mg [ton]
PF = Pay Factor

Pay Adjustment Method A

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @N_d, VMA, VFB, F/B_{eff}, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.80, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 5: Method A Acceptance Limits:

PA = (density PF- 1.0)(Q)(P)x0.50

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 5: Method A Acceptance Limits as follows:

PA = (voids @ N_d PF- 1.0)(Q)(P)x0.20 + (VMA @ N_d PF- 1.0)(Q)(P)x0.20 + (PGAB PF- 1.0)(Q)(P)x0.10

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 5: Method A Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method B

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @N_d, VMA, VFB, F/B_{eff}, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.86, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.70.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 6: Method B Acceptance Limits:

PA = (density PF- 1.0)(Q)(P)x0.50

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 6: Method B Acceptance Limits as follows:

PA = (voids @ N_d PF- 1.0)(Q)(P)x0.20 + (VMA @ N_d PF- 1.0)(Q)(P)x0.20 + (PGAB PF- 1.0)(Q)(P)x0.10

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 6: Method B Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method C

The Department will use density, Performance Graded Asphalt Binder content, and the percent passing the nominal maximum, 2.36 mm, 0.300 mm and 0.075 mm sieves for the type of HMA represented in the JMF. If the PGAB content falls below 0.80, then the PGAB pay factor shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 7: Method C Acceptance Limits:

PA = (density PF- 1.0)(Q)(P)x0.50

PGAB Content and Gradation The Department will determine a pay factor using Table **7**: Method C Acceptance Limits. The Department will calculate the price adjustment for Mixture Properties as follows:

PA = (% Passing Nom. Max PF-1.0)(Q)(P)X0.05+(% passing 2.36 mm PF-1.0)(Q)(P)X0.05+(%passing 0.30 mm PF-1.0)(Q)(P)X0.05+(%passing 0.075 mm PF-1.0)(Q)(P)X0.10+(PGAB PF-1.0)(Q)(P)X0.25

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 7: Method C Acceptance Limits. The Department will not make price adjustments for VMA, Air Voids, VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method D

The Department will use density, Performance Graded Asphalt Binder content, and the screen sizes listed in Table 8b for the type of HMA represented in the JMF. If test results do not meet the Table 8 requirements, deducts as shown in Table 8b shall be applied to the quantity of mix represented by the test.

401.223 Process for Dispute Resolution (Methods A B & C only)

a. Dispute Resolution sampling At the time of Hot-Mix Asphalt sampling, the Department will obtain a split sample of each Acceptance test random sample for possible dispute resolution testing. The Contractor shall also obtain a split sample of the HMA at this same time. If the Contractor wishes to retain the option of requesting dispute testing of the initial Acceptance sample, the Contractor will test their split of the

Acceptance sample and shall report their results to the Resident, with a copy to the QA Engineer at the Central Laboratory in Bangor by 7:00 AM, on the second working day from time of QA sampling, otherwise dispute resolution will not be initiated. The Department's dispute resolution split sample will be properly labeled and stored for a period of at least two weeks, or until the sample is tested.

b. Disputing Acceptance results The Contractor may dispute the Department's Acceptance results and request (Methods A, B, & C) that the dispute resolution split sample be tested by notifying the Department's Resident and the QA Engineer at the Central Laboratory in Bangor in writing within two working days after receiving the results of the Acceptance test. The following shall be provided in the request:

- Acceptance sample reference number
- The specific test result(s) or property(ies) being disputed, and
- The complete, signed report of the Contractor's testing (In a lab certified by the NETTCP and MDOT) of their split of the Acceptance sample indicating that the variances in Table10: Dispute Resolution Variance Limits, for the specific test result(s) or property(ies) were exceeded.

c. Disputable items The Contractor may dispute any or all of the following Method A or B test results when the difference between the Department's value and the Contractor's value for that test equals or exceeds the corresponding allowable variation in Table 10: Dispute Resolution Variance Limits, PGAB content, G_{mb}, and G_{mm}. In addition, if the allowable variation for these tests is not met or exceeded, the Contractor may dispute either or both of the following material properties provided the difference between results for them equals or exceeds the corresponding allowable variation in Table 10: Voids at N_{design}, and VMA.
For Method C only: The results for PGAB content and the screen sizes used for pay adjustment may be disputed.

d. Outcome The value of any disputed result or property reported for the initial Acceptance sample shall stand if the value reported for the dispute resolution sample is not closer to the value the Contractor reported for their split sample than to the value reported for the initial Acceptance sample. If the value reported for the dispute resolution falls precisely half-way between the other two values the value reported for the dispute resolution will replace the original acceptance value. Otherwise, the value reported for the dispute resolution sample will replace the value reported for the initial Acceptance sample, and will be used to re-calculate any other affected results or properties.

TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS

PGAB Content	+/-0.4%
G_{mb}	+/-0.030
G_{mm}	+/-0.020
Voids @ N_d	+/-0.8%
VMA	+/-0.8%
Passing 4.75 mm and larger sieves	+/- 4.0%
Passing 2.36 mm to 0.60 mm sieves	+/- 3.0%
Passing 0.30 mm to 0.15	+/- 2.0 %
0.075 mm sieve	+/- 1.0%

SECTION 402 - PAVEMENT SMOOTHNESS

402.00 Smoothness Projects Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Bituminous Box

402.01 Pavement Smoothness The final pavement surface shall be evaluated for smoothness using a Class I or Class II profiler as defined by ASTM E950 (94). Smoothness measurements will be expressed in terms of the International Roughness Index (IRI) as defined by the World Bank, in units of inches/mile.

402.02 Lot Size Lot size for smoothness will be 1000 lane-meters [3000 lane-feet]. A sublot will consist of 20 lane-meters [50 lane-feet]. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If equal to or greater than one-half the normal lot size, it will be tested as a separate lot.

402.03 Acceptance Testing The Department will conduct Acceptance testing following completion of the surface course. Sections to be excluded from testing include the following:

Bridge decks and joints (no smoothness measurements will be taken within 30 m [100 ft] of bridge joints)
Acceleration and deceleration lanes
Shoulders and ramps
Side streets and roads
Within 30 m [100 ft] of transverse joints at the beginning and end of the project
Within 30 m [100 ft] of railroad crossings
Urban areas with speed limits of 50 kph [30 mph] or lower

Each lot shall have 2 measurements made in each wheel path. The average of the 4 measurements will determine the smoothness for that lot.

The smoothness measurements will be statistically evaluated for pay factors as described in Subsection 106.7 - Quality Level Analysis, using the specification limits shown below.

ACCEPTANCE LIMITS

Level	USL
I	0.95 m/km [60 in/mile]
II	1.10 m/km [70 in/mile]
III	1.25 m/km [80 in/mile]

Computation of Smoothness Pay Adjustment:

PA = (PF-1.0)(Q)(P)
where:
Q = Quantity of surface course in the Lot (excluding shoulders, side streets, bridge decks, ramps, acceleration and deceleration lanes)
PF = smoothness pay factor for the Lot
P = Contract unit price for surface pavement
PA = pay adjustment

402.04 Unacceptable Work In the event that any Lot is found to have a pay factor less than 0.80, the Contractor shall take whatever remedial action is required to correct the pavement surface in that Lot at no additional expense to the Department. Such remedial action may include but is not limited to removal and replacement of the unacceptable pavement. In the event remedial action is necessary, the Contractor shall submit a written plan to the Resident outlining the scope of the remedial work. The Resident must approve this plan before the remedial work can begin. Following remedial work, the Lot shall be retested, and will be subject to the specification limits listed above. The resulting pay factor, if within the acceptable range, will be used in the final pay adjustment. The Contractor shall pay the cost of retesting the pavement following corrective action.

Localized surface tolerance defects will be subject to the provisions outlined in Section 401.101 Surface Tolerances.

Payment will be made under:

Pay Item	Pay Unit
402.10 Incentive/Disincentive - Pavement Smoothness	Lump Sum

SECTION 403 - HOT BITUMINOUS PAVEMENT

403.01 Description This work shall consist of constructing one or more courses of bituminous pavement on an approved base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the plans or established.

The bituminous pavement shall be composed of a mixture of aggregate, filler if required, and bituminous material.

403.02 General The materials and their use shall conform to the requirements of Section 401 - Hot Mix Asphalt Pavement.

403.03 Construction The construction requirements shall be as specified in Section 401 - Hot Mix Asphalt Pavement.
In addition, hot bituminous pavement placed on bridges shall also conform to the following requirements.

a. The mixture shall be composed of aggregate, PGAB and mineral filler but no recycled asphalt pavement and placed in courses as specified in the Special Provisions.

b. The bottom course shall be placed with an approved rubber mounted bituminous paver of such type and operated in such a manner that the membrane waterproofing will not be damaged in any way.

c. The top course shall not be placed until the bottom course has cooled sufficiently to provide stability.

d. The Contractor will not be required to cut sample cores from the compacted pavement on the bridge deck.

e. After the top course has been placed, the shoulder areas shall be sealed 1 meter [3 ft] wide with two applications of an emulsified bituminous sealer meeting the requirements of Section 702.12 - Emulsified Bituminous Sealing Compound. The first application shall be pre-mixed with fine, sharp sand, similar to mortar sand, as needed to fill all voids in the mix in the area being sealed. The second application may be applied without sand. The sealer shall be carried to the curb at the gutter line in sufficient quantity to leave a bead or fillet of material at the face of the curb. The area to be sealed shall be clean, dry and the surface shall be at ambient temperature.

f. The furnishing and applying of the required quantity of sealer for the bridge shoulder areas shall be incidental to placing the hot bituminous pavement.

g. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

h. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.

403.04 Method of Measurement Hot bituminous pavement will be measured as specified in Section 401.21-Method of Measurement.

403.05 Basis of Payment The accepted quantities of hot bituminous pavement will be paid for at the contract unit price per Megagram [ton] for the bituminous mixtures, including bituminous material complete in place.

Method A, Method B, Method C and Method D shall be used for acceptance as specified in Section 401 - Hot Mix Asphalt Pavements. (See Complementary Notes, Section 403 - Hot Bituminous Pavement, for Method location).

Payment will be made under:

Pay Item		Pay Unit
403.102	Hot Mix Asphalt Pavement for Special Areas	MG [Ton]
403.206	Hot Mix Asphalt, 25 mm Nominal Maximum Size	MG [Ton]
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	MG [Ton]
403.2071	Hot Mix Asphalt , 19.0 mm Nominal Maximum Size	MG [Ton]
403.2072	Asphalt Rich Hot Mix Asphalt,19.0 mm Nominal Maximum Size (Asphalt Rich Base and Intermediate course)	MG [Ton]
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	MG [Ton]
403.2081	Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (PG 70-28)	MG [Ton]
403.209	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	MG [Ton]
403.210	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size	MG [Ton]
403.2101	Hot Mix Asphalt - 9.5 mm Nominal Maximum Size (PG 70-28)	MG [Ton]
403.2102	Asphalt Rich Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Asphalt Rich Intermediate course)	MG [Ton]
403.211	Hot Mix Asphalt (shimming)	MG [Ton]
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size	MG [Ton]

403.2131	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, (PG 70-28) (Base and Intermediate Base course)	MG [Ton]
403.2132	Asphalt Rich Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course)	MG [Ton]

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SPECIAL PROVISION
SECTION 703
AGGREGATES

The Standard Specifications, Revision of 2002 Section 700 - Materials, Subsection 703.09 HMA Mixture Composition has been revised as follows:

703.09 HMA Mixture Composition The coarse and fine aggregate shall meet the requirements of Section 703.07. The several aggregate fractions for mixtures shall be sized, graded, and combined in such proportions that the resulting composite blends will meet the grading requirements of the following tables or as otherwise specified.

TABLE 1: COMPOSITION OF MIXTURES - CONTROL POINTS

SIEVE SIZE	GRADING			
	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm	TYPE 4.75 mm
	PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE			
37.5 mm				
25 mm	100			
19 mm	90-100	100		
12.5 mm	-90	90-100	100	100
9.5 mm	-	-90	90-100	95-100
4.75 mm	-	-	-90	80-100
2.36 mm	23-49	28-58	32-67	40 - 80
1.18 mm	-	-	-	-
600 µm	-	-	-	-
300 µm	-	-	-	-
75 µm	**2-7**	**2-7**	**2-7**	**2-7**

SIEVE SIZE	RESTRICTED ZONES			
	TYPE 19 mm [¾ in]	TYPE 12.5 mm [½ in]	*TYPE 9.5 mm [⅜ in]	TYPE 4.75 mm [#40]
	PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE			
37.5 mm [1½ in]	-	-	-	-
25 mm [1 in]	-	-	-	-
19 mm [¾ in]	-	-	-	-
12.5 mm [½ in]	-	-	-	-
9.5 mm [⅜ in]	-	-	-	-
4.75 mm [No. 4]	-	-	-	-
2.36 mm [No. 8]	34.6	39.1	47.2	-
1.18 mm [No. 16]	22.3-28.3	25.6-31.6	31.6-37.6	-
600 µm [No. 30]	16.7-20.7	19.1-23.1	23.5-27.5	-
300 µm [No. 50]	13.7	15.5	18.7	-
75 µm [No. 200]	-	-	-	-

* The restricted zone is presented for information and definition of “Fine” 9.5mm mixes only.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT

Desc. Of Course	Grad Design.	Item Number	Total Thick	No. Of Layers	Comp. Notes
4" HMA Overlay Areas					
Mainline Travelway & Shoulders (As Indicated)					
Wearing	12.5 mm	403.208	1 ½"	1	1,4,7,20
Base	12.5 mm	403.213	2 ½"	1	1,4,7
1 ½" HMA Overlay Areas					
Mainline Travelway & Shoulders					
Wearing	12.5 mm	403.208	1 ½"	1	1,4,7,20
Shim	9.5 mm	403.211	variable	1/more	1,2,4,8,11,14
Sidewalks					
Wearing	9.5 mm	403.209	2"	1/more	2,3,10,11,14
Drives, Misc.					
Wearing	9.5 mm	403.209	3"	2/more	2,3,10,11,14

COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 64-28** grading.
2. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.
3. The design traffic level for mix placed shall be <0.3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
7. Section 106.6 Acceptance, (1) Method A.
8. Section 106.6 Acceptance, (2) Method B. The Contractor may request a contract modification to change to testing method "A" prior to work starting on this item.
10. Section 106.6 Acceptance, (2) Method D.
11. The combined aggregate gradation required for this item shall be classified as a 9.5mm "**fine graded "** mixture, (using the Primary Control Sieve control point) as defined in 703.09.
14. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.

20. The Contractor may place the specified HMA pavement course, not to exceed 2" inch compacted depth, over the full single travel lane width, for each production day. If this option is utilized the Contractor will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day. The Contractor will also be responsible for installing additional warning signage that clearly defines the centerline elevation differential hazard, as well as additional centerline delineation such as double RPM application, or temporary painted line. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile for the entire length of effected roadway section. On roadways with two-way traffic, the Contractor will be required to place the specified course over the full width of the mainline traveled way being paved prior to opening the sections to weekend or holiday traffic. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.

Tack Coat

A tack coat of emulsified asphalt, RS-1, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.025 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and the surface course, at a rate not to exceed 0.025 gal/yd². Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 534
PRECAST STRUCTURAL CONCRETE

The provisions of Section 534 of the Standard Specifications shall apply with the following additions and modifications:

534.01 Description
This work shall consist of furnishing and installing precast concrete stairs with handrails as indicated on the plans, details and as specified herein.

534.03 Drawings
Contractor shall submit detailed fabrication and installation shop drawings of all precast structural concrete structures to the Resident for review and approval. Drawings shall include, but not limited to, plans, elevations, dimensions, shapes, cross sections, openings, extent and location of each finish, connections, support conditions, and types of reinforcement.

534.04 Design Requirements
Concrete Specifications:
All precast concrete unit material shall conform to the requirements provided in Section 712.061 of the Standard Specifications.

Handrails Specifications:
Handrails shall be aluminum with black powder coat finish. Handrail balusters shall be ½-inch squared and spaced no more than 4-inches on center. Handrails dimensions shall conform to all local and state building codes.

Refer to Sheet C402 of the Contract Drawings for dimensions and additional information regarding the precast concrete stair.

534.08 Quality Assurance
Contractor shall comply with quality control and quality assurance requirements for Structural Precast Concrete Units provided in Section 712.061 of the Standard Specifications.

Precast concrete stairs shall be provided by a manufacturer with no less than 5 years of experience in the production of precast concrete structures.

534.21 Method of Measurement
Precast concrete stair satisfactorily placed and accepted will be measured by the total item, complete and in place, inclusive of the design of the structure, footings required to place the structure, handrails and special equipment needed to deliver and place structure.

534.22 Basis of Payment
Full installation of structure, complete and in place per the lump sum bid price.

Payment will be made under:

Pay Item		Pay Unit
534.04	Precast Concrete Stair	Lump Sum

SPECIAL PROVISION
SECTION 603
PIPE CULVERTS AND STORM DRAINS

The provisions of Section 603 of the Standard Specifications shall apply with the following additions and modifications:

603.11 Method of Measurement
Measurement shall be in accordance with Subsection 603.11.

603.12 Basis of Payment
Payment shall be in accordance with Subsection 603.12.

Payment will be made under:

Pay Item		Pay Unit
603.04	4" PVC Drain Service	Linear Foot
603.05	6" PVC Pipe	Linear Foot

SPECIAL PROVISION
SECTION 608
DETACTABLE WARNINGS
(Cast Iron)

The provisions of Section 608 of the Standard Specifications shall apply with the following additions and modifications:

Description
This work shall consist of furnishing and installing curb ramp detectable warning plates with truncated domes at the locations shown on the plans or as established by the Resident.

Materials
Detectable Warnings: The Contractor shall provide new cast iron detectable warning plates as manufactured by one of the manufacturers listed on Maine DOT's Qualified Products list of Cast Iron Detectable Warning Plates. This list can be found at:

http://www.maine.gov/mdot/tr/qpl/.

Each field shall match the width of the ramp and shall have a natural finish.

Prior to starting this work, the Contractor shall submit for approval the name of the selected supplier, manufacturer's literature describing the product, installation procedures, and routine maintenance required.

Concrete: Portland cement concrete shall meet the requirements of Section 502, Structural Concrete, Class A

Construction Requirements
Existing Concrete Curb Ramps: Existing Concrete shall be saw-cut to a dimension 4 in larger than the detectable warning plates. New concrete shall be placed in the resulting opening and finished, and the new plates set into the wet concrete, according to manufacturer recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage.

New Concrete Curb Ramps: New concrete shall be placed and finished for the ramp, and the new plates set into the wet concrete, according to manufacturer recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage

New Asphalt Ramps: Asphalt shall be saw cut and removed to provide an opening that will allow for the dimensions of the cast iron plate surrounded by an additional 4 in border on all sides of the plate. New concrete shall be placed in the resulting opening and finished, and the new plates set into the wet concrete, according to manufacturer truncated domes shall be flush with adjacent surfaces to allow proper drainage.

Method of Measurement
Detectable warning fields properly placed and accepted shall be measured for payment by the square foot. Measurement shall include actual plate area, not surrounding concrete.

Basis of Payment
Payment will be full compensation at the contract unit price for all labor, materials, and equipment required to install the detectable warning fields. This shall include surface preparation and removal of concrete or asphalt, and necessary replacement concrete. On new concrete ramps, concrete shall be paid for under separate items

Payment will be made under:

Pay Item		Pay Unit
608.26	Curb Ramp Detectable Warning Field	Square Foot

SPECIAL PROVISION
SECTION 611
MASONRY PLUG

The following items shall be considered additions to the Standard Specifications under Section 614.

611.01 Description
This work shall consist of the construction of Masonry Plugs as shown on the plans and details, and specified herein.

611.02 Materials
Materials shall meet the requirements for the various subsections of the specifications listed below:

Bricks shall conform to requirements of ASTM Standard Specifications for Sewer Brick, Designation C-32-63, Grade MA and SA.

Masonry Mortar shall conform to Section 705 of the Standard Specifications.

611.03 Construction Methods
Excavation shall be made to the required depth and width to perform the work as required.

611.04 Method of Measurement
The installation of a masonry plug into a pipe with a diameter of less than 8 inches shall be incidental to the contract and shall require no measurement or payment. The installation of a plug into a pipe with a diameter of 8 inches and larger shall be paid for on a per each basis, complete in place.

611.05 Basis of Payment
The accepted quantity of masonry plugs in pipes 8 inches and larger will be paid for at the contract unit price per each, which price shall include the cost of all excavation, bricks, mortar, flowable concrete, all labor, materials, and any equipment necessary to satisfactorily complete the work.

Payment will be made under:

Pay Item		Pay Unit
611.14	Masonry Plug ≥ 8”	Each

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
(Traffic Control)

Failure by the contractor to follow the Contracts 652 Special Provisions and Standard Specification and/or The Manual on Uniform Traffic Control Devices (MUTCD) and/or The Contractors own Traffic Control Plan will result in a violation letter and result in a reduction in payment as shown in the schedule below. The Department's Resident or any other representative of The Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Any reduction in payment under this Special Provision will be in addition to forfeiting payment of maintenance of traffic control devices for that day.

ORIGINAL CONTRACT AMOUNT				
From	**Up to and**	**Amount of Penalty Damages per Violation**		
More Than	**Including**	**1st**	**2nd**	**3rd & Subsequent**
$0	$1,000,000	$250	$500	$1,250
$1,000,000	$2,000,000	$500	$1,000	$2,500
$2,000,000	$4,000,000	$1,000	$2,000	$5,000
$4,000,000	and more	$2,000	$4,000	$10,000

February 4, 2011
Supersedes February 27, 2003

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

Approaches Approach signing shall include the following signs as a minimum. Field conditions may warrant the use of additional signs as determined by the Resident.

Road work Next x Miles
Road work 500 Feet
End Road Work

Work Area At each work site, signs and channelizing devices shall be used as directed by the Resident. Signs include:

Road Work xxxx [1]
One Lane Road Ahead
Flagger Sign

Other typical signs include:

Be Prepared to Stop
Low Shoulder
Bump
Pavement Ends

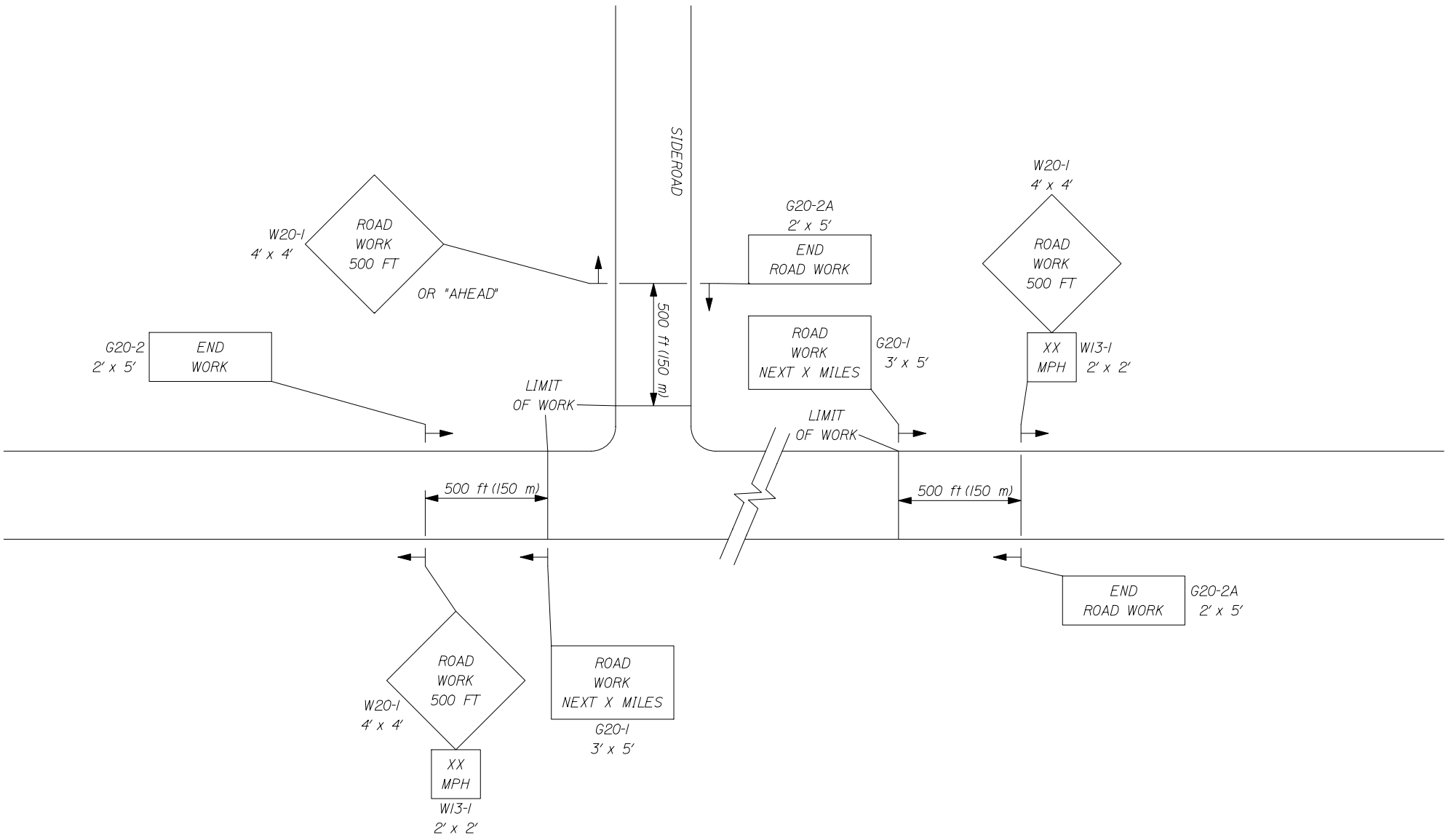
The above lists of Approach signs and Work Area signs are representative of the contract Requirements. Other sign legends may be required.

The Contractor shall conduct their operations in such a manner that the roadway will not be restricted to one lane for more than 800 m [2,500 ft] at each work area. To encourage quality paving in warm-weather conditions, the length can be extended to 4,000 ft depending on the traffic impacts. Where more than one work area restricts traffic to one lane operation, these work areas shall be separated by at least 1.6 km [1 mile] of two way operation.

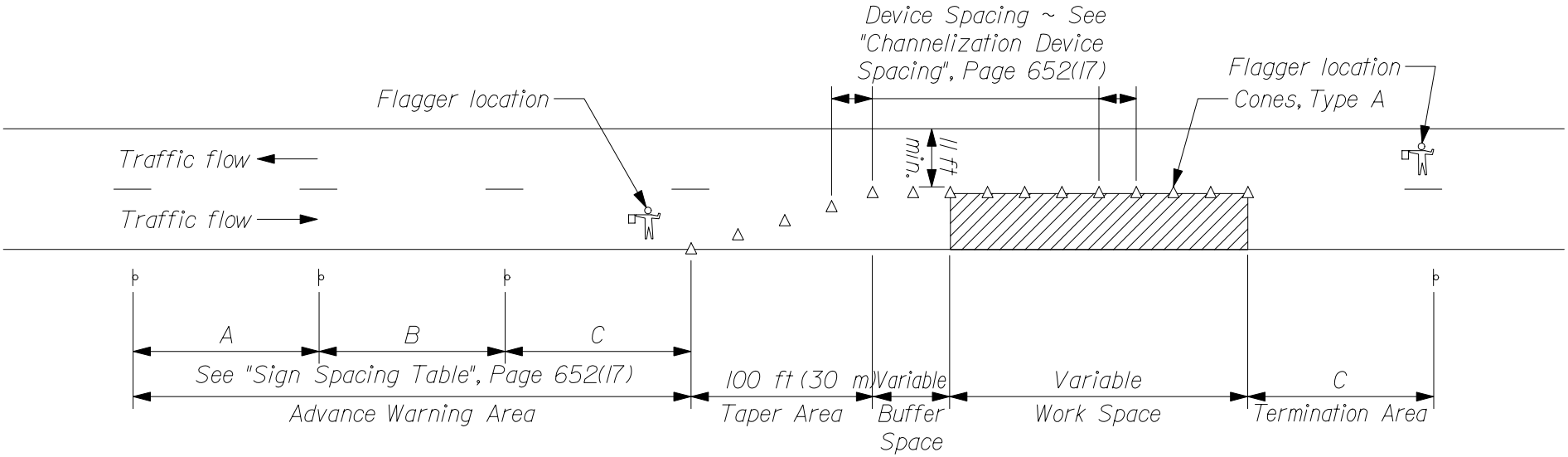
Temporary Centerline A temporary centerline shall be placed each day on all new pavement to be used by traffic. The temporary centerline, when specified of reflectorized traffic paint, shall conform to the standard marking patterns used for permanent markings.

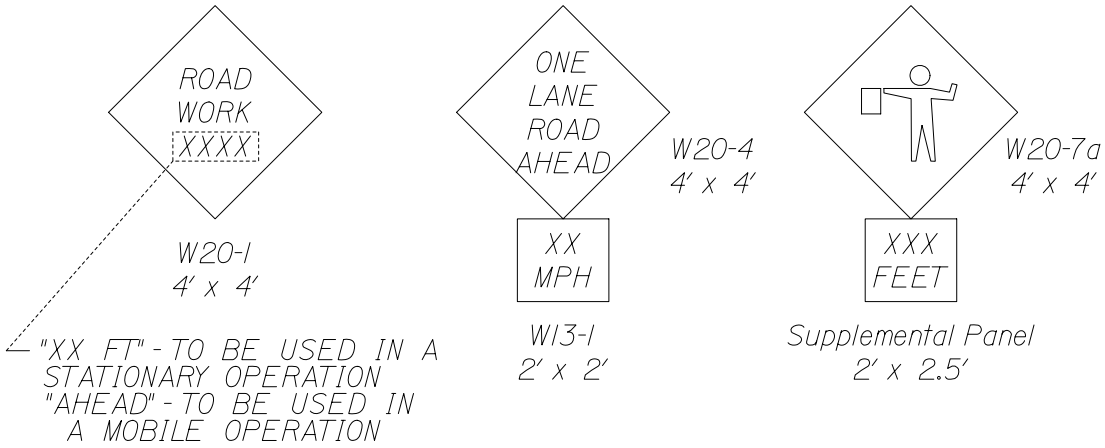
Failure to apply a temporary centerline daily will result in a Traffic Control Violation and suspension of paving operations until temporary markers are applied to all previously placed pavement.

[1] "Road Work Ahead" to be used in mobile operations and "Road Work xx ft" to be used in stationary operations as directed by the Resident.



-- PROJECT APPROACH SIGNING --
TWO WAY TRAFFIC





TYPICAL APPLICATION: TWO - WAY, TWO LANE ROADWAY, CLOSING ONE LANE USING FLAGGERS

TYPE OF TAPER	TAPER LENGTH (L)*
Merging Taper	at least L
Shifting Taper	at least 0.5L
Shoulder Taper	at least 0.33L
One-Lane, Two-Way Traffic Taper	100 ft (30 m) maximum
Downstream Taper	100 ft (30 m) per lane

* Formulas for L are as follows:

For speed limits of 40 mph (60 km/h) or less:

$L = \frac{WS^2}{60}$ $\quad (L = \frac{WS^2}{155})$

For speed limits of 45 mph (70 km/h) or greater:

$L = WS$ $\quad (L = \frac{WS}{1.6})$

* Formulas for L are as follows:

A minimum of 5 channelization devices shall be used in the taper.

CHANNELIZATION DEVICE SPACING

The spacing of channelization devices shall not exceed a distance equal to 1.0 times the speed limit in mph when used for taper channelization, and a distance in feet of 2.0 times the speed limit in mph when used for tangent channelization.

SIGN SPACING TABLE			
Road Type	Distance Between Signs**		
	A	B	C
Urban 30 mph (50 km/h) or less	100 (30)	100 (30)	100 (30)
Urban 35 mph (55 km/h) and greater	350 (100)	350 (100)	350 (100)
Rural	500 (150)	500 (150)	500 (150)
Expressway / Urban Parkway	2,640 (800)	1,500 (450)	1000 (300)

**Distances are shown in feet (meters).

GENERAL NOTES;

1. Final placement of signs and devices may be changed to fit field conditions as approved by the Resident.

SUGGESTED BUFFER ZONE LENGTHS

Speed (mph)	Length (feet)	Speed (mph)	Length (feet)
20	115	40	325
25	155	45	360
30	200	50	425
35	250	55	495

April 17, 2007
Supersedes May 10, 2006

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
Construction Sign Sheeting Material

Super high intensity fluorescent retroreflective sheeting, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic), is required for all construction signs.

SPECIAL PROVISION
SECTION 656
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

The provisions of Section 656 of the Standard Specifications shall apply with the following additions and modifications:

The following is added to Section 656 regarding Project Specific Information and Requirements. All references to the Maine Department of Transportation Best Management Practices for Erosion and Sedimentation Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The latest version is dated "February 2008" and is available at:

http://www.maine.gov/mdot/env/documents/pdf/bmp2008/BMP2008full.pdf

Procedures specified shall be according to the BMP Manual unless stated otherwise. Project Specific Information and Requirements

The following information and requirements apply specifically to this Project. The temporary soil erosion and water pollution control measures associated with this work shall be addressed in the Soil Erosion and Water Pollution Control Plan (SEWPCP.)

1. Newly disturbed earth shall be mulched by the end of each workday. Mulch shall be maintained on a daily basis.

2. The SEWPCP shall describe the location and method of temporary erosion and sediment control for existing and proposed catch basins, outlet areas and culvert inlets and outlets.

3. If water is flowing within the drainage system, the water shall be diverted to a stable area or conduit and work shall be conducted in the dry. The Contractor's plan shall address when and where the diversions will be necessary.

4. Dust control items other than those under Standard Specification 637, if applicable, shall be included in the plan.

5. Permanent slope stabilization measures shall be applied within one week of the last soil disturbance. Temporary slope stabilization is required on a daily basis.

6. Culvert inlet and outlet protection shall be installed within 48 hours of culvert installation, or prior to a storm event, whichever is sooner.

7. Temporary winter stabilization must be used between November 1st and April 1st or outside of that time period if the ground is frozen or snow covered. Temporary winter stabilization involves, at a minimum, covering all disturbed soils and seeded ground that is not Acceptable Work with an approved method. If temporary winter stabilization practices are used then spring procedures for permanent stabilization shall also be described in the SEWPCP. Use of these methods for over-winter temporary erosion control will be incidental to the contract.

SPECIAL PROVISION
SECTION 703
AGGREGATES

The Standard Specifications, November 2014 Edition Section 700 - Materials, Subsection 703.09 HMA Mixture Composition has been revised as follows:

703.09 HMA Mixture Composition The coarse and fine aggregate shall meet the requirements of Section 703.07. The several aggregate fractions for mixtures shall be sized, graded, and combined in such proportions that the resulting composite blends will meet the grading requirements of the following tables or as otherwise specified.

TABLE 1: COMPOSITION OF MIXTURES - CONTROL POINTS

SIEVE SIZE	GRADING			
	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm	TYPE 4.75 mm
	PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE			
37.5 mm				
25 mm	100			
19 mm	90-100	100		
12.5 mm	-90	90-100	100	100
9.5 mm	-	-90	90-100	95-100
4.75 mm	-	-	-90	80-100
2.36 mm	23-49	28-58	32-67	40 - 80
1.18 mm	-	-	-	-
600 µm	-	-	-	-
300 µm	-	-	-	-
75 µm	**2-7**	**2-7**	**2-7**	**2-7**

SIEVE SIZE	RESTRICTED ZONES			
	TYPE 19 mm [¾ in]	TYPE 12.5 mm [½ in]	*TYPE 9.5 mm [⅜ in]	TYPE 4.75 mm [#40]
	PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE			
37.5 mm [1½ in]	-	-	-	-
25 mm [1 in]	-	-	-	-
19 mm [¾ in]	-	-	-	-
12.5 mm [½ in]	-	-	-	-
9.5 mm [⅜ in]	-	-	-	-
4.75 mm [No. 4]	-	-	-	-
2.36 mm [No. 8]	34.6	39.1	47.2	-
1.18 mm [No. 16]	22.3-28.3	25.6-31.6	31.6-37.6	-
600 µm [No. 30]	16.7-20.7	19.1-23.1	23.5-27.5	-
300 µm [No. 50]	13.7	15.5	18.7	-
75 µm [No. 200]	-	-	-	-

* The restricted zone is presented for information and definition of “Fine” 9.5mm mixes only.

SPECIAL PROVISION
SECTION 803
SEWER MAINS AND SERVICES

The following items shall be considered additions to the Standard Specifications under Section 803.

803.01 Description

If a sewer service must be relocated due to a field determined conflict, Contractor shall provide excavation, trenching and backfill to satisfactorily relocate the service with the approval of the Engineer. The Contractor shall be responsible for locating and reconnecting existing sewer laterals to the existing sewer. All connections shall be made in conformance with the Maine State Plumbing Code. The Contractor shall install locating/warning tape over the centerline of all sanitary and storm sewer laterals as required by City ordinance. Both a green warning tape and a number 10 or 12 gauge single strand coated wire shall be installed at a maximum of 24 inches below finish surface grade for the entire length of the pipe. Magnetic warning tape may be used in place of the separate warning tape and wire.

803.02 Test Pits

Contractor shall perform test pit excavation in locations identified on the Drawings to locate underground utilities. Contractor shall excavate in a manner to allow an effective examination of the underground utility as required to collect measurements and observations to complete a test pit log. Upon completion, the test pit excavation shall be backfilled, compacted and the surface shall be repaired to match existing conditions.

803.02 Method of Measurement

Test pits will be measured per each, complete in place.

Sewer service relocation will be measured by the linear foot complete in place.

803.03 Basis of Payment

The accepted quantity of test pits will be paid for at the contract unit price per each. Payment shall be full compensation for furnishing all labor, materials and equipment necessary for excavation, backfilling, surface replacement, disposal of materials, and protection of utilities.

The accepted quantity of service relocation will be paid for at the contract unit price per linear foot of pipe relocated, complete in place. The amount bid for each service shall be full compensation for furnishing all labor, equipment, tools, adaptors, reducers, and materials necessary to satisfactorily connect all services. The cost of locating/warning tape including installation shall be considered incidental to the appropriate lateral. Payment for trench excavation, with the exception of structural rock excavation, pipe bedding materials, backfill material and backfilling shall be included in this item for payment.

Payment will be made under:

Pay Item		Pay Unit
803.01	Test Pit	Each
803.136	Sewer Service Relocation	Linear Foot

SPECIAL PROVISION
SECTION 812
SEWER MANHOLES

The following items shall be considered additions to the Standard Specifications under Section 812.

812.01 Description
This work shall consist of the adjusting all sewer manholes to grade.

Adjusting manholes to grade shall include removing and resetting frame and cover and fully reconstructing riser brick or precast risers to install frame at finish grade.

812.02 Construction Requirements
Adjusting manholes to grade shall include removing and resetting frame and cover and fully reconstructing riser brick or precast risers to install frame at finish grade.

812.03 Method of Measurement
Existing manholes to be adjusted or rebuilt will be measured per each unit complete in place.

812.04 Basis of Payment
The accepted quantities of manholes will be paid for at the contract unit price each of the respective types complete in place. Payment for adjusting manholes shall include furnishing all materials including new blocks, bricks, mortar, metal tops, and covers where required. There will be no payment for cleaning, adjusted, manholes.

Payment will be made under:

Pay Item		Pay Unit
812.162	Adjust Sewer Manhole to Grade	Each

SPECIAL PROVISION
SECTION 823
CURB STOPS AND GATE VALVES

The following items shall be considered additions to the Standard Specifications under Section 823.

823.01 Description
This work shall consist of the following:

- Relocating valve boxes and curb stops; and
- Adjusting valve boxes and curb stops to grade.

All connections shall be made in conformance with the Maine State Plumbing Code. All new service lines shall match the size of the existing lines. The Contractor shall be responsible for locating and reconnecting to the existing water main. The Contractor shall install locating/warning tape over the water service as required by City ordinance. Relocation and adjustment of valve boxes and curb stops shall be performed in accordance with Auburn Water and Sewer District requirements.

The Contractor shall coordinate and attend a Pre-Construction meeting with the Auburn Water and Sewer District, and provide all necessary notifications to the Water District and the City during construction.

823.02 Materials
All materials must comply with the current Auburn Water and Sewer District specifications, details and requirements.

823.03 Method of Measurement:
The relocation of curb stops and gate valves will be measured per each. Adjustment of valve boxes and curb stops to grade shall be considered incidental to the contract and no separate measurements shall be made.

823.04 Basis of Payment
The accepted quantities of curb stop and gate valve relocation will be paid for at the contract unit price per each complete and in place. The bid unit price for relocation shall be full compensation for furnishing all labor, equipment, tools, adaptors, reducers, and materials necessary to satisfactorily relocate and reconnect services. The cost of locating/warning tape including installation shall be considered incidental. Payment for trench excavation, with the exception of structural rock excavation, pipe bedding materials, backfill materials and backfilling shall be included in this item for payment.

Payment will be made under:

Pay Item		Pay Unit
823.334	Relocating Curb Stop or Gate Value	Each

SPECIAL PROVISION
SECTION 824
FIRE HYDRANTS

The following items shall be considered additions to the Standard Specifications under Section 824.

824.01 Description
This work shall consist of the following:

- Installing hydrant relocations, including removal, relocation, installation, new pipe and connection to water main;
- Demolishing existing hydrant; and
- Furnishing and installing new hydrant including installation, new pipe and connection to water main.

The Contractor shall coordinate and attend a Pre-Construction meeting with the Auburn Water and Sewer District, and provide all necessary notifications to the Water District and the City during construction.

824.02 Materials
All materials must comply with the current Auburn Water and Sewer District specifications, details and requirements.

824.03 Method of Measurement:
Hydrants shall be measured by each unit demolished, installed or relocated.

824.04 Basis of Payment
The accepted quantities of hydrant demolition, furnish and installation, and relocation shall be paid for at the contract unit price each complete in place. The amount bid shall be full compensation for furnishing all labor, equipment, tools, adaptors, and materials necessary to satisfactorily relocate or replace the water services impacted by the construction. The cost of coordination with the Auburn Water and Sewer District and the City of Auburn is included in this pay item. Trench excavation, providing bedding materials, and all other effort necessary to satisfactorily complete the work shall be included. The cost of insulation shall be incidental to the associated pay items. Pipe bedding and backfilling shall also be incidental to each pay item. The cost of locating/warning tape including installation shall be considered incidental. The cost for disinfection and testing shall be considered incidental to the pay item. The Auburn Water and Sewer District will provide shutdown and reactivation of the water main.

Payment will be made under:

Pay Item		Pay Unit
824.29	Demolishing Hydrant	Each
824.30	Fire Hydrant	Each
824.321	Removing and Relocating Hydrant	Each

SPECIAL PROVISION
SECTION 830
WATER MAIN AND SERVICES

The following items shall be considered additions to the Standard Specifications under Section 830.

830.01 Description
This work shall consist of the following:

- Replacing water service lines due to a field determined utility conflict and as directed by the Engineer

All connections shall be made in conformance with the Maine State Plumbing Code. All new service lines shall match the size of the existing lines. The Contractor shall be responsible for locating and reconnecting to the existing water main. The Contractor shall install locating/warning tape over the water service as required by City ordinance. The Contractor shall provide all necessary labor, equipment, tools, and materials necessary to complete the water service replacements as directed by the Auburn Water and Sewer District upon test pit results.

The Contractor shall coordinate and attend a Pre-Construction meeting with the Auburn Water and Sewer District, and provide all necessary notifications to the Water District and the City during construction.

830.02 Materials
All materials must comply with the current Auburn Water and Sewer District specifications, details and requirements.

830.03 Method of Measurement:
The water service replacements will be measured per linear foot of replacement as directed by the Engineer.

830.04 Basis of Payment
The accepted quantities of water service replacement will be paid for at the contract unit price per linear foot complete and in place. The bid unit price for service replacement shall be full compensation for furnishing all labor, equipment, tools, adaptors, reducers, and materials necessary to satisfactorily replace and reconnect services. The cost of locating/warning tape including installation shall be considered incidental to the appropriate lateral. Payment for trench excavation, with the exception of structural rock excavation, pipe bedding materials, backfill materials and backfilling shall be included in this item for payment.

Payment will be made under:

Pay Item		Pay Unit
830.102	Water Service Replacement	Linear Foot

APPENDIX A TO DIVISION 100

SECTION 1 - BIDDING PROVISIONS

A. Federally Required Certifications By signing and delivering a Bid, the Bidder certifies as provided in all certifications set forth in this Appendix A - Federal Contract Provisions Supplement including:

- Certification Regarding No Kickbacks to Procure Contract as provided on this page 1 below.
- Certification Regarding Non-collusion as provided on page 1 below.
- Certification Regarding Non-segregated Facilities as provided by FHWA Form 1273, section III set forth on page 21 below.
- "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion" as provided by FHWA Form 1273, section XI set forth on page 32 below.
- "Certification Regarding Use of Contract Funds for Lobbying" as provided by FHWA Form 1273, section XII set forth on page 35 below.

Unless otherwise provided below, the term "Bidder", for the purposes of these certifications, includes the Bidder, its principals, and the person(s) signing the Bid. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above.

CERTIFICATION REGARDING NO KICKBACKS TO PROCURE CONTRACT Except expressly stated by the Bidder on sheets submitted with the Bid (if any), the Bidder hereby certifies, to the best of its knowledge and belief, that it has not:

(A) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other then a bona fide employee working solely for me) to solicit or secure this contract;

(B) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or;

C) paid, or agreed to pay, to any firm, organization, or person (other than a bona fide employee working solely for me) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract;

By signing and submitting a Bid, the Bidder acknowledges that this certification is to be furnished to the Maine Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this contract in anticipation of federal aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

CERTIFICATION REGARDING NONCOLLUSION Under penalty of perjury as provided by federal law (28 U.S.C. §1746), the Bidder hereby certifies, to the best of its knowledge and belief, that:

the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with the Contract.

For a related provisions, see Section 102.7.2 (C) of the Standard Specifications - "Effects of Signing and Delivery of Bids" - "Certifications", Section 3 of this Appendix A entitled "Other Federal Requirements" including section XI - "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion" and section XII. - "Certification Regarding Use of Contract Funds for Lobbying."

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B. Bid Rigging Hotline To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

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SECTION 2 - FEDERAL EEO AND CIVIL RIGHTS REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 2 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Nondiscrimination & Civil Rights - Title VI The Contractor and its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate. The Contractor and subcontractors shall comply with Title VI of the Civil Rights Act of 1964, as amended, and with all State of Maine and other Federal Civil Rights laws.

For related provisions, see Subsection B - "Nondiscrimination and Affirmative Action - Executive Order 11246" of this Section 2 and Section 3 - Other Federal Requirements of this "Federal Contract Provisions Supplement" including section II - "Nondiscrimination" of the "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273.

B. Nondiscrimination and Affirmative Action - Executive Order 11246 Pursuant to Executive Order 11246, which was issued by President Johnson in 1965 and amended in 1967 and 1978, this Contract provides as follows.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The Contractor shall

document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

Ensure and maintain a working environment free of harassment, intimidations, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all forepersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and to maintain a record of the organization's responses.

Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

Provide immediate written notification to the Department's Civil Rights Office when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Design-Builder's efforts to meet its obligations.

Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under B above.

Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligation; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review

of these items with on-site supervisory personnel such as Superintendents, General Forepersons, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractor's and Subcontractors with whom the Contractor does or anticipates doing business.

Direct its recruitment efforts, both orally and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later that one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screenings, procedures, and test to be used in the selection process.

Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth, both on the site and in other areas of a Contractor's workforce.

Validate all tests and other selection requirements.

Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor's and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.

Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

C. Goals for Employment of Women and Minorities Per Executive Order 11246, craft tradesperson goals are 6.9% women and .5% minorities employed. However, goals may be

adjusted upward at the mutual agreement of the Contractor and the Department. Calculation of these percentages shall not include On-the-Job Training Program trainees, and shall not include clerical or field clerk position employees.

For a more complete presentation of requirements for such Goals, see the federally required document "Goals for Employment of Females and Minorities" set forth in the next 6 pages below.

****

Start of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

§60-4.2 Solicitations

(d) The following notice shall be included in, and shall be part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of $10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)

1. The Offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

Goals for female participation in each trade 6.9%

Goals for minority participation for each trade
Maine
001 Bangor, ME 0.8%
Non-SMSA Counties (Aroostook, Hancock, Penobscot, Piscataquis, Waldo, Washington)

002 Portland-Lewiston, ME
SMSA Counties: 4243 Lewiston-Auburn, ME 0.5%
(Androscoggin)

6403 Portland, ME 0.6%
(Cumberland, Sagadahoc)

Non-SMSA Counties: 0.5%
(Franklin, Kennebec, Knox, Lincoln, Oxford, Somerset, York)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs

construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be in violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated started and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

   c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department form 941;

   d. "Minority" includes:
      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of the North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor, is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors for Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical areas where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specific.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant, thereto.

6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of

employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as expensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, when possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment sources or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.

   f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female

employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment, efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing prior to the date for the acceptance of applications for apprenticeship or the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of

solicitation to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a through p. of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program and reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions take on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both make and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, specific minority group of women is underutilized.)

10. The Contractor shall not use the goals and timetables or affirmative action even through the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementation regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the

requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.6.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location sat which the work was performed. Records be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

End of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

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D. Disadvantaged Business Enterprise (DBE) Requirements The Department has established an annual Disadvantaged Business Enterprise goal to be achieved through race neutral means. This goal will be adjusted periodically and will be provided by Supplemental Provision. The Contractor shall comply with all provisions of this section regarding DBE participation and the Department's latest version of the Disadvantaged Business Enterprise Program Manual, said Manual being incorporated herein by reference. In the case of conflict between this Contract and said Manual, this Contract shall control. The Department reserves the right to adjust DBE goals on a project-by-project basis by addendum.

Policy. It is the Department's policy that DBEs as defined in 23 CFR Part 26 and referenced in the Transportation Equity Act for 21st Century of 1998, as amended from the Surface Transportation Uniform Relocation Assistance Act of 1987, and the Intermodal Surface Transportation Efficiency Act of 1991. The intent hereto remains to provide the maximum opportunity for DBEs to participate in the performance of contracts financed in whole or in part with federal funds.

The Department and its Contractors shall not discriminate on the basis of race, color, national origin, ancestry, sex, age, or disability in the award and performance of DOT assisted contracts.

Disadvantaged Business Enterprises are those so certified by the Maine Department of Transportation Civil Rights Office prior to bid opening date.

The Department has determined that elements of a good faith effort to meet the contract goal include but are not limited to the following:

1. Whether the Contractor advertised in general circulation, trade association, and minority/women's-focus media concerning the subcontracting opportunities;

2. Whether the Contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;

3. Whether the Contractor followed up on initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested;

4. Whether the Contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals;

5. Whether the Contractor provided interested DBEs with adequate information about the plans, specification and requirements of the contract;

6. Whether the Contractor negotiated in good faith with interested DBEs, not rejecting the DBE as unqualified without sound reasons based on a thorough investigation of their capabilities;

7. Whether the Contractor made efforts to assist interested DBEs with other appropriate technical/financial assistance required by the Department or Contractor;

8. Whether the Contractor effectively used the services of available minority/women's community organizations, minority/women's business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBEs.

Substitutions of DBEs. The following may be acceptable reasons for Civil Rights Office approval of such a change order:

- The DBE defaults, voluntarily removes itself or is over-extended;
- The Department deletes portions of the work to by performed by the DBE.

It is not intended that the ability to negotiate a more advantageous contract with another certified DBE be considered a valid basis for such a change in DBE utilization once the DBE Bid Submission review has been passed. Any requests to alter the DBE commitment must be in writing and included with the change order.

Failure to carry out terms of this Standard Specification shall be treated as a violation of this contract and will result in contract sanctions which may include withholding of partial payments totaling the creditable dollars amount which would have been paid for said DBE participation, termination of this contract or other measures which may affect the ability of the Contractor to obtain Department contracts.

Copies of the Maine Department of Transportation's DBE Program may be obtained from:

Maine Department of Transportation
Civil Rights Office
#16 State House Station
Augusta, Maine 04333-0016
tel. (207) 624-3519

Quarterly Reporting Requirement. The Contractor must submit Semi-annual reports of actual dollars paid to Disadvantaged Business Enterprises (DBE's) on this Project to the MaineDOT Civil Rights Office by the end of the third week of April and October for the period covering the preceding six months considered Federal Fiscal Year periods. The reports will be submitted directly to the Civil Rights Office on the form provided in the latest version of the DBE Program Manual. Failure to submit the report by the deadline may result in a withholding of approval of partial payment estimates by the Department.

SECTION 3 - OTHER FEDERAL REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 3 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Buy America

If the cost of products purchased for permanent use in this project which are manufactured of steel, iron or the application of any coating to products of these materials exceeds 0.1 percent of the contract amount, or $2,500.00, whichever is greater, the products shall have been manufactured and the coating applied in the United States. The coating materials are not subject to this clause, only the application of the coating. In computing that amount, only the cost of the product and coating application cost will be included.

Ore, for the manufacture of steel or iron, may be from outside the United States; however, all other manufacturing processes of steel or iron must be in the United States to qualify as having been manufactured in the United States.

United States includes the 50 United States and any place subject to the jurisdiction thereof.

Products of steel include, but are not limited to, such products as structural steel, piles, guardrail, steel culverts, reinforcing steel, structural plate and steel supports for signs, luminaries and signals.

Products of iron include, but are not limited to, such products as cast iron grates.

Application of coatings include, but are not limited to, such applications as epoxy, galvanized and paint.

To assure compliance with this section, the Contractor shall submit a certification letter on its letterhead to the Department stating the following:

> "This is to certify that products made of steel, iron or the application of any coating to products of these materials whose costs are in excess of $2,500.00 or 0.1 percent of the original contract amount, whichever is greater, were manufactured and the coating, if one was required, was applied in the United States."

B. Materials

a. Convict Produced Materials References: 23 U.S.C. 114(b)(2), 23 CFR 635.417

Applicability: FHWA's prohibition against the use of convict material only applies to Federal-aid highways. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987.

Materials obtained from prison facilities (e.g., prison industries) are subject to the same requirements for Federal-aid participation that are imposed upon materials acquired from other sources. Materials manufactured or produced by convict labor will be given no preferential treatment.

The preferred method of obtaining materials for a project is through normal contracting procedures which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source, public or private, from which the materials are to be obtained (23 CFR 635.407). Prison industries are prohibited from bidding on projects directly (23 CFR 635.112e), but may act as material supplier to construction contractors.

Prison materials may also be approved as State-furnished material. However, since public agencies may not bid in competition with private firms, direct acquisition of materials from a prison industry for use as State-furnished material is subject to a public interest finding with the Division Administrator's concurrence (23 CFR 635.407d). Selection of materials produced by convict labor as State-furnished materials for mandatory use should be cleared prior to the submittal of the Plans Specifications & Estimates (PS&E).

b. Patented/Proprietary Products References: 23 U.S.C. 112, 23 CFR 635.411

FHWA will not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- the item is purchased or obtained through competitive bidding with equally suitable unpatented items,
- the STA certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or
- the item is used for research or for a special type of construction on relatively short sections of road for experimental purposes. States should follow FHWA's procedures for "Construction Projects Incorporating Experimental Features" (expermnt.htm) for the submittal of work plans and evaluations.

The primary purpose of the policy is to have competition in selection of materials and allow for development of new materials and products. The policy further permits materials and products that are judged equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they shall be bid as alternatives with all, or at least a

reasonable number of, acceptable materials or products listed; and the Division Administrator may approve a single source if it can be found that its utilization is in the public interest.

Trade names are generally the key to identifying patented or proprietary materials. Trade name examples include 3M, Corten, etc. Generally, products identified by their brand or trade name are not to be specified without an "or equal" phrase, and, if trade names are used, all, or at least a reasonable number of acceptable "equal" materials or products should be listed. The licensing of several suppliers to produce a product does not change the fact that it is a single product and should not be specified to the exclusion of other equally suitable products.

c. State Preference References: 23 U.S.C. 112, 23 CFR 635.409

Materials produced within Maine shall not be favored to the exclusion of comparable materials produced outside of Maine. State preference clauses give particular advantage to the designated source and thus restrict competition. Therefore, State preference provisions shall not be used on any Federal-aid construction projects.

This policy also applies to State preference actions against materials of foreign origin, except as otherwise permitted by Federal law. Thus, States cannot give preference to in-State material sources over foreign material sources. Under the Buy America provisions, the States are permitted to expand the Buy America restrictions provided that the STA is legally authorized under State law to impose more stringent requirements.

d. State Owned/Furnished/Designated Materials References: 23 U.S.C. 112, 23 CFR 635.407

Current FHWA policy requires that the contractor must furnish all materials to be incorporated in the work, and the contractor shall be permitted to select the sources from which the materials are to be obtained. Exceptions to this requirement may be made when there is a definite finding, by MaineDOT and concurred in by Federal Highway Administration's (FHWA) Division Administrator, that it is in the public interest to require the contractor to use materials furnished by the MaineDOT or from sources designated by MaineDOT. The exception policy can best be understood by separating State-furnished materials into the categories of manufactured materials and local natural materials.

Manufactured Materials When the use of State-furnished manufactured materials is approved based on a public interest finding, such use must be made mandatory. The optional use of State-furnished manufactured materials is in violation of our policy prohibiting public agencies from competing with private firms. Manufactured materials to be furnished by MaineDOT must be acquired through competitive bidding, unless there is a public interest finding for another method, and concurred in by FHWA's Division Administrator.

Local Natural Materials When MaineDOT owns or controls a local natural materials source such as a borrow pit or a stockpile of salvaged pavement material, etc., the materials may be designated for either optional or mandatory use; however, mandatory use will require a public interest finding (PIF) and FHWA's Division Administrator's concurrence.

In order to permit prospective bidders to properly prepare their bids, the location, cost, and any conditions to be met for obtaining materials that are made available to the contractor shall be stated in the bidding documents.

Mandatory Disposal Sites Normally, the disposal site for surplus excavated materials is to be of the contractor's choosing; although, an optional site(s) may be shown in the contract provisions. A mandatory site shall be specified when there is a finding by MaineDOT, with the concurrence of the Division Administrator, that such placement is the most economical or that the environment would be substantially enhanced without excessive cost. Discussion of the mandatory use of a disposal site in the environmental document may serve as the basis for the public interest finding.

Summarizing FHWA policy for the mandatory use of borrow or disposal sites:

- mandatory use of either requires a public interest finding and FHWA's Division Administrator's concurrence,
- mandatory use of either may be based on environmental consideration where the environment will be substantially enhanced without excessive additional cost, and
- where the use is based on environmental considerations, the discussion in the environmental document may be used as the basis for the public interest finding.

Factors to justify a public interest finding should include such items as cost effectiveness, system integrity, and local shortages of material.

C. Standard FHWA Contract Provisions - FHWA 1273

Unless expressly otherwise provided in the Bid Documents, the following "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273, are hereby incorporated into the Bid Documents and Contract.
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Start of FHWA 1273 REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS (As revised through May 1, 2012)

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination

III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield

qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with

Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-

minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to

such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the

classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the

registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the

contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages.

Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not

permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

End of FHWA 1273

SUPPLEMENTAL SPECIFICATION
(Corrections, Additions, & Revisions to Standard Specifications - November 2014)

SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions
Page 1-5 – Remove the definition of Bridge in its entirety and replace with:
"**Bridge A structure that is erected over a depression or an obstruction, such as water, a highway or a railway, and has an opening measured along the centerline of the Roadway of more than 20 feet between: The faces of abutments; spring line of arches; extreme ends of openings of box culverts, pipes or pipe arches; or the extreme ends of openings for multiple box culverts, pipes or pipe arches**."

Page 1-12 – Remove the definition of Large Culvert in its entirety and replace with:
"**Large Culvert Any structure not defined as a Culvert or Bridge that provides a drainage or non-drainage opening under the Roadway or Approaches to the Roadway, with an opening that is 5 feet but less than 10 feet**."

Remove the definition of Minor Span in its entirety and replace with:
"**Minor Span Same definition as Bridge, except having an opening of between 10 feet and 20 feet, inclusive**."

SECTION 104
GENERAL RIGHTS AND RESPONSIBILITES

104.5.5 Prompt Payment of Subcontractors Add the following paragraph to this subsection:

C. Payment Tracking Federal Projects On federally funded projects, the prime contractor, subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System. They will be responsible for entering all payments to all sub and lower tier contractors. MaineDOT will run a query monthly to ensure that contractors are complying and generate an e-mail to contractors who have not responded to confirm receipt of MaineDOT payment or contractor payment to lower tier subcontractors.

SECTION 105
GENERAL SCOPE OF WORK

105.4.5 Special Detours Remove this subsection in its entirety and replace with:
"105.4.5 Maintenance of Existing Structures When a new Bridge or Minor Span is being installed on a new alignment and the existing structure is to remain in service, the Department will maintain the existing structure and the portions of the roadway required for maintaining traffic until such time that the new structure is opened to traffic and the existing structure is taken out of service. A similar situation exists when a new Bridge or Minor Span is being installed on the same alignment as the existing structure, requiring a temporary detour to be installed by the Contractor per Section 510, Special Detours,

prior to removal of the existing structure. In this case, the Department will maintain the existing structure and the portions of the existing roadway required for maintaining traffic until such time that either the temporary detour is opened to traffic or the Contractor begins any work on the existing structure, including, but not limited to, repairs, modifications, moving, demolition or removal. In either case, once the new structure or temporary detour is opened to traffic, or the Contractor begins any work on the existing structure, the Contractor shall be solely responsible for all maintenance of the existing structure and the portions of the existing approaches that lie outside the new roadway or the temporary detour, respectively. This specification is not intended to supersede Standard Specification Section 104.3.11, Responsibility for Property of Others."

SECTION 109
CHANGES

109.5.1 Definitions - Types of Delays In Paragraph 'A' delete "Equitable Adjustment" and replace with "adjustment of time".

APPENDIX A TO DIVISION 100

Remove Section D in its entirety as this is now covered in Section 105.10 EQUAL OPPORTUNITY AND CIVIL RIGHTS.

SECTION 203
EXCAVATION AND EMBANKMENT

203.02 Materials
At the bottom of page 2-12, add as the first item in the list:

Crushed Stone, ¾ inch 703.13

203.042 Rock Excavation and Blasting
On page 2-16, add the word "**No**" to the third sentence in Section 5 Submittals, Subsection V, 1 so that it reads:
"***No* blasting products will be allowed on the job site if the date codes are missing**."

SECTION 304
AGGREGATE BASE AND SUBBASE COURSE

304.02 Aggregate
Remove the sentence "Aggregate for base and subbase courses shall be material meeting the aggregate type requirements specified in the following table" in its entirety and the table that follows it with headings of 'Material' and 'Aggregate Type'.

304.02 – Aggregate Add the following sentence before the sentence starting with "When designated on the plans…": **"Aggregate Base Course – Type C will be capped with 2" of millings or Untreated Aggregate Surface Course – Type B. Payment for this material will be made under 304.16"**

SECTION 307
FULL DEPTH RECYCLED PAVEMENT

Remove this Section in its entirety and replace with:

SECTION 307
FULL DEPTH RECYCLING
(UNTREATED OR TREATED WITH EMULSIFIED ASPHALT STABILIZER)

307.01 Description This work shall consist of pulverizing a portion of the existing roadway structure into a homogenous mass, adding an emulsified asphalt stabilizer (if required) to the depth of the pulverized material specified in the contract, placing and compacting this material to the lines, grades, and dimensions shown on the plans or established by the Resident.

MATERIALS

307.02 Pulverized Material Pulverized material shall consist of the existing asphalt pavement layers and one inch or more as specified of the underlying gravel, pulverized and blended into a homogenous mass. Pulverized material will be processed to 100% passing a 2 inch square mesh sieve.

307.021 New Aggregate and Additional Recycled Material New aggregate, if required by the contract, shall meet the requirements of Subsection 703.10 - Aggregate for Untreated Surface Course and Leveling Course, Type A. Aggregate Subbase Course Gravel Type D processed to 100 percent passing a 2 inch square mesh sieve and meeting the requirements of 703.06 – Aggregate for Base and Subbase may be used in areas requiring depths greater than 2 inches. New aggregate, will be measured and paid for under the appropriate item.

Recycled material, if required, shall consist of salvaged asphalt material from the project or from off-site stockpiles that has been processed before use to 100 percent passing a 2 inch square mesh sieve. Recycled material shall be conditionally accepted at the source by the Resident. It shall be free of winter sand, granular fill, construction debris, or other materials not generally considered asphalt pavement.

Recycled material generated and salvaged from the project shall be used within the roadway limits to the extent it is available as described in 307.09. No additional payment will be made for material salvaged from the project.

Recycled material supplied from off-site stockpiles shall be paid for as described in the contract, or by contract modification.

<u>307.022 Emulsified Asphalt Stabilizer</u>. If required, the emulsified asphalt stabilizer shall be grade MS-2, MS-4, SS-1, or CSS-1 meeting the requirements of Subsection 702.04 Emulsified Asphalt.

<u>307.023 Water</u> Water shall be clean and free from deleterious concentrations of acids, alkalis, salts or other organic or chemical substances.

<u>307.024 Portland Cement</u> If required, Portland Cement shall be Type I or II meeting the requirements of AASHTO M85.

<u>307.025 Hydrated Lime</u> If required, Hydrated Lime shall meet the requirements of AASHTO M216.

EQUIPMENT

<u>307.03 Pulverizer</u> The pulverizer shall be a self-propelled machine, specifically manufactured for full-depth recycling work and capable of reducing the required existing materials to a size that will pass a 2 inch square mesh sieve. The machine shall be equipped with standard automatic depth controls and must maintain a consistent cutting depth and width. The machine also shall be equipped with a gauge to show depth of material being processed.

<u>307.04 Liquid Mixer Unit or Distributor</u>. If treatment of the recycled layer with emulsified asphalt is required by the contract, a liquid mixing unit or distributor shall be used to introduce the emulsified asphalt stabilizer into the pulverized material. The mixing unit shall contain a liquid distribution and mixing system which has been specifically manufactured for full-depth recycling work, capable of mixing the pulverized material with an evenly metered distribution of emulsified asphalt into a homogeneous mixture, to the depth and width required.

The mixing unit shall be designed, equipped, maintained, and operated so that emulsified asphalt stabilizer at constant temperature may be applied uniformly on variable widths of pulverized material up to 6 feet at readily determined and controlled rates from 0.01 to 1.06 gal/yd^2 with uniform pressure and with an allowable variation from any specified rate not to exceed 0.01 gal/ yd^2. Mixing units shall include a tachometer, pressure gages, and accurate volume measuring devices or a calibrated tank and a thermometer for measuring temperatures of tank contents.

<u>307.041 Cement or Lime Spreader</u> If required by the contract, spreading of the Portland Cement or Hydrated Lime shall be done with a spreader truck designed to spread dry particulate (such as Portland Cement or Lime) or other approved means to insure a uniform distribution across the roadway and minimize fugitive dust. Pneumatic

application, including through a slotted pipe, will not be permitted. Other systems that have been developed include fog systems, vacuum systems, etc. Slurry applications may also be accepted. The Department reserves the right to accept or reject the method of spreading cement. The Contractor shall provide a method for verifying that the correct amount of cement is being applied.

<u>307.05 Placement Equipment</u> Placement of the Full Depth recycled material to the required slope and grade shall be done with an approved highway grader or by another method approved by the Resident.

<u>307.06 Rollers</u> The full depth recycled material shall be rolled with a vibratory pad foot roller, a vibratory steel drum soil compactor and a pneumatic tire roller. The pad foot roller drum shall have a minimum of 112 tamping feet 3 inches in height, a minimum contact area per foot of 17 inch^2, and a minimum width of 84 inches. The vibratory steel drum roller shall have a minimum 84 inch width single drum. The pneumatic tire roller shall meet the requirements of Section 401.10 and the minimum allowable tire pressure shall be 85 psi.

MIX DESIGN

If treatment of the recycled layer with emulsified asphalt is required by the contract, the Department will supply a mix design for the emulsified asphalt stabilized material based on test results from pavement and soil analysis taken to the design depth. The Department will provide the following information prior to construction:

1. **Percent of emulsified asphalt to be used.**
2. **Quantity of lime or cement to be added.**
3. **Optimum moisture content for proper compaction.**
4. **Additional aggregate (if required).**

After a test strip has been completed or as the work progresses, it may be necessary for the Resident to make necessary adjustments to the mix design. Changes to compensation will be in accordance with the Mix Design Special Provision.

CONSTRUCTION REQUIREMENTS

<u>307.06 Pulverizing</u> The entire depth of existing pavement shall be pulverized together with 1 inch or more of the underlying gravel into a homogenous mass. All pulverizing shall be done with equipment that will provide a homogenous mass of pulverized material, processed in-place, which will pass a 2 inch square mesh sieve.

<u>307.07 Weather Limitations</u> Full depth recycled work shall be performed when;

A. Recycling operations will be allowed between May 15th and September 15th inclusive in Zone 1 - Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.

B. The atmospheric temperature, as determined by an approved thermometer placed in the shade at the recycling location, is 50°F and rising.

C. When there is no standing water on the surface.
D. During generally dry conditions, or when weather conditions are such that proper pulverizing, mixing, grading, finishing and curing can be obtained using proper procedures, and when compaction can be accomplished as determined by the Resident.
E. When the surface is not frozen and when overnight temperatures are expected to be above 32°F.
F. Wind conditions are such that the spreading of lime or cement on the roadway ahead of the recycling machine will not adversely affect the operation.

<u>307.08 Surface Tolerance</u> The complete surface of the Full Depth Recycled course shall be shaped and maintained to a tolerance, above or below the required cross sectional shape, of ⅜ inch.

<u>307.09 Full Depth Recycling Procedure</u> New aggregate or recycled material meeting the requirements of Section 307.021 - New Aggregate and Additional Recycled Material, shall be added as necessary to restore cross-slope and/or grade before pulverizing. Locations will be shown on the plans or described in the construction notes. The Resident may add other locations while construction of the project is in progress. The Contractor will use recycled material to the extent it is available, in lieu of new aggregate. The material shall then be pulverized, processed, and blended into a homogeneous mass passing a 2 inch square mesh sieve. Material found not pulverized down to a 2 inch size will be required to be reprocessed by the recycler with successive passes until approved by the Resident.

Should the Contractor be required to add new aggregate or recycled material to restore cross-slope and/or grade after the initial pulverizing process, those areas will require re-processing to blend into a homogenous mass passing a 2 in square mesh sieve.

Sufficient water shall be added during the recycling process to maintain optimum moisture for compaction.

The resultant material from the initial pulverizing processes shall be graded and compacted to the cross-slope and profile shown on the plans or as directed by the Resident. The Contractor will also be responsible for re-establishing the existing profile grade. The completed surface of the full depth recycled course shall be shaped and maintained to a tolerance, above or below the required cross sectional shape, of ⅜ inch. Areas not meeting this tolerance will be repaired as described in Section 307.091. The initial pulverizing process density requirements will be the same as Section 307.101 unless otherwise directed by the Resident.

Additives, if required, shall be introduced following completion of the initial pulverizing and blending process. Emulsified asphalt stabilizer shall be incorporated into the top of the processed material as specified in section <u>307.04</u> to the depth specified in the contract by use of the liquid mixer unit or a distributor, at the rate specified in the mix design. The emulsified asphalt shall then be uniformly blended into a homogeneous mass until an apparent uniform distribution has occurred. The rate of application may be adjusted as necessary by the Resident. Cement or lime shall be introduced as described in section

<u>307.041.</u> The resultant material shall be graded and compacted to the cross-slope and profile shown on the plans or as directed by the Resident. The Contractor will also be responsible for re-establishing the existing profile grade.

After final compaction, the roadway surface shall be treated with a light application of water, and rolled with pneumatic-tired rollers to create a close-knit texture. The finished layer shall be free from:

A. Surface laminations.
B. Segregation of fine and coarse aggregate.
C. Corrugations, centerline differential, potholes, or any other defects that may adversely affect the performance of the layer, or any layers to be placed upon it.

The Contractor shall protect and maintain the recycled layer until a lift of pavement is applied. Any damage or defects in the layer shall be repaired immediately. An even and uniform surface shall be maintained. The recycled surface shall be swept prior to hot mix asphalt overlay placement.

<u>307.091 Repairs</u> Repairs and maintenance of the recycled layers, resulting from damage caused by traffic, weather or environmental conditions, or resulting from damage caused by the Contractor's operations or equipment, shall be completed at no additional cost to the Department.

For recycled layers stabilized with emulsified asphalt, low areas will be repaired using a hot mix asphalt shim. Areas up to 1 inch high can be repaired by milling or shimming with hot mix asphalt. Areas greater than 1 inch high will be repaired using a hot mix asphalt shim. All repair work will be done with the Resident's approval at the Contractor's expense.

TESTING REQUIREMENTS

<u>307.10 Quality Control</u> The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.4 - Quality Control and this Section. The Contractor shall not begin recycling operations until the Department approves the QCP in writing.

Prior to performing any recycling process, the Department and the Contractor shall hold a Pre-recycle conference to discuss the recycling schedule, type and amount of equipment to be used, sequence of operations, and traffic control. A copy of the QC random numbers to be used on the project shall be provided to the Resident. All field supervisors including the responsible onsite recycling process supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Recycling Process including, but not limited to, the following:

A. Sources for all materials, including New Aggregate and Additional Recycled Material.
B. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers.
C. Testing Plan.
D. Recycling operations including recycling speed, methods to ensure that segregation is minimized, grading and compacting operations.
E. Methods for protecting the finished product from damage and procedures for any necessary corrective action.
F. Method of grade checks.
G. Examples of Quality Control forms.
H. Name, responsibilities, and qualifications of the Responsible onsite Recycling Supervisor experienced and knowledgeable with the process.
I. A note that all testing will be done in accordance with AASHTO and MDOT/ACM procedures.

The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate the full depth reclamation process in accordance with the following minimum frequencies:

MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Density	1 per 1000 feet / lane	AASHTO T 310
Air Temperature	4 per day at even intervals	
Surface Temperature	At the beginning and end of each days operation	
Yield of all materials (Daily yield, yield since last test, and total project yield.)	1 per 1000 ft/lane	

The Department may view any QC test and request a QC test at any time. The Contractor shall submit all QC test reports and summaries in writing, signed by the appropriate technician, to the Department's onsite representative by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall make all test results, including randomly sampled densities, available to the Department onsite.

The Contractor shall cease recycling operations whenever one of the following occurs:

A. The Contractor fails to follow the approved QCP.
B. The Contractor fails to achieve 98 percent density after corrective action has been taken.
C. The finished product is visually defective, as determined by the Resident.

D. The computed yield differs from the mix design by 10 percent or more.

Recycling operations shall not resume until the Department approves the corrective action to be taken.

<u>307.101 Test Strip</u> The contractor shall assemble all items of equipment for the recycling operation on the first day of the recycling work. The Contractor shall construct a test strip for the project at a location approved by the Resident. The Responsible onsite Recycling Supervisor will work with Department personnel to determine the suitability of the mixed material, moisture control within the mixed material, and compaction and surface finish. The test strip section is required to:

A. Demonstrate that the equipment and processes can produce recycled layers to meet the requirements specified in these special provisions.
B. Determine the effect on the gradation of the recycled material by varying the forward speed of the recycling machine and the rotation rate of the milling drum.
C. Determine the optimum moisture necessary to achieve proper compaction of the recycled layer.
D. Determine the sequence and manner of rolling necessary to obtain the compaction requirements and establish a target density. The Contractor and the Department will both conduct testing with their respective gauges at this time.

The test strip shall be at least 300 feet in length of a full lane-width (or a half-road width). Full recycling production will not start until a passing test strip has been accomplished. If a test strip fails to meet the requirements of this specification, the Contractor will be required to repair or replace the test strip to the satisfaction of the Resident. Any repairs, replacement, or duplication of the test strip will be at the Contractor's expense.

After the test strip has been pulverized, and the roadway brought to proper shape, the Contractor shall add water until it is determined that optimum moisture has been obtained. The test strip shall then be rolled using the specified compaction equipment as directed until the density readings show an increase in dry density of less than 1 pcf for the final four roller passes of each roller. The Contractor and Department will each determine a target density using their respective gauges by performing several additional density tests and averaging them. The average of these tests will be used as the target density of the recycled material for QC and Acceptance purposes.

Following completion of the test strip, compaction of the material shall continue until a density of not less than 98 percent of the test strip target density has been achieved for the full width and depth of the layer. During the construction and compaction of the Full Depth Recycled base, should three consecutive Acceptance test results for density fail to meet a minimum of 95 percent of the target density, or exceed 102 percent of target density, a new test strip shall be constructed.

ACCEPTANCE TEST FREQUENCY

Property	Frequency	Test Method
In-place Density	1 per 2000 ft / lane	AASHTO T 310

<u>308.102 Curing</u>. No new pavement shall be placed on the full depth recycled pavement until curing has reduced the moisture content to 1 percent or less by total weight of the mixture, or a curing period of 4 days has elapsed, whichever comes first.

<u>307.11 Method of Measurement</u> Full Depth Recycled Pavement (Untreated or Treated with Emulsified Asphalt Stabilizer) will be measured by the square yard.

<u>307.12 Basis of Payment</u> The accepted quantity of Full Depth Recycled Asphalt Pavement (Untreated or Treated with Emulsified Asphalt Stabilizer) will be paid for at the contract unit price per square yard, complete in-place which price will be full compensation for furnishing all equipment, materials and labor for pulverizing, blending, placing, grading, compacting, and for all incidentals necessary to complete the work.

The addition of materials to restore profile grade and/or cross-slope in areas shown on the plans or described in the construction notes will be paid separately under designated pay items within the contract. No additional payment will be made for materials salvaged from the project.

Payments will be made under:

<u>Pay Item</u>	**<u>Pay Unit</u>**
307.331 Full Depth Recycled Pavement (Untreated)	**Square Yard**
307.332 Full Depth Recycled Pavement (with Emulsified Asphalt Stabilizer) 5 in. depth	**Square Yard**
307.333 Full Depth Recycled Pavement (with Emulsified Asphalt Stabilizer) 6 in. depth	**Square Yard**

<u>SECTION 411</u>
UNTREATED AGGRAGATE SURFACE COURSE

<u>411.02 – Aggregate</u> Add the following to the end of the first sentence: **"- Type A"**

<u>SECTION 502</u>

STRUCTURAL CONCRETE

502.05 Composition and Proportioning

Replace Table 1 with

TABLE 1

Concrete CLASS	Minimum Compressive Strength (PSI)	Permeability as indicated by Surface Resistivity (KOhm-cm)	Entrained Air (%)		Notes
		LSL	LSL	USL	
S	3,000	N/A	N/A	N/A	4,5
A	4,000	14	6.0	9.0	1,4,5
P	-----	-----	5.5	7.5	1,2,3,4
LP	5,000	17	6.0	9.0	1,4,5
Fill	3,000	N/A	6.0	9.0	4,5

In the list of information submitted by the contractor for a mix design:

Item J Replace "Target Coulomb Value." with "Target KOhm-cm Value."

502.1703 Acceptance Methods A and B

In the paragraph that starts with "The Department will take Acceptance…" Remove the word chloride from chloride permeability in the last sentence.

Replace the paragraph starting with "Rapid Chloride Permeability specimens…" With the following:

"Surface Resistivity specimens will be tested by the Department in accordance with AASHTO TP-95 at an age ≥ 56 days. Four 4 inch x 8 inch cylinders will be cast per sublot placed. The average of three concrete specimens per sublot will constitute a test result and this average will be used to determine the permeability for pay adjustment computations."

502.1706 Acceptance Method C

Remove in its entirety and Replace with:

502.1706 Acceptance Method C The Department will determine the acceptability of the concrete through Acceptance testing. Acceptance tests will include compressive strength, air content and permeability. Method C concrete with a failing permeability as indicated by the surface resistivity test may be tested for permeability in accordance with the Rapid Chloride Permeability Test AASHTO T-277 averaging the results from two specimens cut from the samples prepared for the surface resistivity test. Method C concrete not meeting the requirements listed in Table 1 or if the Rapid Chloride Permeability test results in values exceeding 2000 coulombs for Class LP or 2400 for Class A, shall be removed and replaced at no cost to the Department. At the

Department's sole discretion, material not meeting requirements may be left in place and paid for at a reduced price as described in Section 502.195.

502.1707 Resolution of Disputed Acceptance Test Results
Section B
Remove "Rapid Chloride" from the section heading.
In paragraph 4 replace T-277 with TP-95

502.192 Pay Adjustment for Chloride Permeability
Remove "Chloride" from the heading and from the first sentence.

Replace the sentence that starts with "values greater than…" and replace with "values less than 10 KOhms-cm for Class A concrete or 11 KOhms-cm for Class LP concrete shall be subject to rejection and replacement, at no additional cost to the Department."

502.194 Pay Adjustments for Compressive Strength, Chloride Permeability and Air Content, Methods A and B

Remove the word "Chloride" from the section heading and from the equation for CPF.

502.195 Pay Adjustment Method C

Table 6: Method C Pay Reductions (page 5-53)
Under "Entrained Air" for "Class Fill", in the first line,
change from "< 4.0 (Removal)" to **"< 4.5 (Removal)**"

In Table 6: Method C PAY REDUCTIONS remove the word 'Chloride' from 'Chloride Permeability'.

SECTION 619
MULCH

619.07 Basis of Payment
In the list of Pay Items add "**619.12 Mulch**" with a Pay Unit of " **Unit** ".
Change the description of 619.1201 from "Mulch" to "**Mulch – Plan Quantity**"

SECTION 621
LANDSCAPING

621.0002 Materials - General
In the list of items change "Organic Humus" to "**Humus**".

621.0019 Plant Pits and Beds
c Class A Planting
In the third paragraph beginning with " The plant pit…" change "½ inch" to "**1 inch**"

SECTION 626
FOUNDATIONS, CONDUIT AND JUNTION BOXES FOR HIGHWAY SIGNING, LIGHTING AND SIGNALS

626.034 Concrete Foundations

On Page 6-85, add the following paragraph before the paragraph beginning with "Drilled shafts shall not be…".

No foundation design will be required for 18- and 24-inch diameter foundations for structures less than 30-feet tall and with no projecting arms. A foundation design prepared by a Professional Engineer licensed in accordance with the laws of the State of Maine will be required for all other foundations Precast foundations will be permitted for 18 and 24-inch diameter foundations for structures less than 30-feet tall and with no projecting arms. Where precast foundations are permitted flowable concrete fill shall be used as backfill in the annular space, and placed from the bottom up. Construction of precast foundations shall conform to the Standard Details and all requirements of Section 712.061 except that the concrete shall have a minimum permeability of 17 kOhm-cm and the use of calcium nitrite will not be required.

On Page 6-86, add the following to the paragraph beginning with "Concrete for drilled shafts…" so that it reads as follows:

"….The Contractor shall provide temporary dewatering of excavations for foundations such that concrete is placed in the dry. **Concrete for drilled shafts shall be placed in accordance with Section 503.10 as temporary casing is withdrawn to prevent debris from contaminating the foundation and to ensure concrete is cast against the surrounding soil. Concrete for drilled shafts and spread footings shall be Class A in accordance with Section 502 - Structural Concrete. Precast foundations will not be permitted except as specified above in this Section.** Backfill for spread footing foundations shall be Gravel Borrow meeting the requirements of Section 703.20 - Gravel Borrow….."

SECTION 660
ON-THE-JOB TRAINING

660.06 Method of Measurement

Remove the first sentence in its entirety and replace with " **The OJT item will be measured by the number of OJT hours by a trainee who has successfully completed an approved training program.**"

660.07 Basis of payment to the Contractor

Remove the last word in the first sentence so that the first sentence reads " The OJT shall be paid for once successfully completed at the contract unit price per **hour**."

Payment will be made under

Change the Pay Item from "660.22" to "**660.21**" and change the Pay Unit from "Each" to "**Hour**".

SECTION 703
AGGREGATES

703.06 Aggregate for Base and Subbase

Remove the first two paragraphs in their entirety and replace with these:

"**The following shall apply to Sections (a.) and (c.) below. The material shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro- Deval value exceeds 25.0, the Washington State Degradation DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version) shall be performed, except that the test shall be performed on the portion of the sample that passes the ½ in sieve and is retained on the No. 10 sieve. If the material has a Washington Degradation value of less than 15, the material shall be rejected.**

The material used in Section (b.) below shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0 the material may be used if it does not exceed 25 percent loss on AASHTO T 96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine. "

703.33 Stone Ballast

In the third paragraph, remove the words " less than" before 2.60 and add the words "**or greater**" after 2.60.

SECTION 717
ROADSIDE IMPROVEMENT MATERIAL

717.02 Agricultural Ground Limestone

In the table after the third paragraph which starts with "Liquid lime…" change the Specification for Nitrogen (N) from "15.5 percent of which 1% is from ammoniac nitrogen and 14.5 /5 is from Nitrate Nitrogen" to read "**15.5 % of which 1% is from Ammoniacal Nitrogen and 14.5 % is from Nitrate Nitrogen**"

LAP Environmental Summary Sheet

Pin: **16612.00** **Date Submitted: 6/18/12**
Town: **Auburn**
CPD Team Leader: Kristen Chamberlain

NEPA Complete: 6/7/12
Individual CE-NEPA is complete for PE and ROW phases only. When project is "taken off the shelf", the project will have to be re-evaluated by FHWA for construction authorization.

☒ **Section 106**
SHPO Concurrence No Adverse Effect

Special Conditions: 567 Riverside Drive, New England barn is NR-eligible, Criteria C
No adverse effect is based on all work being completed within the existing ROW limits consisting of asphalt overlay on currently paved surface.

☒ **Section 4(f) and 6(f)**
Section 4(f)
Review Complete No use
Section 6(f)
Not Applicable

☒ **Section 7**
No Effect
Species of Concern: Atlantic Salmon DPS
Comments/References: no Effect based on no in-water work.

☒ **Hazardous Waste Review**
Applicable **Special Provision 203** **(See attached. Must be included in contract documents).**

☒ **State and Federal Permits**
Letter 12 submitted 5/19/2010
Copies of approvals submitted 5/19/12

NOTE: Local Town/Municipality is responsible for obtaining and providing copies of Maine Department of Environmental Protection and Army Corps of Engineers Permits.

General Notes and/or Comments:

NEPA is complete for PE and ROW phases only. Notify Environmental Office Staff when the project is authorized for construction funding. At that time, NEPA for the project will have to be re-evaluated by FHWA prior to advertise.

**All approvals based on plans/scope as of: 6/18/12*

Riverside Drive, Auburn, Maine
Project No 16612.00
April 19, 2012

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT)

General. The work under this specification, shall be performed in conformance with all the procedures and requirements described herein for the following activities: contaminated soil handling, reuse, temporary stockpiling, transportation, storage and disposal and, contaminated water handling, storage, treatment and disposal. This specification also addresses contaminated soil location, identification, and classification. The intent of this specification is to ensure that any contaminated soil and/or water encountered during construction will be managed in a manner that protects worker health and safety, public welfare and the environment.

Environmental Site Conditions. The Maine Department of Transportation's Environmental Office (MaineDOT's-ENV.) has conducted a series of assessments related to the Auburn Riverside Drive Improvement Project. An initial Phase I Environmental Assessment for the project area was completed to obtain a general understanding of the environmental conditions along the project corridor. Data garnered from this assessment was used to design a Modified, Phase II Contamination Assessment for the project. The primary focus of the assessments was to evaluate the type and extent of subsurface contamination along the project corridor. The Phase I Assessment included a review of relevant Maine Department of Environmental Protection's (MaineDEP's) and Environmental Protection Agency's (EPA's) databases and field reconnaissance of the project area. During Phase II, borings were advanced along the project's length for investigative purposes. During the advancement of these borings, three areas with impacted soil were identified. A photo-ionization detector (PID) was used to test soil grab samples from select explorations for volatile organic compound (VOC) concentrations indicative of petroleum products. (See *Identified Areas Of Contamination* below). Select samples for laboratory testing were also taken to further aid in evaluating subsurface conditions. The results of these investigations are available for review from the Hydrogeologist at MaineDOT's Environmental Office in Augusta (207-624-3100).

Identified Area of Contamination. MaineDOT's-ENV investigation identified three areas of soil contamination associated with the Riverside Drive (Route 2) Highway Improvement Project. For reference, these areas are designated as "**Area A", "Area B", "Area C"** and **"Area D"** respectively. The location of **Area A** is defined as located roughly between MaineDOT survey stations 1+45 to 2+30, left of centerline along

Riverside Drive. The laboratory results for EPH; C11-C22 Aromatic hydrocarbons at 630 to 1800 ppm, C9-C18 Aliphatic Hydrocarbons at 38 ppm, C19-C36 Aliphatic Hydrocarbons at below detection limit (BDL) to 200 ppm, Naphthalene at 2.8 to 3.4 ppm, and 2-methylnaphthalene at 3.2 to 5.0 ppm, Phenanthrene at 28 to 75 ppm, Acenaphthene at 1.2 to 1.6 ppm, Acenaphthylene at 4.7 to 13 ppm, Fluorene at 4.2 to 7.1 ppm, Anthracene at 3.3 to 14 ppm, Fluoranthene at 16 to 44 ppm, Pyrene at 19 to 130 ppm, Benzo(a)anthracene at 11 to 69 ppm, Chrysene at 9 to 56 ppm, Benzo(b)fluoranthene at 6.7 to 55 ppm, Benzo(k) fluoranthene at 7 to 56 ppm, Benzo(a)pyrene at 6.7 to 51 ppm, Benzo(g,h,j)perylene at 4.8 to 34 ppm, Dibenz(a,h)anthracene at 0.86 to 5.4 ppm and Indeno(1,2,3,cd)Pyrene at 4.6 to 37 ppm; for VPH; BDL. VOCs were detected; Naphthalene at 160 to 13000 parts per billion (ppb). Total lead was detected at 36 to 170 ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in **Area A** appears to be related to the past use and storage of gasoline.

The location of **Area B** is defined as along Riverside Drive (Route 2) located roughly between MaineDOT stations 4+25 to 5+20 left and right center line. The laboratory results for EPH; C11-C22 Aromatic hydrocarbons at 220 to 3700 ppm, C9-C18 Aliphatic Hydrocarbons at BDL to 140 ppm, C19-C36 Aliphatic Hydrocarbons at 59 to 510 ppm, Naphthalene at 0.23 to 27 ppm, and 2-methylnaphthalene at 0.3 to 35 ppm, Phenanthrene at 5.1 to 350 ppm, Acenaphthene at 0.20 to 13 ppm, Acenaphthylene at 1.4 to34 ppm, Fluorene at 0.81 to64 ppm, Anthracene at 1.3 to58 ppm, Fluoranthene at 5.4 to 240 ppm, Pyrene at 6.0 to230 ppm, Benzo(a)anthracene at 4.2 to 120 ppm, Chrysene at 3.2 to 74 ppm, Benzo(b)fluoranthene at 3.6 to 54 ppm, Benzo(k) fluoranthene at 3.3 to 58 ppm, Benzo(a)pyrene at 3.5 to 57 ppm, Benzo(g,h,j)perylene at 3.8 to 33 ppm, Dibenz(a,h)anthracene at 1.0 to 6.7 ppm and Indeno(1,2,3,cd)Pyrene at 3.3 to36 ppm; for VPH; BDL. VOCs were detected; Naphthalene at 680 to 5500 ppb. Total lead was detected at 25 to 73 ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in **Area B** appears to be related to the past use and storage of gasoline.

The location of **Area C** is defined as along Riverside Drive located roughly between MaineDOT stations 14+80 to 15+00 right of center line. The laboratory results for EPH; C11-C22 Aromatic hydrocarbons at 840 to 1900 ppm, C9-C18 Aliphatic Hydrocarbons at 23 to 63, C19-C36 Aliphatic Hydrocarbons at 120 to 390 ppm, Naphthalene at 0.50 to 7.5 ppm, and 2-methylnaphthalene at 0.6 to 7.5 ppm, Phenanthrene at 22 to 100 ppm, Acenaphthene at 0.46 to 4.0 ppm, Acenaphthylene at 6.1 to 15 ppm, Fluorene at 2.4 to 30 ppm, Anthracene at 6.7 to 26 ppm, Fluoranthene at 59 to 100ppm, Pyrene at 60 to 100 ppm, Benzo(a)anthracene at 40 to 62 ppm, Chrysene at 31 to 46 ppm, Benzo(b)fluoranthene at 29 to 43 ppm, Benzo(k) fluoranthene at 29 to 46 ppm, Benzo(a)pyrene at 26 to 44 ppm, Benzo(g,h,j)perylene at 29 to 16 ppm, Dibenz(a,h)anthracene at 3.8 to 6.4 ppm and Indeno(1,2,3,cd)Pyrene at 18 to 33 ppm; for VPH; BDL. VOCs were detected; Naphthalene at 2000 to 6300 ppb and Tetrachloroethane at 300 ppb. Total lead was detected at 27 to 65 ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in Area C appears to be related to the past use and storage of gasoline.

The location of **Area D** is defined as along Riverside Drive (Route 2) located roughly between MaineDOT stations 40+00 to 41+10 left of center line. The laboratory results for EPH; C11-C22 Aromatic hydrocarbons at 160 to 1400 ppm, C9-C18 Aliphatic Hydrocarbons at BDL to 50 ppm, C19-C36 Aliphatic Hydrocarbons at 83 to 160 ppm, Naphthalene at 1.2 to 3.3 ppm, and 2-methylnaphthalene at 1.1 to 5.1 ppm, Phenanthrene at 8.4 to 78 ppm, Acenaphthene at 0.63 to 1.8 ppm, Acenaphthylene at 0.92 to 10 ppm, Fluorene at 1.2 to 58 ppm, Anthracene at 1.5 to 9 ppm, Fluoranthene at 7.1 to 58 ppm, Pyrene at 2.6 to 72 ppm, Benzo(a)anthracene at 4.3 to 30 ppm, Chrysene at 3.7 to 27 ppm, Benzo(b)fluoranthene at 0.26 to 29 ppm, Benzo(k) fluoranthene at 2.7 to 21 ppm, Benzo(a)pyrene at 3.0 to 25 ppm, Benzo(g,h,j)perylene at 2 to 21 ppm, Dibenz(a,h)anthracene at 0.41 to 3.8 ppm and Indeno(1,2,3,cd)Pyrene at 2.2 to 20ppm; for VPH; BDL. VOCs were detected; Naphthalene at 170 to 6800 ppb. Total lead was detected at 7.5 to 14.2 ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in **Area D** appears to be related to the past use and storage of gasoline.

Identifying and Screening Contaminated Soil and Groundwater. Within the contaminated section designated **Area A**, excavated soils will be classified by the Resident (or a MaineDOT-ENV representative/City of Auburn representative) based on photo-ionization detector (PID) field screening measurements. Field screening with a PID shall be performed according to the MDEP SOP No. TS004, Compendium of Field Testing of Soil Samples for Gasoline and Fuel Oil dated April 20, 2011.

The excavated soils shall be classified as Group 1 or Group 2.

Group 1 soils shall have PID field screening measurements indicating relative concentrations of volatile organic compounds (VOCs) less than or equal to 20 parts per million (ppm) as measured in the soil headspace.

Group 2 soils shall have PID field screening measurements indicating relative concentrations of volatile organic compounds (VOCs) in parts per million (ppm) as measured in the soil headspace less then the value indicated on Table 1 of SOP TS-004 when screened in accordance with the “Outdoor Commercial Worker/Excavation-Construction Worker”.

Group 3 soils shall have PID field screening measurements indicating VOC concentrations in ppm greater than the value indicated on Table 1 of the SOP-TS004 when screened in accordance with the “Outdoor Commercial Worker/Excavation-Construction Worker”.

Handling and Disposition of Soil Materials. Within **Area A, Area B, Area C**, and **Area D** soil material excavated during construction shall be handled as follows:

Group 1 soils are not considered contaminated. Thus, special handling and disposal are not required for Group 1 soils.

Group 2 soils shall be placed back into their excavation section of origin. The Contractor shall make every attempt to side cast any Group 2 soils next to their excavation site. Upon completion of the given constructional feature, the Group 2 soils shall be placed back into the excavation. Group 2 materials not handled in this manner shall be considered Surplus Group 2 soils. Surplus Group 2 soils must be disposed of or treated at a facility licensed by the MDEP to accept petroleum contaminated special waste. The Contractor is solely responsible for obtaining the associated permits and approvals for the disposal or treatment of the Surplus Group 2 soils from all relevant Municipal, State, and Federal agencies at no additional cost to the State. Notification shall be given to the Resident once approval is granted for the acceptance of this material at the off site facility. No removal of Surplus Group 2 soils from the project shall occur without prior approval by the Resident. If any Surplus Group 2 soils cannot be transported to the pre-approved, properly licensed facility within 8 hours of their excavation, they must be placed in a Temporary Secure Stockpile Area somewhere within the project limits (See Temporary Secured Stockpile Area below).

Group 3 soils shall not be excavated without prior approval by the Resident. The Contractor shall arrange and undertake disposal of all Group 3 soils at a landfill or treatment facility licensed to accept petroleum contaminated special waste. The Contractor is responsible for all additional testing required by the receiving facility. Group 3 soils that cannot be disposed of within 8 hours of excavation shall be stored in a Temporary Secured Stockpile area. If the Contractor proposes other disposal or treatment options, the Contractor is solely responsible for obtaining the associated permits and approvals from all relevant Municipal, State, and Federal agencies at no additional cost to the State.

The Resident is responsible for signing any manifests or bills of lading required to transport and dispose of contaminated soil. The Resident will send all manifests and bills of lading to MaineDOT, Environmental Office, Station 16, Augusta, Maine 04333.

Trench and Underdrain/Stormdrain Design in Contaminated Sections. In **Area A, Area B, Area C** and **Area D** solid, Option III, non-perforated pipe shall be used instead of perforated underdrain pipe to help prevent the infiltration and transportation of potentially contaminated groundwater within the underdrain/stormdrain system. The Contractor shall backfill around the pipe and trenches in this section with uncontaminated material. Backfilling of the trench shall be in accordance with Section 206.03. All stones larger than 3 inches, frozen lumps, dry chunks of clay or any other objectionable matter shall be removed before backfilling.

Seepage control dikes (SCD) shall be installed roughly every 60 feet along the stormwater pipe trench

The SCDs shall consist of a mineral clay material with a liquid limit of equal to or greater than 24 and a natural moisture content of at least 20 percent. The clay should be placed in dry excavations in 6 inch maximum, thick lifts and compacted to 90% of the maximum dry unit weight as determined by AASHTO T99 (Standard Proctor). The SCDs shall be 5 feet long, be in intimate contact with the trench floor, trench walls and circumference of the pipe and extend up to the bottom of the road base. The excavated existing road base or similar material may be placed on top of the SCDs. The Contractor shall take care to ensure that no voids or uncompacted soil is left beside or beneath the Option III culvert pipe.

Secured Stockpile Area. Direct transport of Surplus Group 2 or Group 3 soils to a pre-approved management facility is recommended. However, should the Contractor temporarily store any Surplus Group 2 or Group 3 soils at the site for more than 8 hours following excavation, they must be placed into a properly constructed Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area must be constructed as defined herein and must be approved by the Resident prior to its use.

Should the Contractor utilize a Temporary Secured Stockpile Area, they shall install a continuous 0.3 meter high compacted soil berm around the Secured Stockpile. The Secured Stockpile shall be placed on a liner of 20-mil polyethylene and securely covered with 20-mil polyethylene. The polyethylene liner and cover shall be placed over the soil berm and be installed to ensure that precipitation water drains directly to the outside of the berm perimeter while leachate from the contaminated soil is retained within the stockpile. The Secured Stockpile and soil berm shall be enclosed within a perimeter of concrete Jersey barriers or wooden barricades. The area within the Jersey barriers (or wooden barricades) shall be identified as a "restricted area" to prevent unauthorized access to the contaminated soils.

Secured Stockpile Area - Materials.

A. Polyethylene. Polyethylene used for liner in the Secured Stockpile Area shall have a minimum of 20-mil thickness and shall meet the requirements of ASTM D3020.

B. Common Borrow. Fill used in the construction of the Temporary Secured Stockpile Area soil berm shall consist of Common Borrow and meet the requirements of Section 703.18

C. Concrete Barriers or Wooden Barricades. Concrete barriers or Wooden Barricades to form the sides of the Temporary Secured Stockpile Area shall meet the requirements of Section 526 or 652.05.

Health and Safety/Right-to-Know. Contractors and subcontractors are required to notify their workers of the history of the site and contamination that may be present

and to be alert for evidence of contaminated soil and groundwater. The Contractor shall notify the Resident at least three business days prior to commencing any excavation in **Areas A, Area B, Area C** and **Area D**.

The Contractor shall prepare a site specific Health and Safety Plan (HASP) for its workers and subcontractors who may work in the contaminated areas of the site. A Qualified Health and Safety Professional shall complete the HASP. The Qualified Health and Safety Professional will be an expert in field implementation of the following federal regulations:

29 CFR 1910.120 or 29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1910.134	Respiratory Protection
29 CFR 1926.650	Subpart D - Excavations
29 CFR 1926.651	General Requirements
29 CFR 1926.652	Requirements for Protective Systems

MaineDOT is voluntarily ameliorating the contamination in **Areas A, Area B, Area C** and **Area D.** The remedial efforts defined herein have been reviewed and approved by MaineDEP. Given that this is a voluntary clean up effort approved by a regulatory agency, the OSHA requirements as defined in 29 CFR 1910.120 apply. These requirements mandate that workers and any subcontractors working in the contaminated areas shall comply with all OSHA regulations for Hazardous Waste Operations and Emergency Response including a 40 hour initial hazardous waste operations certification [OSHA 1910.120(e)], annual 8 hour refresher course within the last 12 months and medical surveillance [OSHA 1910.120(f)] within the last 12 months.

The contractor shall designate a person to provide direct on-site supervision of the work in the contaminated areas. This person shall have the training under OSHA 1910.120 (e) as above and in addition be qualified as a construction Competent Person. It is the responsibility of the competent person to make those inspections necessary to identify situations that could result in hazardous conditions (e.g., possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions), and then to insure that corrective measures are taken.

Submittals. The Contractor shall submit a site specific Health and Safety Plan (HASP) to the Resident at least two weeks in advance of any excavation work on the project. The Contractor shall not proceed with work until MaineDOT has reviewed the plan and notified the Contractor that it is acceptable.

Health and Safety Monitoring. Within the contaminated areas of the project, the Contractor's designated on-site person shall monitor the worker breathing zone for those constituents specified in the Contractor's HASP. The Contractor shall provide all required health and safety monitoring equipment.

Dewatering. Groundwater may be encountered and its removal necessary to complete work within **Area A, Area B, Area C** and **Area D.** It will be treated as "contaminated" water. The Contractor shall inform the Resident before any dewatering commences. The "contaminated" water shall be pumped into a temporary holding tank(s). The Contractor will be responsible for the procurement of any holding tank(s). Any testing, treatment and/or disposal of the stored, petroleum-contaminated water shall be undertaken by the Contractor in accordance with applicable Federal, State and local regulatory requirements.

On-Site Water Storage Tanks - Materials. If dewatering within the identified contaminated area becomes necessary the holding tanks used for temporary storage of contaminated water pumped from excavations shall be contamination free and have a minimum capacity of 2,000 gallons.

Dust Control. The Contractor shall employ dust control measures to minimize the creation of airborne dust during the construction process in potentially contaminated areas. As a minimum, standard dust control techniques shall be employed where heavy equipment and the public will be traveling. These may include techniques such as watering-down the site or spreading hygroscopic salts.

Unanticipated Contamination. If the Contractor encounters previously undiscovered contamination or potentially hazardous conditions related to contamination, the Contractor shall immediately suspend work and secure the area. The Contractor will then notify the Resident immediately. These potentially hazardous conditions include, but are not limited to, buried containers, drums, tanks, "oil saturated soils", strong odors, or the presence of petroleum sufficient to cause a sheen on the groundwater. The area of potential hazard shall be secured to minimize health risks to workers and the public and to prevent a release of contaminants into the environment. The source of any suspected contamination shall be evaluated by the Resident (or MaineDOT's -ENV representative). As appropriate, the Resident will notify the MDEP's Response Services Unit in Portland and MaineDOT's Environmental Office. The Auburn Fire Department must also be notified prior to removal of buried storage tanks and associated piping. The Contractor will evaluate the impact of the hazard on construction, amend the HASP if necessary, and with the Resident's approval, recommence work in accordance with the procedures of this Special Provision.

Method of Measurement. There will be no measurement for identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Measurement for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by lump sum.

Measurement of the off site treatment or disposal of Surplus Group 2 and all Group 3 soils will be by the ton of Special Excavation.

There will be no measurement for construction of a Temporary Secured Stockpile Area. Construction of a Temporary Secured Stockpile Area, if necessary, is considered incidental to project construction. There will be no measurement for hauling Surplus Group 2 material or Group 3 soils to the Temporary Secure Stockpile area or placement and removal of Surplus Group 2 or Group 3 soils in or out of the Temporary Secure Stockpile area. All hauling and any subsequent management/placement of contaminated soils are considered incidental to project construction.

There will be no measurement for additional laboratory testing of contaminated soil that is required by the landfill or treatment facility. Testing is incidental to the disposal of Special Excavation.

Measurement for the following items shall be according to Subsection 109:04 ("Change Order"/Force Account): any necessary contaminated water holding tank(s); and treatment or disposal of any contaminated groundwater.

Basis of Payment. There will be no payment for the identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Payment for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by the lump sum

Payment for off site disposal or treatment of contaminated Surplus Group 2 and all Group 3 soils at a MaineDEP licensed facility shall be by the ton of Special Excavation.

There will be no payment for the construction of the Temporary Secured Stockpile Area or hauling/management/placement of contaminated soils to the Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area shall be considered incidental to project construction.

Payment for the following items shall be according to Subsection 109:04 ("Change Order"/Force Account): any necessary contaminated water holding tank(s); and treatment or disposal of any contaminated groundwater.

Pay Item		Pay Unit
203.2312	Health and Safety Plan (HASP)	L.S.
203.2333	Disposal/Treatment of Special Excavation	Ton

RIVERSIDE DRIVE RECONSTRUCTION

CITY OF AUBURN, MAINE

WIN 016612.00

APPENDIX A - GEOTECHNICAL REPORT

SUMMIT
GEOENGINEERING SERVICES

Geotechnical Report
Roadway Reconstruction
Riverside Drive and Mill Street
Auburn, Maine

Prepared for:

Woodard & Curran

Prepared by:

Summit Geoengineering Services
Project #10132
November 2010

640 Main Street, Lewiston, Maine 04240, (207) 576-3313
434 Cony Road, Augusta, Maine 04330, (207) 318-7761

November 9, 2010
Summit #10132

Daniel Goyette, P.E.
Woodard & Curran
41 Hutchins Drive
Portland, Maine 04102

Reference: Geotechnical Support Services
Roadway Reconstruction – Riverside Drive and Mill Street Auburn, Maine

Dear Mr. Goyette,

This report summarizes our geotechnical investigation for the proposed roadway reconstruction along Mill Street and portions of Riverside Drive in Auburn, Maine. Our work included performing 15 test borings and 29 probes at the site, performing laboratory testing, and preparing this report summarizing our findings and geotechnical recommendations.

1.0 Project and Site

We understand that the town of Auburn is planning to reconstruct Mill Street and the portion of Riverside Drive from the Mill Street intersection to Gagne & Sons near the Oak Hill Cemetery. The project consists of reconstruction of approximately 4,000 linear feet of roadway, including new storm water structures as part of the renovation.

2.0 Explorations & Laboratory Testing

Maine Test Borings performed a total of 15 borings and 29 ledge probes under contract to Summit. Summit was onsite to coordinate and observe the explorations performed on November 1st and 2nd, 2010. The borings and probes were spaced at approximate 100-foot intervals and were advanced using 2-¼ inch solid stem augers drilled to a depth of 10 feet. Standard 24-inch long split spoon samples were obtained from the surface to a depth of 4 feet and at a depth of 5 to 7 feet. The explorations were located by Summit prior to drilling by taping from existing site features. Location of the explorations are shown on Figures 2A to 2C, attached in Appendix A. A summary table and logs of the explorations are attached in Appendix B.

Due to some uncertainty of exact locations for underground utilities, Dig Smart of Maine was subcontracted to verify that exploration locations were free from subsurface obstructions.

Two samples of subbase fill and one sample of general fill were tested for grain size analyses in accordance with ASTMD422. Summary of the gradation results are presented below:

LABORATORY GRADATION SUMMARY TABLE					
Sample	**Material**	**USCS**	**%Gravel**	**%Sand**	**%Fines**
R-3 (1'-2.5')	Subbase fill	SW	29.5	66.5	4.0
R-15 (0.9'-2.9')	General fill	SM	17.9	67.3	14.8
R-18 (0.5'-1.5')	Subbase fill	SP	41.4	54.6	4.0

Note: Based on ASTM D422 test and Unified Soil Classification System particle distribution.

3.0 Subsurface Conditions

In general, the soils encountered within the explorations consisted of bituminous ***pavement***, overlying ***subbase fill***, overlying ***general fill***, overlying ***alluvial deposits***.

Bituminous ***pavement*** encountered along Mill Street ranged from 3 to 8 inches in thickness and along Riverside Drive ranged from 5 to 9 inches in thickness.

Subbase fill underlying the pavement ranged from 6 to 18 inches in thickness and consists of brown gravelly sand with trace silt and is classified as SW or SP in accordance with the Unified Soil Classification System (USCS). SPT-N values for the subbase fill ranged from 38 to 117 blows per foot (bpf) and averaged 62 bpf, indicating very dense conditions. The subbase fill was generally damp.

General fill, where encountered, ranged from 1.1 to 3.5 feet in thickness and consists of brown sand with some gravel and little silt. The general fill is classified as SM in accordance with the USCS. SPT-N values for the general fill ranged from 27 to 95 bpf and averaged 49 bpf indicating dense conditions. The general fill was damp. A bituminous pavement layer, approximately 2 inches in thickness, was occasionally encountered between the subbase fill and general fill interface.

Alluvial deposits were encountered beneath the fill layer to a depth exceeding 10 feet. The alluvial deposits are visually classified as silty sand, sandy silt, or silty clay and are classified as SM, ML, or CL respectively, in accordance with the USCS. SPT-N values for the alluvial deposits ranged from 3 to 38 blows per foot (bpf) and averaged 13 bpf indicating loose to compact conditions. The alluvial deposits were generally damp to moist.

Bedrock was not encountered in the explorations performed to a depth of 10 feet.

Groundwater was not encountered within explorations performed at the site.

4.0 Pavement Section Recommendations

We anticipate finished grade will be at or near the existing roadway grade. Based on this, the subgrade will consist of existing roadway fill and/or alluvial deposits and is considered to be slightly to moderately frost susceptible. The pavement section design recommendations are based on the type of roadway, frost susceptibility of the subgrade soil, and the mean annual freezing index.

The mean annual freezing index for the Auburn area is estimated at 950 degree days. Based on the subgrade and mean annual freezing index, the anticipated mean annual frost penetration depth is 42 inches.

For the conditions discussed above, we recommend a minimum total pavement section thickness of 60% of the mean annual frost penetration depth, or 25 inches. We further recommend that the pavement section consist of the following materials.

MATERIAL	THICKNESS (in)	SPECIFICATION
Asphalt Surface Course	1.5	MDOT Superpave
Asphalt Binder Course	2.5	MDOT Superpave
Base Soil	3	MDOT 703.06 Type A
Subbase Soil	18	MDOT 703.06 Type D

We recommend the following gradation requirements be used for subbase and base gravel:

Sieve Designation	Percent Passing a 3-inch Sieve	
	MDOT Type A (Base)	MDOT Type D (Subbase)
3 Inch	100	100
2 Inch	100	--
½ Inch	45 – 70	--
¼ Inch	30 – 55	25 – 70
No. 40	0 – 20	0 – 30
No. 200	0 – 5	0 - 7

The material specifications are referenced to the 1995 Maine Department of Transportation Standard Specifications for Highways and Bridges and Maine Department of Transportation Standard Specifications, Revision of 2002.

The maximum particle size should be limited to 2 inches for MDOT Type A base and 6 inches for MDOT Type D subbase. All base and subbase soil should be placed in 3 to 12 inch lifts and be compacted to a minimum of 95 percent of its maximum dry density, determined in accordance with ASTM D1557, Modified Proctor Density.

We recommend the subgrade be proof-rolled prior to placing subbase or base. Proof rolling should consist of a minimum of three passes in a north-south direction and then three passes in an east-west direction using a large (10 ton operating weight) vibratory roller. If excessive soil moisture is present, we recommend proof rolling be performed in the static mode to prevent softening of localized subgrade silt and clay.

5.0 Earthwork Considerations

Grain size analyses were performed for 2 samples of the existing subbase fill and 1 sample of the general fill. Based on the gradation results, the existing subbase fill encountered 6 to 18 inches below pavement meets the intent of specifications for MDOT type D subbase gravel, but does not meet requirements for MDOT Type A base gravel. Gradation results indicate the general fill underlying subbase fill does not meet MDOT Type A or Type D due to the high fines content.

Due to the limited sample size from the boring explorations, we recommend that more representative sample(s) be obtained during construction to verify compliance with project specification requirements prior to reuse.

The base of excavations for new storm water structures in the sandy alluvium deposits have the potential to loosen during excavation. We recommend that base of excavations in the sandy alluvium be compacted with a vibratory plate compactor making a minimum of 3 passes in each of two perpendicular directions. Alternatively, crushed stone can be placed at the base of the excavation and tamped to lock the stone structure together.

Excavations below 4 feet, if necessary, should be sloped no greater than 1.5H to 1V for type C sandy soil. This slope is based on the current OSHA Excavation Guidelines.

We recommend that a qualified geotechnical consultant be retained to monitor and test soil materials used during construction and confirm that soil conditions and construction methods are consistence with this report. Summit would welcome the opportunity to provide this service.

6.0 Closure

This report has been prepared for the exclusive use of Woodard and Curran for the above referenced roadway reconstruction in Auburn, Maine. Our recommendations are based on professional judgment and generally accepted principles of geotechnical engineering. No other warranty is expressed or implied.

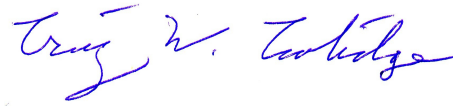
Analyses, evaluations, and recommendations are based on widely spaced explorations and project information provided by others. Some changes in subsurface conditions from those presented in this report may occur and would not be evident until construction. Should subsurface conditions or project construction information differ materially from those described in this report, Summit should be notified so that we can re-evaluate our recommendations.

It is recommended that this report be made available in its entirety to contractors for informational purposes and be incorporated in the construction Contract Documents.

We appreciate the opportunity to serve you during this phase of your project. If there are any questions or additional information is required, please do not hesitate to call.

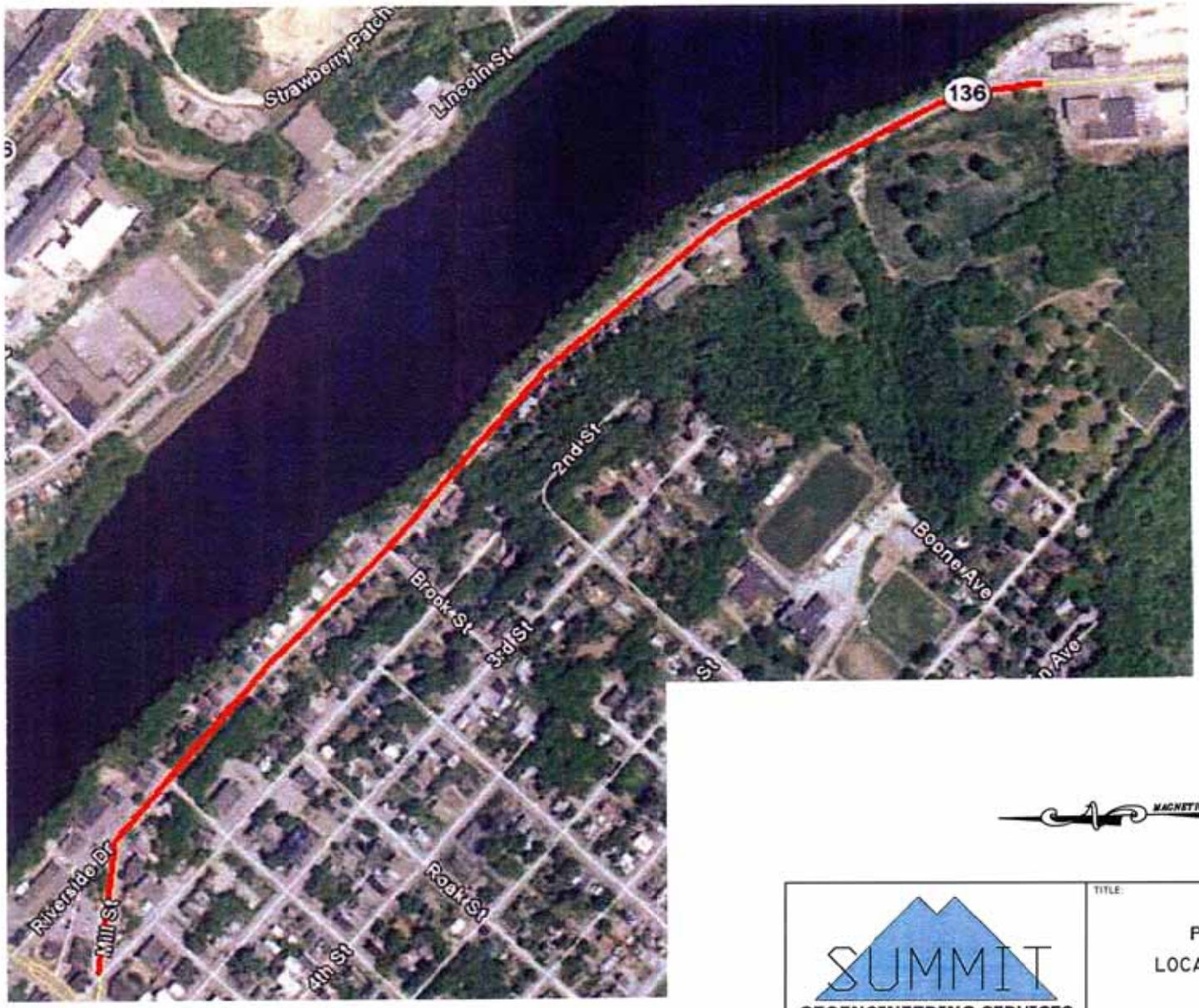
Sincerely yours,
Summit Geoengineering Services,

Adam C. Lyons, E.I.
Geotechnical Engineer



Craig W. Coolidge, P.E.
Vice President
Senior Geotechnical Engineer

APPENDIX A
EXPLORATION LOCATION FIGURES



MAGNETIC

SOURCE
GOOGLE EARTH IMAGE

KEY:
= PROJECT AREA

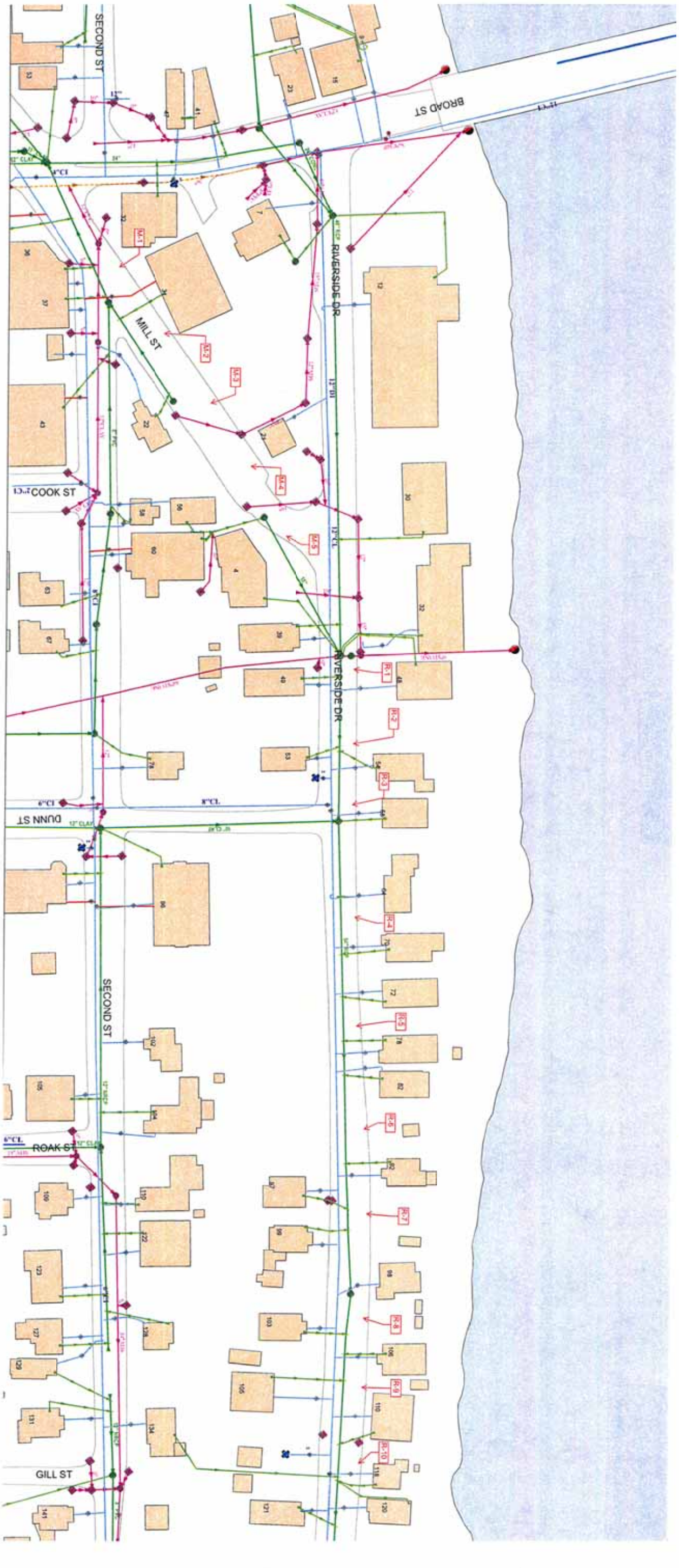
SUMMIT
GEOENGINEERING SERVICES
434 Cony Road
Augusta, Maine 04330
Tel.: (207) 318-7761
summitgeoeng.com

TITLE: PROJECT LOCATION PLAN

DRAWN:	SCALE:
ACL	NOT TO SCALE
FILE NO.: 10132	DATE: 11/9/10

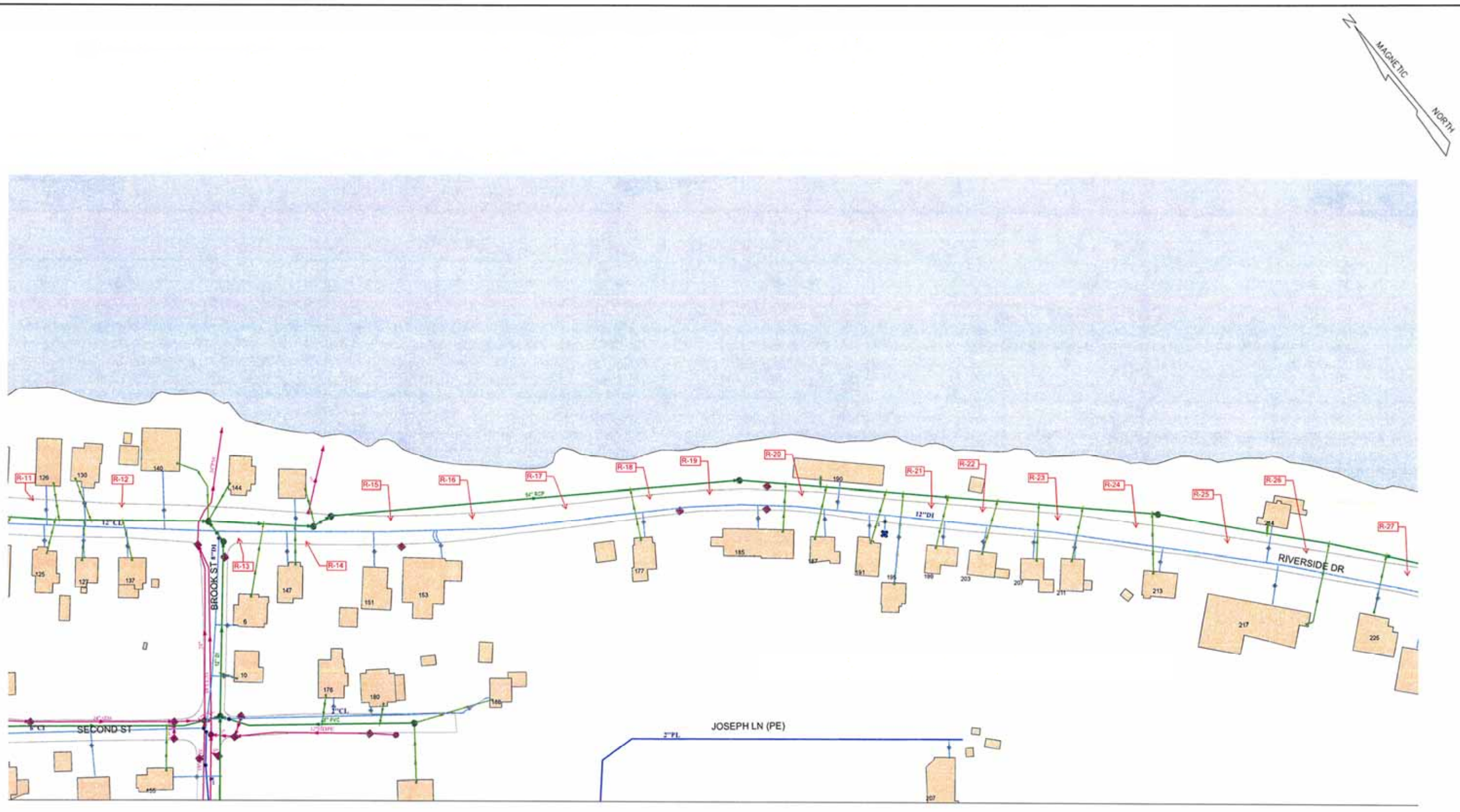
FIGURE: 1

PROJECT: ROADWAY EVALUATION - AUBURN, MAINE



REFERENCE: GIS UTILITY PLAN PROVIDED BY CITY OF AUBURN

FIGURE: 2A	PROJECT #: 10132	640 Main Street Lewiston, Maine 04240 Tel.: (207) 576-3313 summitgeoeng.com SUMMIT GEOENGINEERING SERVICES	TITLE: EXPLORATION LOCATION PLAN SCALE: NTS DRAWN BY: ACL DATE: 11-9-2010 APPR. BY: CWC
			PROJECT: ROADWAY EVALUATION RIVERSIDE DR. AND MILL ST. - AUBURN, ME CLIENT: WOODARD & CURRAN



REFERENCE: GIS UTILITY PLAN PROVIDED BY CITY OF AUBURN

PROJECT: ROADWAY EVALUATION
RIVERSIDE DR. AND MILL ST. - AUBURN, ME

CLIENT: WOODARD & CURRAN

TITLE: EXPLORATION LOCATION PLAN

SCALE: NTS

DRAWN BY: ACL

APPR. BY: CWC

DATE: 11-9-2010

Tel.: (207) 576-3313
summitgeoeng.com
640 Main Street
Lewiston, Maine 04240
SUMMIT GEOENGINEERING SERVICES

PROJECT #: 10132

FIGURE: 2B

REFERENCE: GIS UTILITY PLAN PROVIDED BY CITY OF AUBURN

PROJECT: ROADWAY EVALUATION
RIVERSIDE DR. AND MILL ST. - AUBURN, ME

CLIENT: WOODARD & CURRAN

TITLE: EXPLORATION LOCATION PLAN

SCALE: NTS

DRAWN BY: ACL

DATE: 11-9-2010

APPR. BY: CWC

640 Main Street
Lewiston, Maine 04240
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SUMMIT
GEOENGINEERING SERVICES

PROJECT #: 10132

FIGURE: 2C

APPENDIX B
SUBSURFACE CONDITIONS SUMMARY
PHOTO LOGS
EXPLORATION LOGS

SUBSURFACE CONDITIONS SUMMARY

Project Name: Roadway Evaluation
Location: Riverside Drive
Project Number: 10132
Exploration Dates: Nov. 1st and 2nd, 2010

Exploration No.	GPS Coordinates	Pavement	Subbase Fill	General Fill	Alluvium	Bedrock
R-1	44*05'14.4" N 70*13'13.2" W	0' - 0.8' (9")	0.8' - 2.5' (20")		2.5' - 10'	N/E
R-2	44*05'13.9" N 70*13'12.4" W	0' - 0.7' (8")	0.7' - 2.5' (21")		2.5' - 10'	N/E
R-3	44*05'13.4" N 70*13'11.8" W	0' - 0.8' (9")	0.8' - 1.8' (12")	1.8' - 3' (14")	3' - 10'	N/E
R-4	44*05'12.5" N 70*13'10.1" W	0' - 0.7' (8")	0.7' - 3' (28")		3' - 10'	N/E
R-5	44*05'11.8" N 70*13'08.8" W	0' - 0.7' (8")	0.7' - 3' (28")		3' - 10'	N/E
R-6	44*05'11.4" N 70*13'07.7" W	0' - 0.5' (6")	0.5' - 1.4' (11")	1.4' - 2.6' (14")	2.6' - 10'	N/E
R-7	44*05'10.8" N 70*13'06.8" W	0' - 0.7' (8")	0.7' - 2.5' (21")		2.5' - 10'	N/E
R-8	44*05'09.9" N 70*13'05.6" W	0' - 0.7' (8")	0.7' - 2.5' (21")		2.5' - 10'	N/E
R-9	44*05'09.3" N 70*13'04.6" W	0' - 0.5' (6")	0.5' - 1' (6")	1' - 2.5' (18")	2.5' - 10'	N/E
R-10	44*05'08.9" N 70*13'04.0" W	0' - 0.5' (6")	0.5' - 2' (18")		2' - 10'	N/E
R-11	44*05'08.3" N 70*13'02.8" W	0' - 0.7' (8")	0.7' - 2' (16")		2' - 10'	N/E
R-12	44*05'07.5" N 70*13'01.9" W	0' - 0.7' (8")	0.7' - 1.6' (11")	1.6' - 3' (17")	3' - 10'	N/E
R-13	44*05'06.8" N 70*13'00.5" W	0' - 0.6' (7")	0.6' - 2' (17")		2' - 10'	N/E
R-14	44*05'06.1" N 70*12'59.9" W	0' - 0.7' (8")	0.7' - 2.5' (21")		2.5' - 10'	N/E
R-15	44*05'05.5" N 70*12'58.7" W	0' - 0.8' (9")	0.8' - 1.6' (10")	1.6' - 3.5' (23")	3.5' - 10'	N/E
R-16	44*05'04.8" N 70*12'57.5" W	0' - 0.4' (5")	0.4' - 2.5' (25")		2.5' - 10'	N/E
R-17	44*05'04.3" N 70*12'56.6" W	0' - 0.5' (6")	0.5' - 2.5' (24")		2.5' - 10'	N/E
R-18	44*05'03.9" N 70*12'55.2" W	0' - 0.6' (7")	0.6' - 1.6' (12")	N/E	1.6' - 10'	N/E
R-19	44*05'03.2" N 70*12'54.4" W	0' - 0.8' (9")	0.8' - 2.5' (20")		2.5' - 10'	N/E
R-20	44*05'02.5" N 70*12'53.5" W	0' - 0.7' (8")	0.7' - 2' (16")		2' - 10'	N/E
R-21	44*05'01.5" N 70*12'51.7" W	0' - 0.7' (8")	0.8' - 2' (15")	N/E	2' - 10'	N/E
R-22	44*05'01.0" N 70*12'51.7" W	0' - 0.7' (8")	0.7' - 2' (16")		2' - 10'	N/E
R-23	44*05'00.6" N 70*12'50.4" W	0' - 0.5' (6")	0.5' - 2.5' (24")		2.5' - 10'	N/E
R-24	44*04'59.7" N 70*12'49.8" W	0' - 0.5' (6")	0.5' - 1.5' (12")	1.5' - 3' (18")	3' - 10'	N/E
R-25	44*04'59.1" N 70*12'48.8" W	0' - 0.6' (7")	0.6' - 2' (17")		2' - 10'	N/E
R-26	44*04'58.4" N 70*12'47.9" W	0' - 0.6' (7")	0.6' - 3' (29")		3' - 10'	N/E
R-27	44*04'57.5" N 70*12'47.0" W	0' - 0.4' (5")	0.4' - 1.3' (11")	1.3' - 2.5' (14")	2.5' - 10'	N/E
R-28	44*04'57.0" N 70*12'46.0" W	0' - 0.6' (7")	0.6' - 2.5' (23")		2.5' - 10'	N/E
R-29	44*04'56.1" N 70*12'45.0" W	0' - 0.5' (6")	0.5' - 2' (18")		2' - 10'	N/E
R-30	44*04'55.4" N 70*12'44.4" W	0' - 0.6' (7")	0.6' - 1.4' (10")	1.4' - 2.5' (13")	2.5' - 10'	N/E
R-31	44*04'54.7" N 70*12'43.9" W	0' - 0.5' (6")	0.5' - 2.5' (24")		2.5' - 10'	N/E
R-32	44*04'53.8" N 70*12'43.1" W	0' - 0.5' (6")	0.5' - 2.5' (24")		2.5' - 10'	N/E
R-33	44*04'52.8" N 70*12'42.4" W	0' - 0.5' (6")	0.5' - 2' (18")	2' - 5.5' (42")	5.5' - 10'	N/E
R-34	44*04'52.1" N 70*12'41.6" W	0' - 0.5' (6")	0.5' - 4' (42")		4' - 10'	N/E
R-35	44*04'51.4" N 70*12'41.1" W	0' - 0.5' (6")	0.5' - 4.5' (48")		4.5' - 10'	N/E
R-36	44*04'50.5" N 70*12'40.2" W	0' - 0.6' (7")	0.6' - 1.5' (11")	1.5' - 3' (18")	3' - 10 '	N/E
R-37	44*04'49.7" N 70*12'39.9" W	0' - 0.6' (7")	0.6' - 3.5' (35")		3.5' - 10'	N/E
R-38	44*04'48.7" N 70*12'39.3" W	0' - 0.5' (6")	0.5' - 2.5' (24")		2.5' - 10'	N/E
R-39	44*04'47.5" N 70*12'39.1" W	0' - 0.5' (6")	0.5' - 1.5' (12")	1.5' - 3' (18")	3' - 10'	N/E

NOTES:

Subbase fill and general fill transition undistinguishable at probe locations.
Subgrade generally consisted of bituminous pavement overlying fill overlying alluvium overlying bedrock (not encountered).
Groundwater seepage was not encountered within the boring/probe explorations during the exploration.
N/E = Not Encountered
(#) = thickness in inches

SUBSURFACE CONDITIONS SUMMARY

Project Name: Roadway Evaluation **Project Number:** 10132

Location: Mill Street **Exploration Dates:** November 1, 2010

Exploration No.	GPS Coordinates	Pavement	Subbase Fill	Alluvium	Bedrock
M-1	44*05'15.1" N 70*13'19.9" W	0' - 0.3' (3")	0.3' - 2' (20")	2' - 10'	N/E
M-2	44*05'14.8" N 70*13'18.8" W	0' - 0.5' (6")	0.5' - 1.5' (12")	1.5' - 10'	N/E
M-3	44*05'15.0" N 70*13'17.6" W	0' - 0.5' (6")	0.5' - 2' (18")	2' - 10'	N/E
M-4	44*05'14.8" N 70*13'16.0" W	0' - 0.5' (6")	0.5' - 2' (18")	2' - 10'	N/E
M-5	44*05'14.7" N 70*13'15.4" W	0' - 0.7' (8")	0.7' - 2' (16")	2' - 10'	N/E

NOTES:

Subgrade generally consisted of bituminous pavement overlying fill overlying alluvium overlying bedrock (not encountered).
Groundwater seepage was not encountered within the explorations
N/E = Not Encountered
(#) = layer thickness in inches

SUMMIT
GEOENGINEERING SERVICES

PHOTOGRAPHIC LOG

Client Name:	**Project No.**
Woodard & Curran	10132

Photo No. 1

Date: 11-1-2010

Site Location:

Riverside Drive
Auburn, Maine

Description:

Photograph of starting point on Riverside Drive near Mill Street intersection. (Mill street is veering to the left).

Photo No. 2

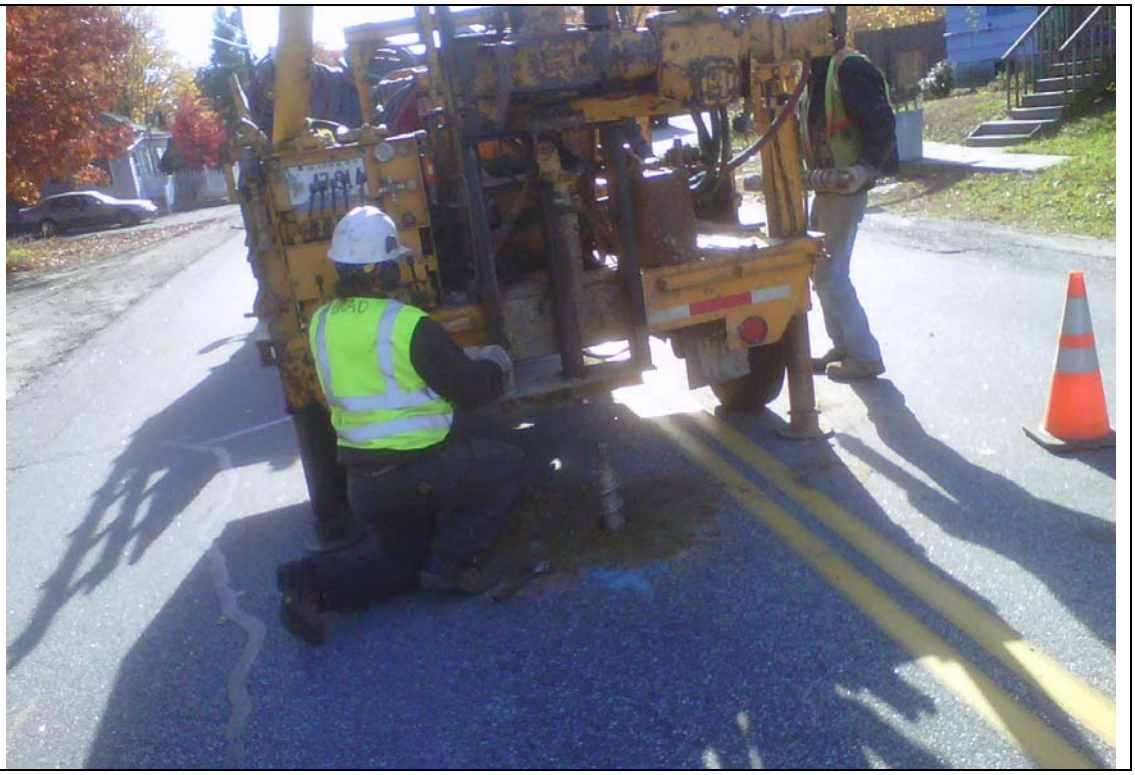
Date: 11-1-2010

Site Location:

Riverside Drive
Auburn, Maine

Description:

Photograph of probe advancement along Riverside Drive.



640 Main Street, Lewiston, Maine 04240, (207) 576-3313
434 Cony Road, Augusta, Maine 04330, (207) 318-7761

Photo No. 3	
Date: 11-2-2010	
Site Location: Riverside Drive Auburn, Maine	
Description: Photograph of Riverside Drive with the Oak Hill Cemetary on the right.	

Photo No. 4	
Date: 11-2-2010	
Site Location: Riverside Drive Auburn, Maine	
Description: Photograph of test boring R-39 at the end point on Riverside Drive near Gagne & Sons.	

EXPLORATION REPORT COVER SHEET

The exploration report has been prepared by the geotechnical engineer from both field and laboratory data. Differences between field logs and exploration reports may exist.

It is common practice in the soil and foundation engineering profession that field logs and laboratory data sheets not be included in engineering reports, because they do no represent the engineer's final opinion as to appropriate descriptions for conditions encountered in the exploration and testing work. The field logs will be retained in our office for review. Results of laboratory tests are generally shown on the borings logs or are described in the text of the report as appropriate.

Drilling and Sampling Symbols:

SS = Split Spoon
ST = Shelby Tube – 2" OD, disturbed
UT = Shelby Tube – 3" OD, undisturbed
HSA = Hollow Stem Auger
CS = Casing – size as noted
Sv = Vane Shear
PP = Pocket Penetrometer
RX = Rock Core – size as noted

Hyd = Hydraulic advance of probes
WOH = Weight of Hammer
WOR = Weight of Rod
GS = Grain Size Data
PI = Plasticity Index
LL = Liquid Limit
w = Natural Water Content
USCS = unified Soil Classification System

Water Level Measurements:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable groundwater levels. In impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations; additional evidence of groundwater elevations via observation or monitoring wells must be sought.

Gradation Description and Terminology:

Boulders:	Over 8 inches
Cobbles:	8 inches to 3 inches
Gravel:	3 inches to No.4 sieve
Sand:	No.4 to No. 200 sieve
Silt:	No. 200 sieve to 0.005 mm
Clay:	less than 0.005 mm

Trace:	Less than 5%
Little:	5% to 15%
Some:	15% to 25%
Silty, Sandy, etc.:	Greater than 25%

Density of Granular Soils and Consistency of Cohesive Soils:

CONSISTENCY OF COHESIVE SOILS		DENSITY OF GRANULAR SOILS	
SPT N-value blows/ft	**Consistency**	**SPT N-value blows/ft**	**Relative Density**
0 to 2	Very Soft	0 to 3	Very Loose
3 to 4	Soft	4 to 9	Loose
5 to 8	Firm	10 to 29	Compact
9 to 16	Stiff	30 to 49	Dense
17 to 32	Very Stiff	50 to 80	Very Dense
>32	Hard		

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	**M-1**
Location:	Mill Street	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Mill Street
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 3"		PAVEMENT
1					Brown Sandy GRAVEL, little Silt, damp, dense, SP-SM		0.3' FILL
2							
3					Brown Sand, some to little Gravel, little to some Silt, damp, SM		2' ALLUVIUM
4							
5							
6							
7							
8							
9					Olive brown Silty CLAY, damp to moist, CL		8'
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'15.1" N
70*13'19.9" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	**M-2**
Location:	Mill Street	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Mill Street
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1	S-1	24/17	0.5 - 2.5	48	Brown Sandy GRAVEL, little Silt, damp,		0.5'
				24	dense, SP-SM		SUBBASE FILL
2				27	Brown SAND, little Gravel and Silt, damp,		1.5'
				14	dense, SP-SM		ALLUVIUM
3	S-2	24/16	2.5 - 4.5	6			
				5	Orange brown Sandy SILT, damp, stiff, ML		3'
4				7			
				6			
5							
	S-3	24/10	5 - 7	5	Light brown SAND, trace Silt, damp, loose, SP		5'
6				4			
				4			
7				13			
					Denser drilling in to gravelly sand		7'
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'14.8" N
70*13'18.8" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	M-3
Location:	Mill Street	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Mill Street
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little to some Silt, damp, dense, SP-SM		0.5' FILL
2							
3					Brown fine Sand, little to trace Silt, damp, SP-SM		2' ALLUVIUM
4							
5					Olive brown Silty CLAY, damp, CL		4'
6							
7							
8					Denser drilling into gravelly sand		7'
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'15.0" N
70*13'17.6" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	M-4
Location:	Mill Street	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Mill Street
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, dense, SP-SM		0.5' FILL
2							
3					Brown fine SAND, little to trace Silt, damp, SP-SM		2' ALLUVIUM
4							
5							
6							
7					Olive brown and slightly mottled Silty CLAY, damp to moist, CL		6'
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'14.8" N
70*13'16.0" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	M-5
Location:	Mill Street	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Mill Street
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1	S-1	24/14	0.7 - 2.7	26	Brown Gravelly SAND, little Silt, damp,		0.7'
				28	dense, SP-SM		SUBBASE FILL
2				24			
				21	Light brown fine SAND, trace to little Silt, damp,		2'
3	S-2	24/10	2.7 - 4.7	21	dense, SP-SM		ALLUVIUM
				24			
4				47			
				23			
5							
	S-3	24/16	5 - 7	6	Olive brown Silty CLAY, damp, very stiff, CL		5'
6				9		pp > 9,000 psf	
				11			
7				16			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:
pp = pocket penetrometer
Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Location:
44*05'14.7" N
70*13'15.4" W

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-1
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1					Bituminous Pavement = 9"		PAVEMENT
2					Brown SAND, little Gravel and Silt, damp, SP-SM		0.8' FILL
3					Brown SAND, little to some Silt, damp, SM		2.5' ALLUVIUM
6					Brown Gravelly SAND, little to some Silt, SM cobble at 6'		5'
7					Brown SAND, some Silt, damp, SM		6'
11					End of exploration, no refusal		10'

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'14.4" N
70*13'13.2" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-2
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown SAND, little Gravel and Silt, damp, SP-SM		0.7'
2							
3					Brown SAND, little to some Silt, damp, SM		2.5' ALLUVIUM
4							
5							
6							
7					Orange brown Sandy SILT, damp, ML		6'
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'13.9" N
70*13'12.4" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-3
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1					Bituminous Pavement = 9"		PAVEMENT
2	S-1	24/15	0.8 - 2.8	21	Light brown SAND, some Gravel, trace Silt, humid,	Gravel = 29.5%	0.8'
				25	dense, SW	Sand = 66.5%	SUBBASE FILL
3				19	Brown Sand, some Silt, trace Gravel, damp,	Fines = 4.0%	1.8'
				18	compact, SM		GENERAL FILL
4	S-2	24/12	2.8 - 4.8	14	Light brown SAND, little to trace Silt, trace Gravel,		3'
				10	humid, compact, SP-SM		ALLUVIUM
5				15			
				20			
6	S-3	24/10	5 - 7	19	Brown Gravelly SAND, littl e Silt, damp,		5'
				20	dense, SP-SM		
7				18			
				16			
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'13.4" N
70*13'11.8" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-4
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.7' FILL
2							
3							
4					Brown Gravelly SAND, little to some Silt, damp, SM		3' ALLUVIUM
5							
6					Brown SAND, little Gravel, little to some Silt, damp, SM		5.5'
7							
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'12.5" N
70*13'10.1" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-5
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Dense drilling into Gravelly SAND, little Silt, damp, SP-SM		0.7' FILL
2							
3							
4					Brown Silty fine SAND, damp, SM		3' ALLUVIUM
5							
6							
7							
8							
9					Olive brown Silty CLAY, damp, CL		8.5'
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'11.8" N
70*13'08.8" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-6
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1	S-1	24/9	0.6 - 2.6	44	Brown SAND, some Gravel, little Silt, humid,		0.5'
				29	dense, SP-SM		SUBBASE FILL
2				21	Brown Sand, some Silt, trace Gravel, damp,		1.4'
				13	compact, SM		GENERAL FILL
3	S-2	24/18	2.6 - 4.6	6	Light brown fine SAND, little Silt, humid,		2.6'
				5	compact, SP-SM		ALLUVIUM
4				5			
				4			
5							
	S-3	24/16	5 - 7	5	Same as above, humid, loose, SP-SM		
6				3			
				4			
7				4			
8							
					Olive brown Silty CLAY, moist, firm, CL		8'
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'11.4" N
70*13'07.7" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-7
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.7' FILL
2							
3					Brown fine SAND, little to some Silt, damp, SP-SM		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'10.8" N
70*13'06.8" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-8
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.7' FILL
2							
3					Brown SAND, little Gravel and Silt, damp, SP-SM		2.5' ALLUVIUM
4							
5							
6					Brown SA ND, some Gravel, little to some Silt, damp, SM		4.8'
7					Brown SAND, little Gravel, little to some Silt, damp, SM		6.5'
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'09.9" N
70*13'05.6" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-9
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp,		0.5' SUBBASE FILL
	S-1	18/10	1 - 2.5	21	compact, SP-SM		1'
2				14	Light brown SAND, some Silt, little to trace Gravel,		GENERAL FILL
				9	damp, compact, SM		
3	S-2	24/14	2.5 - 4.5	8	Orange brown SILT, little Sand, damp, firm, ML		2.5'
				9			ALLUVIUM
4				4			
				3			
5							
	S-3	24/16	5 - 7	3	Same as above, grading to olive brown SILT, little		
6				1	fine Sand, damp to moist, firm, ML		
				3			
7				3			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'09.3" N
70*13'04.6" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-10
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.5' FILL
2							
					Brown Silty fine SAND, trace Gravel, damp, SM		2' ALLUVIUM
3							
4							
5							
6							
					Gravel layer 6' to 6.3'		
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'08.9" N
70*13'04.0" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-11
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.7' FILL
2							
3					Brown Silty fine SAND, trace Gravel, damp, SM		2' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'08.3" N
70*13'02.8" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-12
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1	S-1	24/13	0.7 - 2.7	31	Brown Sandy GRAVEL, trace Silt, humid, very dense, GP		0.7' SUBBASE FILL
				31			
2				22	Brown Sandy GRAVEL, little silt, humid to damp, compact, GP-GM		1.6' GENERAL FILL
				15			
3	S-2	24/16	2.7 - 4.7	10			
				8	Light brown SAND, trace Silt, damp, compact, SP		3' ALLUVIUM
4				9			
				8			
5							
	S-3	24/7	5 - 7	3			
6				3			
				4			
7				10	Dark brown SAND, some Gravel, little to some Silt, damp, compact, SM		6.5'
8							
9							
10					Grades to little Gravel with depth		
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'07.5" N
70*13'01.9" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-13
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1					Brown Sandy GRAVEL, little Silt, damp, GP-GM		0.6' FILL
2							
3					Brown SAND, little to some Gravel and Silt, damp, SM		2' ALLUVIUM
4							
5							
6							
7							
8							
9					Olive gray Silty SAND, little to trace Gravel, moist, SM		8'
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'06.8" N
70*13'00.5" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-14
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown Sandy GRAVEL, little Silt, damp, GP-GM		0.7' FILL
2							
3					Brown Silty SAND, little Gravel, damp, SM		2.5' ALLUVIUM
4							
5							
6							
					Thin Gravel lense at 6'		
7							
8					Thin Gravel lense at 7.5'		
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'06.1" N
70*12'59.9" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-15
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 9"		PAVEMENT
1							
	S-1	24/16	0.9 - 2.9	34	Brown Gravelly SAND, trace Silt, humid, dense, SP		0.8' SUBBASE FILL
2				36	2" thick asphalt layer	Gravel = 17.9%	1.6'
				44	Brown SAND, some Gravel, little Silt, damp, very	Sand = 67.3%	GENERAL FILL
3				51	dense, SM	Fines = 14.8%	
	S-2	24/11	2.9 - 4.9	31			
4				18	Brown SILT, little fine Sand, damp, very stiff, ML		3.5'
				18			ALLUVIUM
5				15			
	S-3	24/19	5 - 7	3	Same as above, slightly mottled, damp, firm, ML		
6				3			
				4			
7				4			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'05.5" N
70*12'58.7" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-16
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/1/2010	Date Completed: 11/1/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/1/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 5"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.4' FILL
2							
3					Light brown Silty fine SAND, damp, SM		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'04.8" N
70*12'57.5" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-17
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.5' FILL
2							
3					Light brown Silty fine SAND, damp, SM		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'04.3" N
70*12'56.6" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-18
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1	S-1	24/16	0.6 - 2.6	20	Brown Gravelly SAND, trace Silt, humid,	Gravel = 41.4%	0.6'
				21	dense, SP	Sand = 54.6 %	SUBBASE FILL
2				17	Light brown Silty fine SAND, damp, compact, SM	Fines = 4.0%	1.6'
				13			ALLUVIUM
3	S-2	24/14	2.6 - 4.6	7	Same as above, damp, compact, SM		
				7			
4				8			
				8			
5							
	S-3	24/14	5 - 7	2	Same as above, damp, loose, SM		
6				2			
				2			
7				2			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'03.9" N
70*12'55.2" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-19
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1					Bituminous Pavement = 9"		PAVEMENT
2					Brown Gravelly SAND, little Silt, damp, SP-SM		0.8' FILL
3					Light brown fine SAND, some Silt, damp, SM		2.5' ALLUVIUM
4					Thin Gravel lense at 3.5'		
5							
6							
7							
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'03.2" N
70*12'54.4" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-20
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.7' FILL
2							
3					Light brown fine SAND, some Silt, damp, SM		2' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'02.5" N
70*12'53.5" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-21
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 9"		PAVEMENT
1							
	S-1	24/13	0.9 - 2.9	20	Brown SAND, some Gravel, trace Silt, humid,		0.8'
2				18	dense, SP		SUBBASE FILL
				10	Light brown fine SAND, some Silt, damp,		2'
3				10	compact, SM		ALLUVIUM
	S-2	24/12	2.9 - 4.9	6	Same as above, damp, loose, SM		
4				5			
				3			
5				3			
	S-3	24/7	5 - 7	3	Same as above, damp, loose, SM		
6				2			
				1			
7				4			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'01.5" N
70*12'51.7" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-22
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 8"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.7' FILL
2							
3					Light brown fine SAND, some Silt, damp, SM		2' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'01.0" N
70*12'51.7" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-23
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.5' FILL
2							
3					Light brown fine SAND, some Silt, damp, SM		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*05'00.6" N
70*12'50.4" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-24
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Sandy GRAVEL, trace Silt, damp, very		0.5'
	S-1	24/11	0.9 - 2.9	58	dense, GP		SUBBASE FILL
2				34	Dark brown SAND, some Gravel and Silt, damp, very		1.5'
				33	dense, SM		GENERAL FILL
3				20			
	S-2	24/19	2.9 - 4.9	3	Light brown fine SAND, some Silt, damp,		3'
4				4	loose, SM		ALLUVIUM
				3			
5				3			
	S-3	24/20	5 - 7	4	Same as above, damp, loose, SM		
6				4			
				5			
7				4			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'59.7" N
70*12'49.8" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-25
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1					Brown Sand, some Gravel, little Silt, damp, SP-SM		0.6' FILL
2							
3					Orange brown Silty SAND, damp, SM		2' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'59.1" N
70*12'48.8" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-26
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.6' FILL
2							
3							
4					Orange brown Silty SAND, damp, SM		3' ALLUVIUM
5							
6							
7							
8					Light brown SAND, some Silt, damp, SM		7'
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'58.4" N
70*12'47.9" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-27
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 5"		PAVEMENT
1	S-1	24/14	0.5 - 2.5	16	Brown Gravelly SAND, trace Silt, damp,		0.4'
				22	dense, SP		SUBBASE FILL
2				16	Dark brown SAND, some Gravel and Silt, damp,		1.3'
				11	compact, SM		GENERAL FILL
3	S-2	24/14	2.5 - 4.5	6	Light brown Sandy SILT, damp, firm, ML		2.5'
				4			ALLUVIUM
4				4			
				5			
5							
	S-3	24/12	5 - 7	2	Same as above, damp, firm, ML		
6				2			
				2			
7				3			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'57.5" N
70*12'47.0" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-28
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.6' FILL
2							
3					Light brown Silty SAND, damp, SM		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9					Light brown Silty Sand, little Gravel, damp, SM		8'
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'57.0" N
70*12'46.0" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-29
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.5' FILL
2							
3					Light brown Silty SAND, damp, SM		2' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'56.1" N
70*12'45.0" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-30
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1	S-1	24/13	0.6 - 2.6	53	Brown Sandy GRAVEL, trace Silt, damp, very		0.6'
				64	dense, GP		SUBBASE FILL
2				45	Dark brown SAND, some Gravel and Silt, damp,		1.4'
				45	very dense, SM		GENERAL FILL
3	S-2	24/16	2.6 - 4.6	12	Brown SAND, trace Silt, damp, compact, SP		2.5'
				8	Olive brown slightly mottled SILT, little to some Clay,		ALLUVIUM
4				6	damp, stiff, ML		
				8			
5							
	S-3	24/18	5 - 7	4	Olive brown and slightly mottled SILT, little to some		
6				5	Sand and Clay, moist, stiff, ML	pp = 4,000 psf	
				5			
7				6			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:
pp = pocket penetrometer
Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Location:
44*04'55.4" N
70*12'44.4" W

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-31
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.5' FILL
2							
3					Olive brown SILT, some Clay, little Sand, moist, ML		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'54.7" N
70*12'43.9" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-32
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.5' FILL
2							
3					Olive brown Clayey SILT, trace Sand, moist, ML		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9					Light brown Silty fine SAND, damp to moist, SM		8'
10							
11					End of exploration, no refusal		10'
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'53.8" N
70*12'43.1" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-33
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1	S-1	14/10	0.5 - 1.7	32	Brown Sandy GRAVEL, trace Silt, damp, very dense, GP		0.5' SUBBASE FILL
				39			
2				50/2"			
	S-2	24/17	2 - 4	24	Brown Sandy GRAVEL, trace Silt, damp, very dense, GP		2' GENERAL FILL
3				26			
				32			
4				35	Dark brown Gravelly SAND, little to some Silt, damp, very dense, SM		
5							
	S-3	24/14	5 - 7	20			
6				16	Olive brown and mottled Sandy Silt, damp, very stiff, ML		5.5' ALLUVIUM
				10			
7				11			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'52.8" N
70*12'42.4" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-34
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.5' FILL
2							
3					Grading to SM		
4							
					Orange brown Sandy SILT, damp, ML		4' ALLUVIUM
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'52.1" N
70*12'41.6" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-35
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown Gravelly SAND, little Silt, damp, SP-SM		0.5' FILL
2							
3					Grading to SM		
4							
5					Brown to light brown Silty SAND, damp, SM		4.5' ALLUVIUM
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'51.4" N
70*12'41.1" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-36
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1	S-1	24/15	0.7 - 2.7	25	Brown Sandy GRAVEL, trace Silt, damp, very dense, GP		0.6' SUBBASE FILL
				38			
2				28	Dark brown SAND, some Gravel and Silt, damp, compact, SM		1.5' GENERAL FILL
				22			
3	S-2	24/16	2.7 - 4.7	20			
				8	Brown Silty SAND, damp, compact, SM		3' ALLUVIUM
4				6			
				5			
5							
	S-3	24/13	5 - 7	2	Light brown SILT, some Sand, damp, firm, ML		5'
6				2			
				3			
7				2			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'50.5" N
70*12'40.2" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-37
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 7"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.6' FILL
2							
3							
4					Brown SILT, some Sand, damp, ML		3.5' ALLUVIUM
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'49.7" N
70*12'39.9" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-38
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1					Brown SAND, some Gravel, little Silt, damp, SP-SM		0.5' FILL
2							
3					Brown SILT, some to little Sand, damp, ML		2.5' ALLUVIUM
4							
5							
6							
7							
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'48.7" N
70*12'39.3" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Roadway Evaluation	Boring #:	R-39
Location:	Riverside Drive	Project #:	10132
	Auburn, Maine	Sheet:	1 of 1
		Chkd by:	CWC

Drilling Co:	Maine Test Borings	Boring Location:	Riverside Drive
Personnel:	Brad Enos	Elevation:	Not Available
Summit Staff:	Adam Lyons, E.I.	Date started: 11/2/2010	Date Completed: 11/2/2010

DRILLING METHOD		SAMPLER	
Vehicle:	Trailor	Type:	24" SS
Model:	Mobile B-47	Hammer:	140 lb
Method:	2 1/4" SSA	Fall:	30"

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
11/2/2010	N/E	N/E	None Encountered

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	Blows/6 in.	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
					Bituminous Pavement = 6"		PAVEMENT
1	S-1	24/12	0.5 - 2.5	31	Brown Sandy GRAVEL, trace Silt, damp, very dense, GP		0.5' SUBBASE FILL
				28			
2				28	Brown SAND, some Gravel, little to some Silt, damp, very dense, SM		1.5' GENERAL FILL
				26			
3	S-2	24/15	2.5 - 4.5	14			
				10	Brown SILT, some SAND, damp, very stiff, ML		3' ALLUVIUM
4				7			
				6			
5							
	S-3	24/17	5 - 7	2	Olive brown and slightly mottled SILT, little Sand, damp, firm, ML		5'
6				2			
				3			
7				3			
8							
9							
10							
					End of exploration, no refusal		10'
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Granular Soils		Cohesive Soils		% Composition	
Blows/ft.	Density	Blows/ft.	Consistency		
0-4	V. Loose	<2	V. soft		
4-10	Loose	2-4	Soft	<5%	trace
10-30	Compact	4-8	Firm	5-15	little
30-50	Dense	8-15	Stiff	15-25	some
>50	V. Dense	15-30	V. Stiff	>25	and
		>30	Hard		

NOTES:

Location:
44*04'47.5" N
70*12'39.1" W

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

APPENDIX C
LABORATORY RESULTS

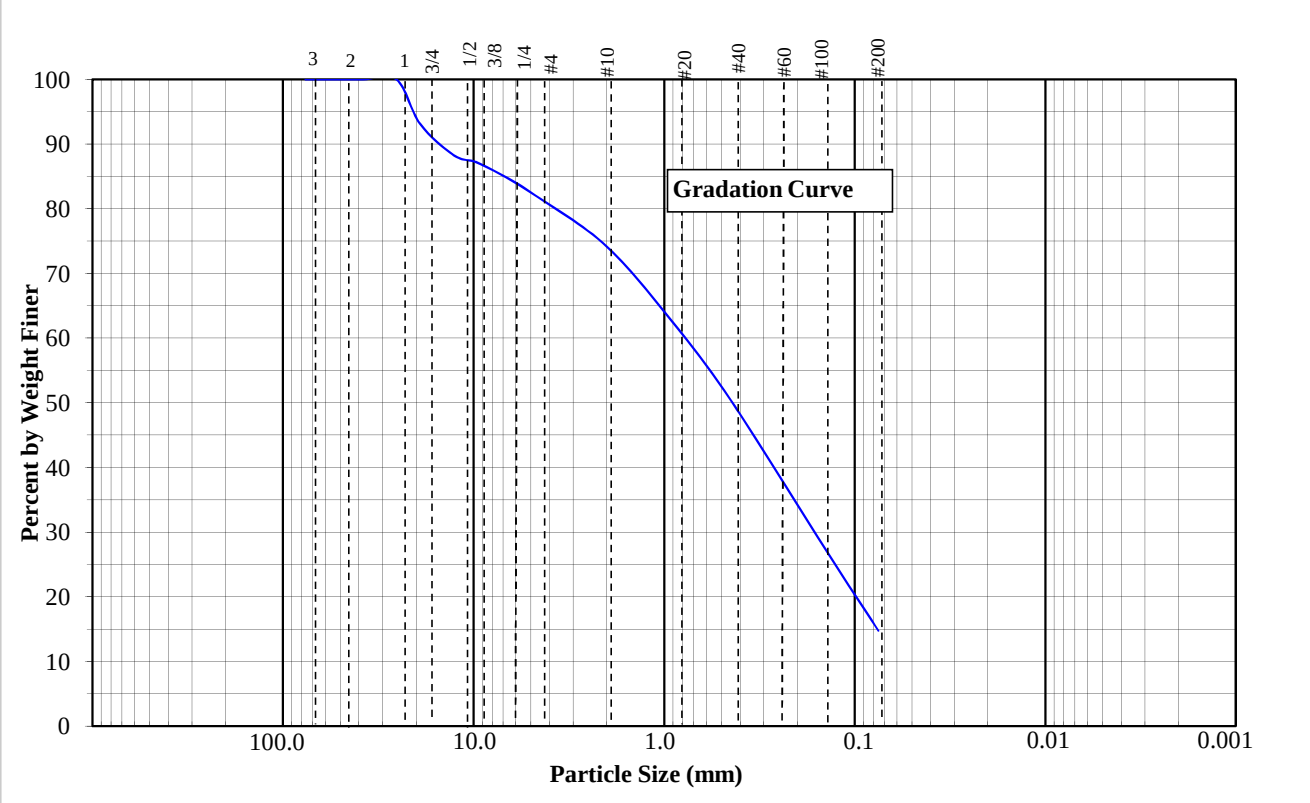
SUMMIT ENVIRONMENTAL CONSULTANTS, INC.
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax:(207) 626-9094

GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME:	Auburn Roadway Evaluation	PROJ #:	14381
CLIENT:	Summit Geoengineering Services	SUMMIT SAMPLE:	S1
SOIL DESCRIPTION:	Sand, some gravel, little silt (SM)	INTENDED USE:	Investigation
SOURCE:	R-15, 0.9' to 2.9'	TECHNICIAN:	M.Gilman
DATE:	11/04/10		

DATA

PARTICLE SIZE mm		% BY WT FINER
76.20	(3 in)	100.0
50.80	(2 in)	100.0
38.10	(1-1/2 in)	100.0
25.40	(1 in)	100.0
19.05	(3/4 in)	93.1
12.70	(1/2 in)	88.3
9.53	(3/8 in)	87.1
6.35	(1/4 in)	84.4
4.75	(No. 4)	82.1
2.00	(No. 10)	74.2
0.85	(No. 20)	61.5
0.43	(No. 40)	49.5
0.15	(No. 100)	28.4
0.075	(No. 200)	14.8



REMARKS:

Reviewed: Darrell A. Gilman, CMT Manager
Date: 11/4/10

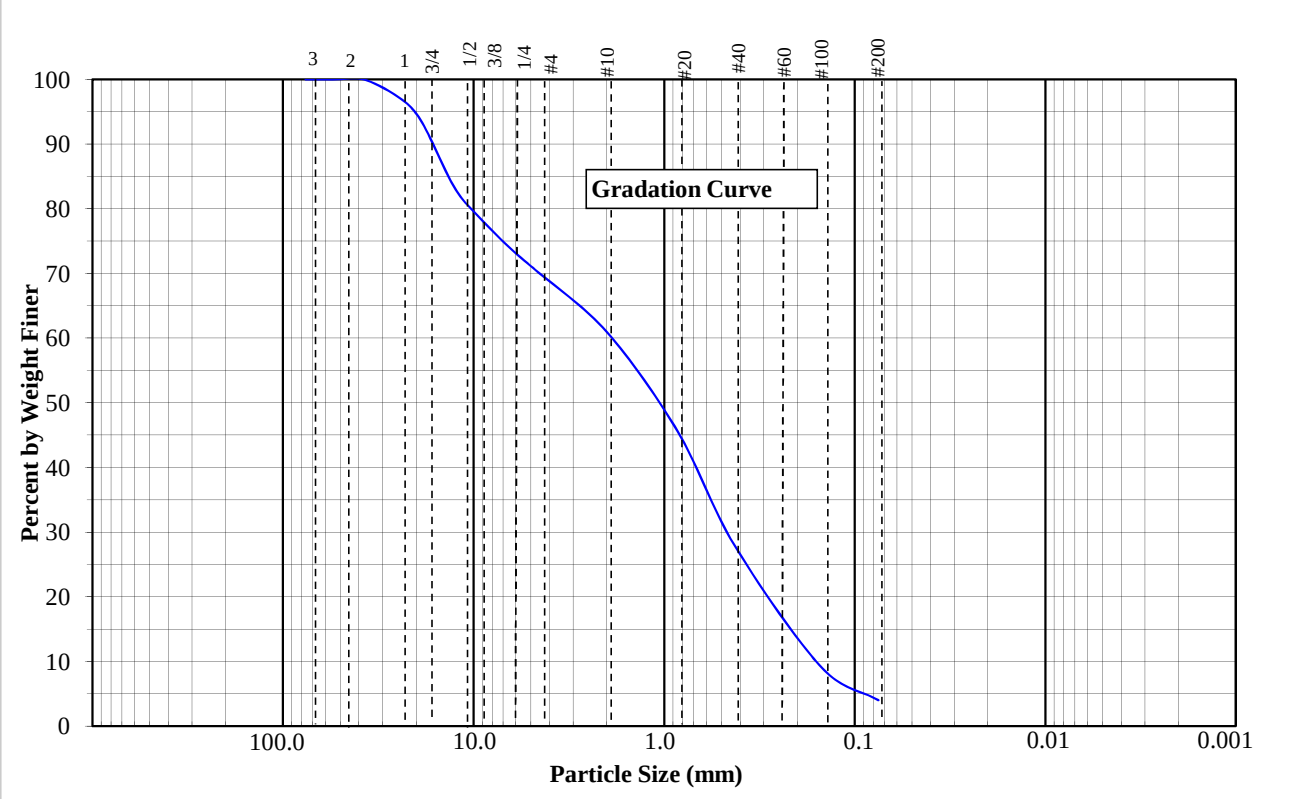
SUMMIT ENVIRONMENTAL CONSULTANTS, INC.
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax:(207) 626-9094

GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME:	Auburn Roadway Evaluation	PROJ #:	14381
CLIENT:	Summit Geoengineering Services	SUMMIT SAMPLE:	S2
SOIL DESCRIPTION:	Gravelly sand, trace silt (SW)	INTENDED USE:	Investigation
SOURCE:	R-3, 1'-2.5'	TECHNICIAN:	M.Gilman
DATE:	11/04/10		

DATA

PARTICLE SIZE mm		% BY WT FINER
76.20	(3 in)	100.0
50.80	(2 in)	100.0
38.10	(1-1/2 in)	100.0
25.40	(1 in)	97.4
19.05	(3/4 in)	93.8
12.70	(1/2 in)	83.4
9.53	(3/8 in)	78.9
6.35	(1/4 in)	73.7
4.75	(No. 4)	70.5
2.00	(No. 10)	60.9
0.85	(No. 20)	45.6
0.43	(No. 40)	27.8
0.15	(No. 100)	9.1
0.075	(No. 200)	4.0



REMARKS:

Reviewed: Darrell A. Gilman, CMT Manager
Date: 11/5/10

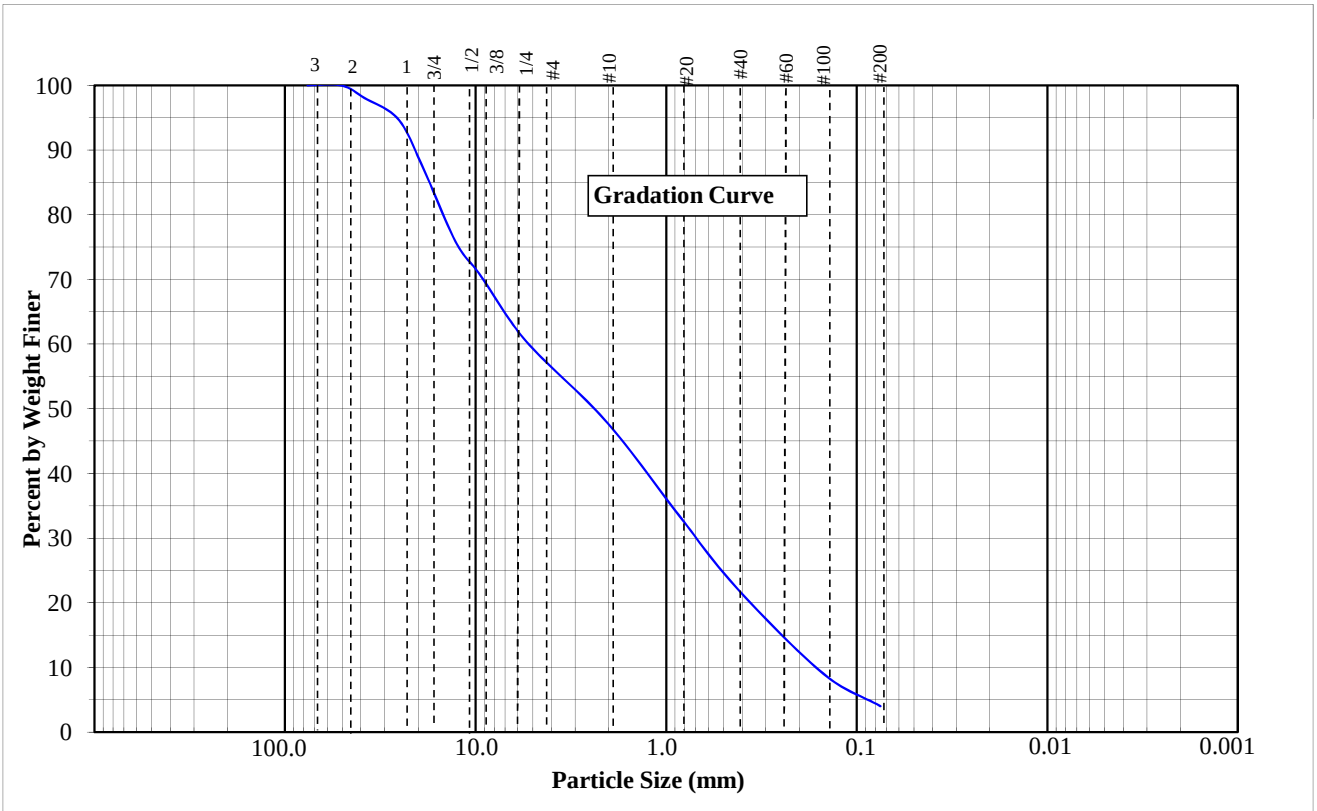
SUMMIT ENVIRONMENTAL CONSULTANTS, INC.
434 Cony Road, Augusta, Maine 04330
Phone:(207) 621-8334 Fax:(207) 626-9094

GRAIN SIZE ANALYSIS - ASTM D422

PROJECT NAME:	Auburn Roadway Evaluation	PROJ #:	14381
CLIENT:	Summit Geoengineering Services	SUMMIT SAMPLE:	S3
SOIL DESCRIPTION:	Gravelly sand, trace silt (SP)	INTENDED USE:	Investigation
SOURCE:	R-18, 0.5' to 1.5'	TECHNICIAN:	M.Gilman
DATE:	11/04/10		

DATA

PARTICLE SIZE mm		% BY WT FINER
76.20	(3 in)	100.0
50.80	(2 in)	100.0
38.10	(1-1/2 in)	98.0
25.40	(1 in)	94.7
19.05	(3/4 in)	87.5
12.70	(1/2 in)	75.7
9.53	(3/8 in)	70.8
6.35	(1/4 in)	63.0
4.75	(No. 4)	58.6
2.00	(No. 10)	47.6
0.85	(No. 20)	33.4
0.43	(No. 40)	22.2
0.15	(No. 100)	9.1
0.075	(No. 200)	4.0



REMARKS:

Reviewed: Darrell A. Gilman, CMT Manager
Date: 11/5/10

RIVERSIDE DRIVE RECONSTRUCTION

CITY OF AUBURN, MAINE

WIN 016612.00

APPENDIX B - SUMMARY OF LIMITED SUBSURFACE INVESTIGATION MEMORANDUM

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM TO FILE

TO: David Senus
FROM: Karl Kasper and Karen Lambek
DATE: 4/9/2012
RE: Summary of Limited Subsurface Investigation for Riverside Drive Reconstruction Project (PIN 016612.00)

Karen Lambek and Leah Sturm of Woodard & Curran (W&C) conducted a limited subsurface investigation along Riverside Drive (¾ miles of roadway from Broad Street to # 217 Riverside) and Mill Street (from Broad Street to Riverside Drive) on January 26 and 30, 2012.

Project Goals. The project goals for this subsurface investigation include the following:

- Confirm and quantify the presence of contaminants within the study area;
- Develop volume estimates of contaminated soil for soil management and disposal;
- Develop a Soil Management Plan, which will address worker safety as it relates to the excavation and disposal of contaminated soil that may be encountered during the reconstruction project; and
- Develop the basis of information for Maine Department of Transportation (MDOT) to prepare Special Provision 203.

Subsurface Investigation. On January 26 and 30, 2012, a total of 21 Geoprobe® borings were completed by Environmental Project, Inc. (EPI) to assess the potential presence of contamination. Locations were selected based on results of our file review. Properties of interest were identified based on past or current property use, spill reports, underground storage tank (UST) removals, and locations along Mill Street with naphthalene odors encountered during the geotechnical investigation conducted in November 2010. Borings were completed to a maximum depth of 4 feet (6 feet in one location of storm drain installation) below ground surface (bgs). One soil sample was collected per location generally between 0 and 2 ft bgs; the depth selected for sampling was based on odors encountered or where photoionization detector (PID) readings were highest. The sample was screened with a PID for gasoline contaminants and an oleophilic dye shake test was performed at each location to determine the presence of fuel oil in subsurface soil. Soil that did not show visual or olfactory signs of contamination, had no to low PID levels, and had negative oleophilic dye shake test results were not submitted for analysis. Samples that indicated contamination were submitted to Katahdin Analytical Laboratory for analysis of hazardous waste parameters required to characterize the contaminated material for off-site disposal (Extractable Petroleum Hydrocarbons [EPH] and Volatile Petroleum Hydrocarbons [VPH]), volatile organic compounds [VOCs], and total lead).

Results. Eight samples were <u>not</u> submitted for laboratory analysis for the previously stated reasons; the rationale for sampling at each location is noted:

- RD-1 (Dunkin' Donuts; former service station)
- RD-4 (Rollodrome; UST removal)
- RD-5 (Al's Auto Body; current use as an auto repair shop)
- RD-10 (L/A Radiator Works; identified by DOT, UST removal, current use as an auto repair shop)
- RD-11 (Residence; former location of an auto repair shop)
- RD-13 (Young Guns Service Station; identified by DOT, current use as an auto repair shop)
- RD-16 (Foreign Car Service; identified by DOT, spill report, UST removal, current use)
- RD-17 (Brad's Precision Auto Repair; current use as an auto repair shop)

Of the 13 samples submitted for analysis, one sample (RD-2) did not contain concentrations in exceedance of Maine Remedial Action Guidelines (RAGs). Twelve samples had concentrations of at least one constituent in exceedance of Maine RAGs. The table below summarizes the Maine RAG exceedances. Polycyclic aromatic hydrocarbon (PAH) compounds (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene) exceeded the RAGs for the 'Excavation or Construction Worker' scenario. The RAGs for 'Residential' exposure were also evaluated to determine acceptable disposal practices, and whether excavated soil could be utilized offsite in residential applications. The following compounds exceeded the 'Residential' RAGs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, C11-C22 aromatics, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Although naphthalene odors were encountered in the majority of the samples submitted for laboratory analysis, results show that naphthalene did not exceed Maine RAGs.

The following table summarizes the RAG exceedances that were encountered during the subsurface investigation by boring location. The locations are presented on the attached figures.

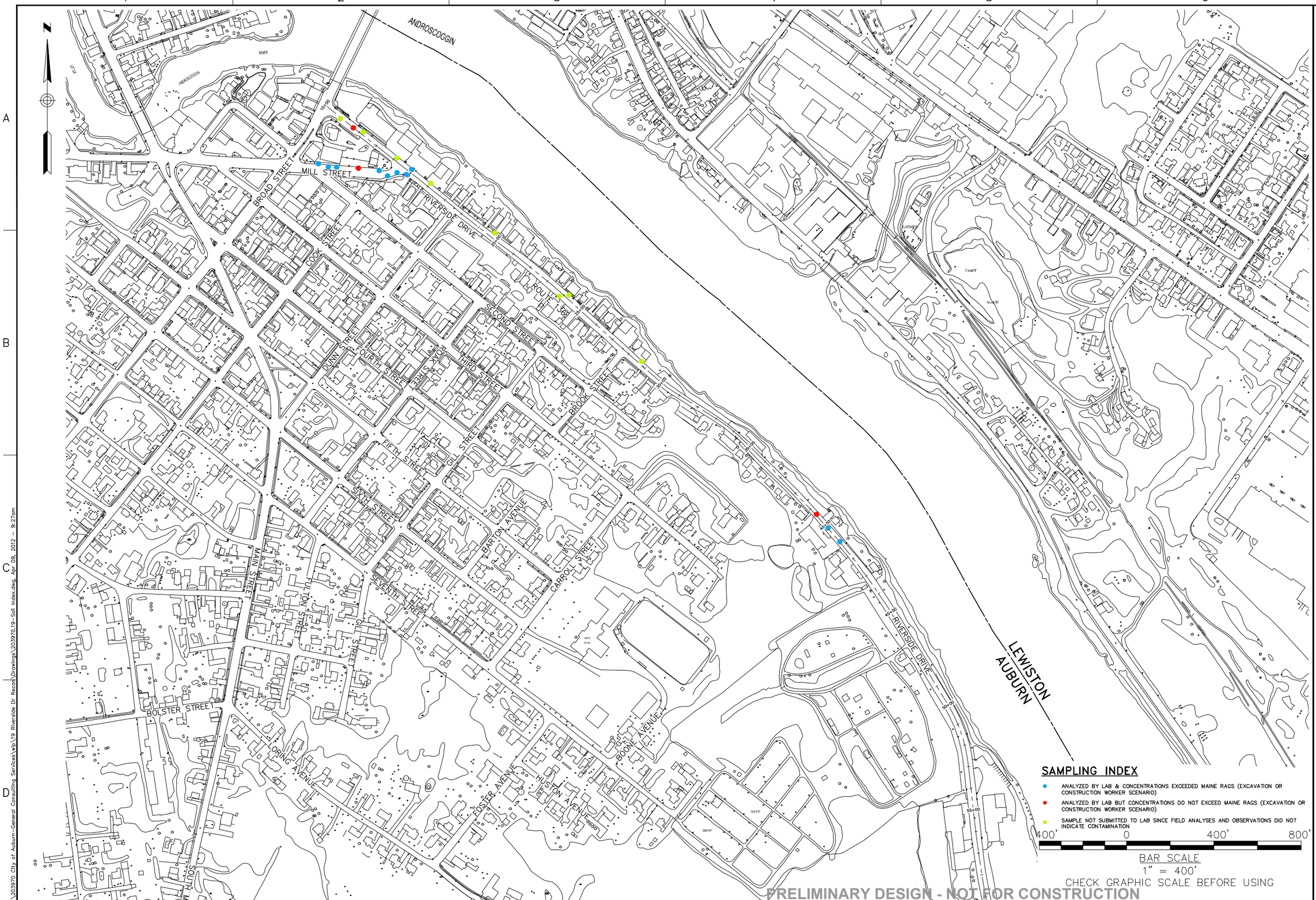
Boring Location	Station #	Figure # (attached)	Sample Depth (in.)	Compounds Exceeding 'Excavation or Construction Worker' RAG	Compounds Exceeding 'Residential' RAG
				EPH	EPH
MS-1	1+45	1	5-8	X	X
MS-2	1+92	1	10-12	X	X
MS-3	2+30	1	6-11	X	X
MS-4	3+30	1	8-11		X
MS-5	4+26	1	4-10	X	X
MS-6	4+66	1	13	X	X
RD-2	11+67	2	17		
RD-6	14+95	2	20	X	X
RD-7	5+12	1	22	X	X
RD-9	14+90	2	11-12	X	X
RD-18	39+37	4	16-18		X
RD-19	40+19	4	18-20	X	X
RD-20	41+02	4	12-16	X	X

As shown on the above table, EPH compounds (PAHs) were detected above Maine RAGs. VOCs, VPH, and total lead concentrations did not exceed Maine RAGs. The attached figures show these exceedances spatially, and include the individual PAH compounds that were detected above Maine RAGs. A summary of the results (exceedances only) is also attached, along with a full data package provided by Katahdin Analytical Laboratory.

According to the guidance entitled 'Maine Remedial Action Guidelines for Soil Contaminated with Hazardous Substances' (January 13, 2010), the RAGs for PAHs are low relative to background concentrations often found in Maine. Elevated background PAHs may be due to runoff or deposition from heavily traveled roadways, degraded asphalt, or deposition of Polycyclic Organic Matter (POM) from most combustion sources, particularly residential or industrial wood combustion. PAHs are also common site-related contaminants, particularly at sites where petroleum, coal, coal ash, or wood ash were spilled or disposed. It is anticipated that PAHs will be encountered along Riverside Drive and Mill Street during reconstruction activities, and not necessarily limited to the areas investigated by W&C during the subsurface investigation.

Recommendations. W&C recommends meeting with the City of Auburn, MDOT, and Maine Department of Environmental Protection to develop Special Provision for the project that will outline worker safety and field screening and stockpiling requirements for excavated soils. In addition, we recommend discussing any restrictions to off-site reuse or disposal of excavated soils, and the potential of entering the site into the State's Voluntary Response Action Program (VRAP).

No additional sampling is recommended to further characterize or quantify the magnitude or extent of contamination along Riverside Drive; W&C has collected sufficient data to prepare the Soil Management Plan.



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WOODARD & CURRAN

COMMITMENT & INTEGRITY DRIVE RESULTS

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203970.19-SOIL INDEX.DWG

SOIL SAMPLING INDEX

CITY OF AUBURN
60 COURT STREET
AUBURN, ME 04210

RIVERSIDE DRIVE RECONSTRUCTION

JOB NO.: 203970.19
DATE: APRIL 2012
SCALE: 1"=400'
SHEET: 1 OF 4

INDEX

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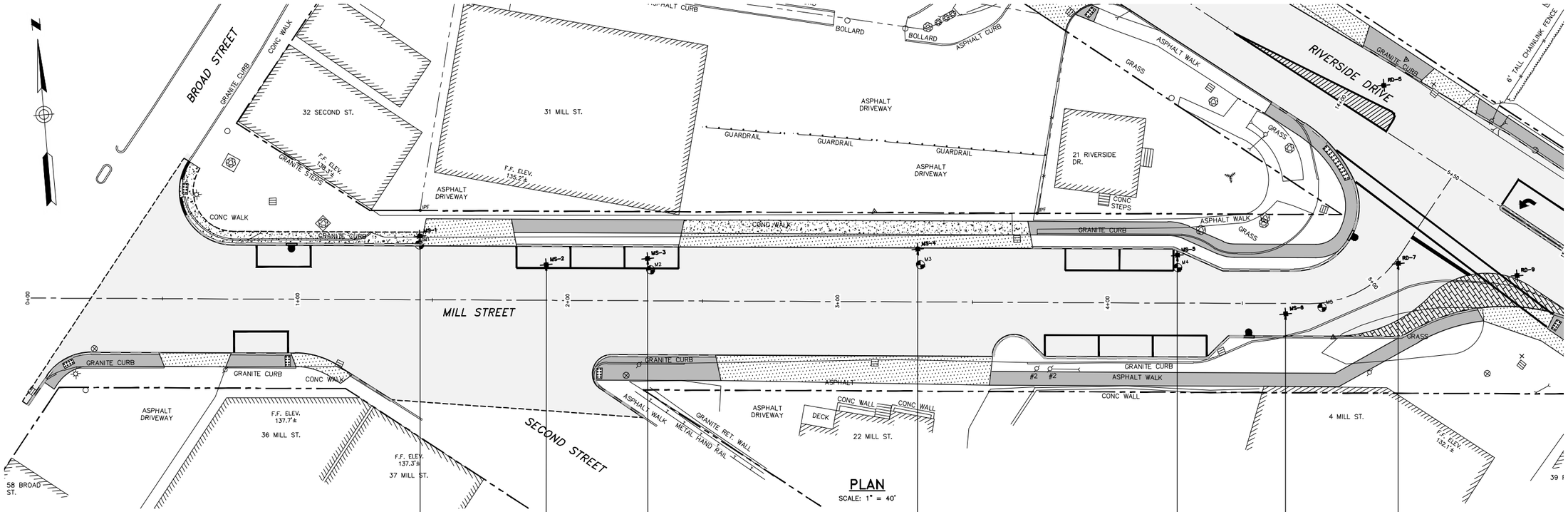

PLAN

SCALE: 1" = 40'

MS-1 (STA: 1+45)
BENZO(A)PYRENE
DIBENZ(A,H)ANTHRACENE

MS-2 (STA: 1+92)
BENZO(A)ANTHRACENE
BENZO(A)PYRENE
BENZO(B)FLUORANTHENE
DIBENZ(A,H)ANTHRACENE

MS-3 (STA: 2+30)
BENZO(A)PYRENE

MS-4 (STA: 3+30)
NO MAINE RAG
EXCEEDANCES

MS-5 (STA: 4+26)
BENZO(A)ANTHRACENE
BENZO(A)PYRENE

MS-6 (STA: 4+66)
BENZO(A)ANTHRACENE
BENZO(A)PYRENE
BENZO(B)FLUORANTHENE
DIBENZ(A,H)ANTHRACENE

RD-7 (STA: 5+12)
BENZO(A)ANTHRACENE
BENZO(A)PYRENE
DIBENZ(A,H)ANTHRACENE

LEGEND

BORINGS PERFORMED FOR SUMMIT GEOENGINEERINGS SERVICES AS PART OF THE GEOTECHNICAL INVESTIGATION IN NOVEMBER 2010

BORINGS PERFORMED FOR WOODARD & CURRAN AS PART OF THE ENVIRONMENTAL INVESTIGATION CONDUCTED IN JANUARY 2012

NOTE: RESULTS WERE COMPARED TO THE MAINE REMEDIAL ACTION GUIDELINES (RAGS) FOR THE EXCAVATION OR CONSTRUCTION WORKER SCENARIO. COMPOUNDS LISTED EXCEED THE RAG.

40' 0 40' 80'
BAR SCALE
1" = 40'
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CHECKED BY: KML
203970.19-SOIL FIGS.DWG

FIGURE 1
SOIL SAMPLING RESULTS
MILL STREET

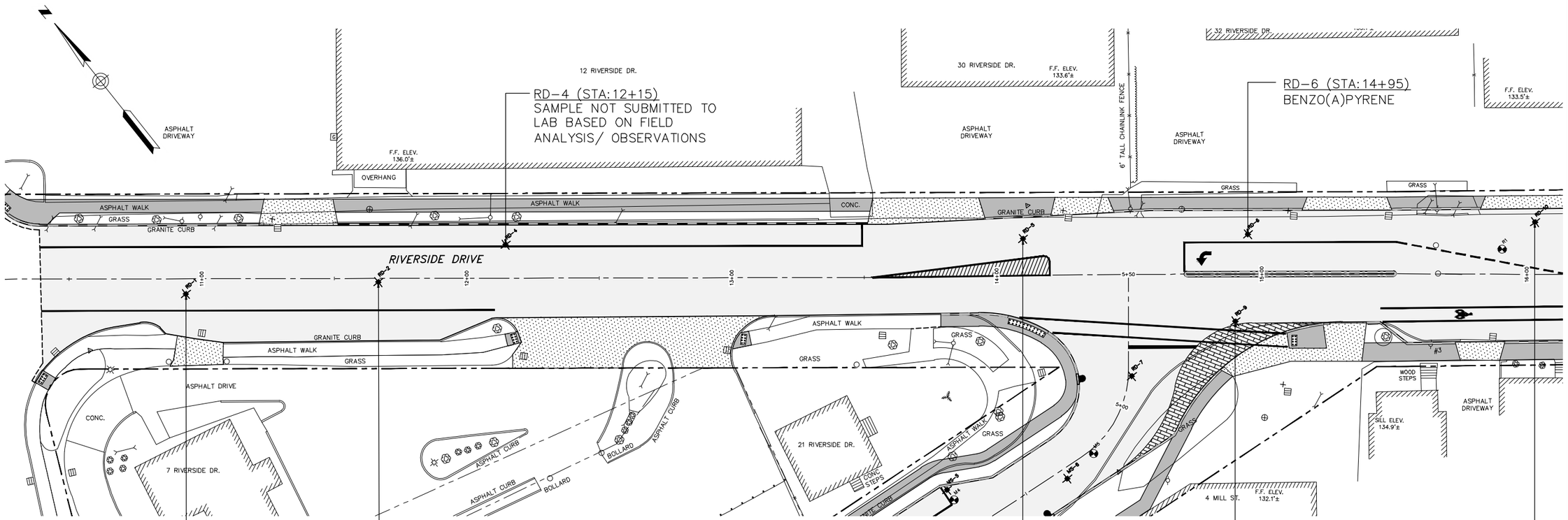
CITY OF AUBURN
60 COURT STREET
AUBURN, ME 04210

RIVERSIDE DRIVE RECONSTRUCTION

JOB NO.: 203970.19
DATE: APRIL 2012
SCALE: 1"=40'
SHEET: 2 OF 5

Fig. 1

G:\203970 City of Auburn-General Consulting Services\wip\19 Riverside Dr Recon\Drawings\203970.19-Soil Figs.dwg, Apr 09, 2012 - 9:27am



PLAN
SCALE: 1" = 40'

LEGEND

BORINGS PERFORMED FOR SUMMIT GEOENGINEERINGS SERVICES AS PART OF THE GEOTECHNICAL INVESTIGATION IN NOVEMBER 2010

BORINGS PERFORMED FOR WOODARD & CURRAN AS PART OF THE ENVIRONMENTAL INVESTIGATION CONDUCTED IN JANUARY 2012

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40' 0 40' 80'
BAR SCALE
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203970.19-SOIL FIGS.DWG

FIGURE 2
SOIL SAMPLING RESULTS
RIVERSIDE DRIVE

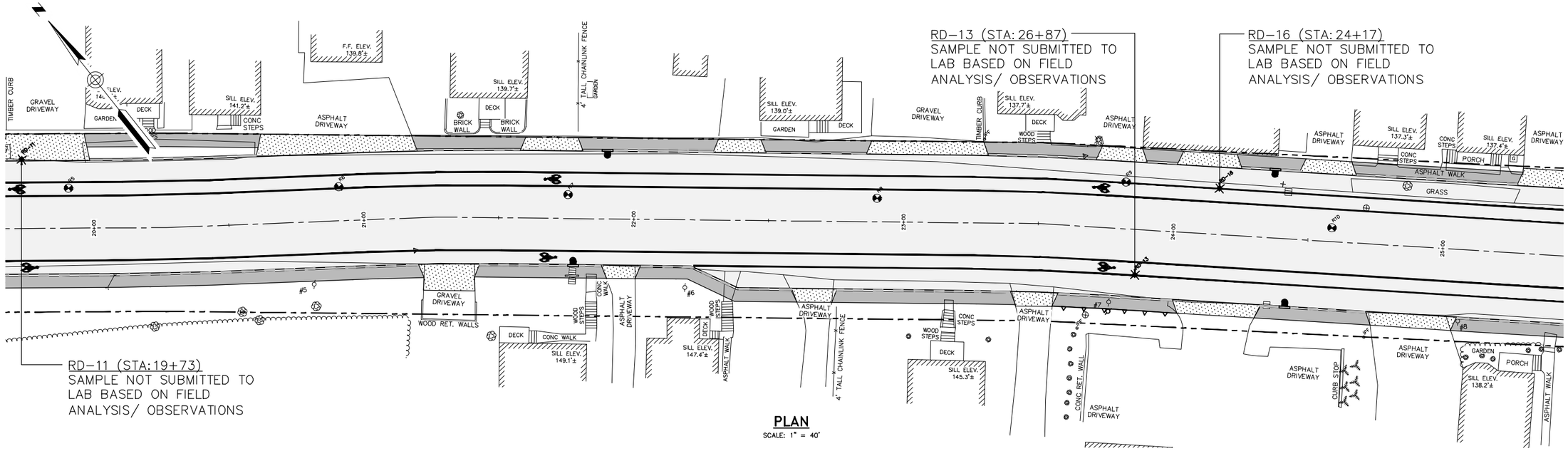
CITY OF AUBURN
60 COURT STREET
AUBURN, ME 04210

RIVERSIDE DRIVE RECONSTRUCTION

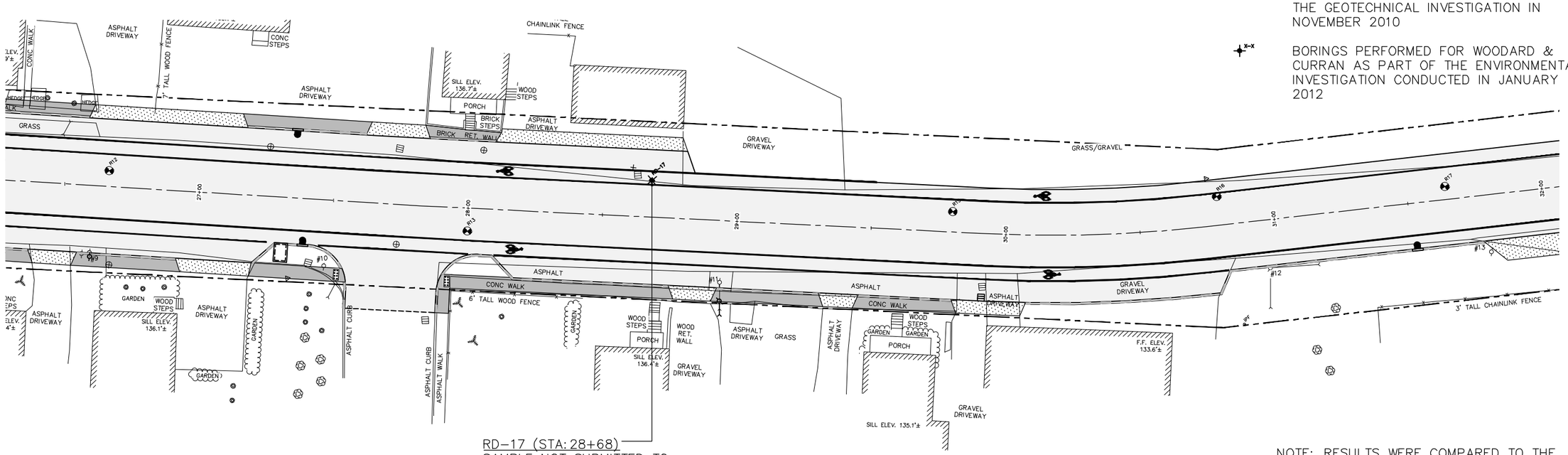
JOB NO.: 203970.19
DATE: APRIL 2012
SCALE: 1"=40'
SHEET: 3 OF 5

Fig. 2

G:\203970 City of Auburn-General Consulting Services\wip\19 Riverside Dr Recon\Drawings\203970.19-Soil Figs.dwg, Apr 09, 2012 - 9:28am



PLAN
SCALE: 1" = 40'



PLAN
SCALE: 1" = 40'

RD-17 (STA: 28+68)
SAMPLE NOT SUBMITTED TO LAB BASED ON FIELD ANALYSIS/ OBSERVATIONS

LEGEND

BORINGS PERFORMED FOR SUMMIT GEOENGINEERINGS SERVICES AS PART OF THE GEOTECHNICAL INVESTIGATION IN NOVEMBER 2010

BORINGS PERFORMED FOR WOODARD & CURRAN AS PART OF THE ENVIRONMENTAL INVESTIGATION CONDUCTED IN JANUARY 2012

40' 0 40' 80'

BAR SCALE
1" = 40'
CHECK GRAPHIC SCALE BEFORE USING

NOTE: RESULTS WERE COMPARED TO THE MAINE REMEDIAL ACTION GUIDELINES (RAGS) FOR THE EXCAVATION OR CONSTRUCTION WORKER SCENARIO. COMPOUNDS LISTED EXCEED THE RAG.

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203970.19-SOIL FIGS.DWG

FIGURE 3
SOIL SAMPLING RESULTS
RIVERSIDE DRIVE

CITY OF AUBURN
60 COURT STREET
AUBURN, ME 04210

RIVERSIDE DRIVE RECONSTRUCTION

JOB NO.: 203970.19
DATE: APRIL 2012
SCALE: 1"=40'
SHEET: 4 OF 5

Fig. 3

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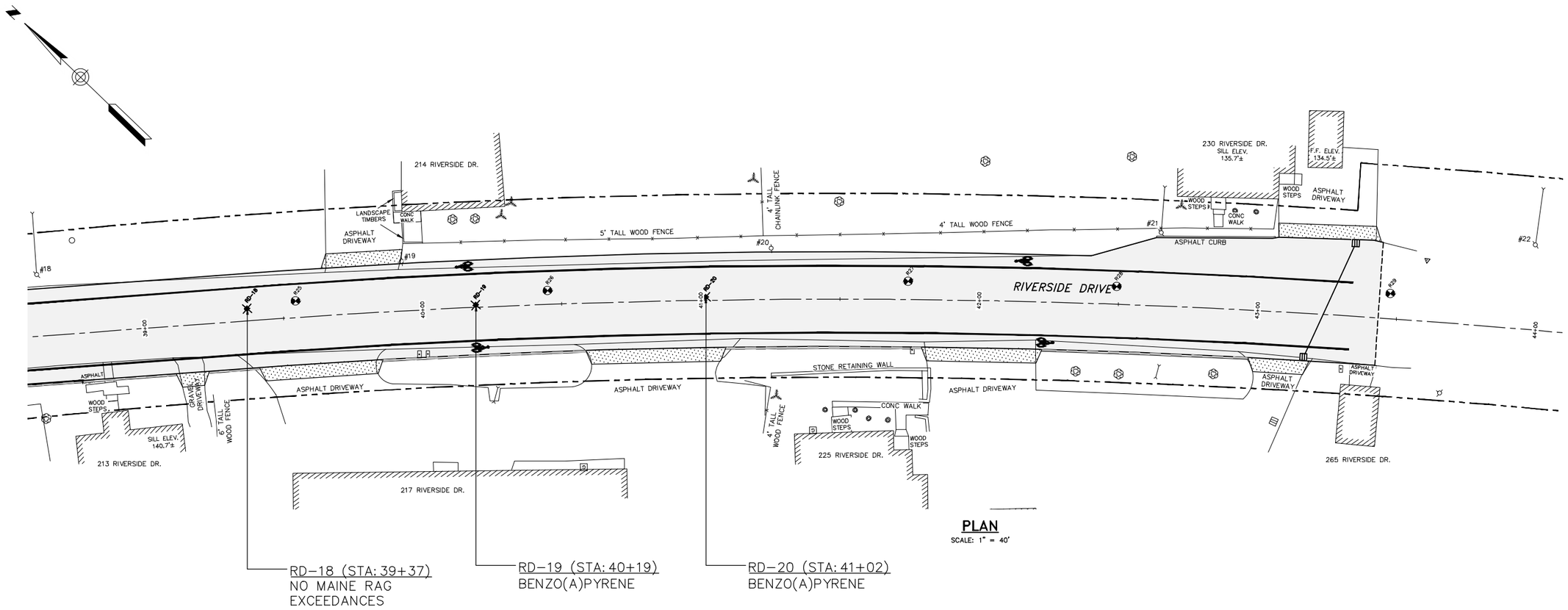

RD-18 (STA: 39+37)
NO MAINE RAG EXCEEDANCES

RD-19 (STA: 40+19)
BENZO(A)PYRENE

RD-20 (STA: 41+02)
BENZO(A)PYRENE

PLAN
SCALE: 1" = 40'

LEGEND

BORINGS PERFORMED FOR SUMMIT GEOENGINEERINGS SERVICES AS PART OF THE GEOTECHNICAL INVESTIGATION IN NOVEMBER 2010

BORINGS PERFORMED FOR WOODARD & CURRAN AS PART OF THE ENVIRONMENTAL INVESTIGATION CONDUCTED IN JANUARY 2012

NOTE: RESULTS WERE COMPARED TO THE MAINE REMEDIAL ACTION GUIDELINES (RAGS) FOR THE EXCAVATION OR CONSTRUCTION WORKER SCENARIO. COMPOUNDS LISTED EXCEED THE RAG.

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REV	DESCRIPTION	DATE

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203970.19-SOIL FIGS.DWG

FIGURE 4
SOIL SAMPLING RESULTS
RIVERSIDE DRIVE

CITY OF AUBURN
60 COURT STREET
AUBURN, ME 04210

RIVERSIDE DRIVE RECONSTRUCTION

JOB NO.: 203970-19
DATE: APRIL 2012
SCALE: 1"=40'
SHEET: 5 OF 5

Fig. 4

G:\203970 City of Auburn-General Consulting Services\wip\19 Riverside Dr Recon\Drawings\203970.19-Soil Figs.dwg, Apr 09, 2012 - 9:28am

Constituents Exceeding Maine RAGs - Riverside Drive

	Maine RAGs - Excavation Worker	MS-1	MS-2	MS-3	MS-4	MS-5	MS-6	RD-2	RD-6	RD-7	RD-9	RD-18	RD-19	RD-20
	Multiple Contaminant													
Benzo(a)anthracene	43	41	69	7/11	4.2	58	120	<RL	40	52	62	4.3	23	30
Benzo(a)pyrene	4.3	35	51	8.1/6.7	3.5	32	57	<RL	26	34	44	3	25	19
Benzo(b)fluoranthene	43	36	55	6.2/7.2	3.6	36	54	<RL	29	35	43	3.6	29	18
Dibenz(a,h)anthracene	4.3	5.4	6.7	1/0.86	1	4.3	6.7	<RL	3.8	4.6	6.4	0.41	3.8	2.8

	Maine RAGs - Residential	MS-1	MS-2	MS-3	MS-4	MS-5	MS-6	RD-2	RD-6	RD-7	RD-9	RD-18	RD-19	RD-20
	Multiple Contaminant													
Benzo(a)anthracene	0.26	41	69	7/11	4.2	58	120	<RL	40	52	62	4.3	23	30
Benzo(a)pyrene	0.026	35	51	8.1/6.7	3.5	32	57	<RL	26	34	44	3	25	19
Benzo(b)fluoranthene	0.26	36	55	6.2/7.2	3.6	36	54	<RL	29	35	43	3.6	29	18
Benzo(k)fluoranthene	2.6	36	50	7/9.3	3.3	34	58	<RL	29	31	46	2.7	24	21
C11-C22 Aromatics	730	1100	1800	870	220	1900	3700	<RL	840	1400	1900	160	700	1400
Chrysene	26	33	56	14/9	3.2	47	74	<RL	31	34	46	3.7	19	27
Dibenz(a,h)anthracene	0.026	5.4	6.7	1/0.86	1	4.3	6.7	<RL	3.8	4.6	6.4	0.41	3.8	2.8
Indeno(1,2,3-cd)pyrene	0.26	27	37	4.9/4.6	3.3	21	36	<RL	18	25	33	2.2	20	14

Notes:

RL = reporting limit

Results with gray shading exceed Multiple Contaminant RAG

Samples RD-1, RD-4, RD-5, RD-10, RD-11, RD-13, RD-16, and RD-17 were not sumbitted for laboratory analysis since there was no indication of contamination during field tests/observations.

Katahdin ANALYTICAL SERVICES

nelac Cert. No. E87604

February 15, 2012

Ms. Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

RE: Katahdin Lab Number: SF0553
Project ID: Auburn-Riverside Drive
Project Manager: Ms. Jennifer Obrin
Sample Receipt Date(s): January 31, 2012

Dear Ms. Lambek:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Quality Control Data Summary
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert.html for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Deborah J. Nadeau
Authorized Signature

02/15/2012
Date

TECHNICAL NARRATIVE

Organics Analysis

The samples of work order SF0553 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MADEP, May 2004, Revision 1.1, and/or for the specific methods listed below or on the Report of Analysis.

8260B Analysis

The targets analytes naphthalene and 1,2,3-trichlorobenzene were detected in the aqueous method blank WG104315-2 above the PQL. The associated methanol blank WG104315-3 did not have any target analytes detected above the PQL. The aqueous QC is reported in ug/L since a methanol sample is prepared by diluting the sample methanol with water. The methanol blank is prepared by diluting methanol with water. The associated samples SF0553-2, 8, and 10 had concentrations of naphthalene that were above the PQL. Since the methanol blank did not have naphthalene detected above the PQL, the associated samples were not flagged with the "B" qualifier.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than ten percent of the client compound list. The LCS report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long as the LCS is acceptable.

There were no other protocol deviations or observations noted by the organics laboratory staff.

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 06-FEB-2012 12:40
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 90.8

Lab ID: SF0553-1DL
Client ID: RD-7
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	470	1.0	10	470
Chloromethane	U	470	1.0	10	470
Vinyl chloride	U	470	1.0	10	470
Bromomethane	U	470	1.0	10	470
Chloroethane	U	470	1.0	10	470
Trichlorofluoromethane	U	470	1.0	10	470
1,1-Dichloroethene	U	230	1.0	5	230
Methylene Chloride	U	1200	1.0	25	1200
trans-1,2-Dichloroethene	U	230	1.0	5	230
1,1-Dichloroethane	U	230	1.0	5	230
cis-1,2-Dichloroethene	U	230	1.0	5	230
1,2-Dichloroethylene (total)	U	470	1.0	10	470
2,2-Dichloropropane	U	230	1.0	5	230
Chloroform	U	230	1.0	5	230
Bromochloromethane	U	230	1.0	5	230
1,1,1-Trichloroethane	U	230	1.0	5	230
1,2-Dichloroethane	U	230	1.0	5	230
1,1-Dichloropropene	U	230	1.0	5	230
Carbon Tetrachloride	U	230	1.0	5	230
Benzene	U	230	1.0	5	230
1,2-Dichloropropane	U	230	1.0	5	230
Trichloroethene	U	230	1.0	5	230
Dibromomethane	U	230	1.0	5	230
Bromodichloromethane	U	230	1.0	5	230
cis-1,3-dichloropropene	U	230	1.0	5	230
Toluene	U	230	1.0	5	230
trans-1,3-Dichloropropene	U	230	1.0	5	230
1,1,2-Trichloroethane	U	230	1.0	5	230
1,3-Dichloropropane	U	230	1.0	5	230
Dibromochloromethane	U	230	1.0	5	230
Tetrachloroethene	U	230	1.0	5	230
1,2-Dibromoethane	U	230	1.0	5	230
Chlorobenzene	U	230	1.0	5	230
1,1,1,2-Tetrachloroethane	U	230	1.0	5	230
Ethylbenzene	U	230	1.0	5	230
Bromoform	U	230	1.0	5	230
Styrene	U	230	1.0	5	230
1,1,2,2-Tetrachloroethane	U	230	1.0	5	230
1,2,3-Trichloropropane	U	230	1.0	5	230
Isopropylbenzene	U	230	1.0	5	230
Bromobenzene	U	230	1.0	5	230
2-Chlorotoluene	U	230	1.0	5	230
N-Propylbenzene	U	230	1.0	5	230

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 06-FEB-2012 12:40
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 90.8

Lab ID: SF0553-1DL
Client ID: RD-7
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	230	1.0	5	230
1,3,5-Trimethylbenzene	U	230	1.0	5	230
tert-Butylbenzene	U	230	1.0	5	230
1,2,4-Trichlorobenzene	U	230	1.0	5	230
sec-Butylbenzene	U	230	1.0	5	230
1,3-Dichlorobenzene	U	230	1.0	5	230
P-Isopropyltoluene	U	230	1.0	5	230
1,4-Dichlorobenzene	U	230	1.0	5	230
1,2-Dichlorobenzene	U	230	1.0	5	230
N-Butylbenzene	U	230	1.0	5	230
1,2-Dibromo-3-Chloropropane	U	230	1.0	5	230
1,2,4-Trimethylbenzene	U	230	1.0	5	230
Naphthalene		680	1.0	5	230
Hexachlorobutadiene	U	230	1.0	5	230
1,2,3-Trichlorobenzene	U	230	1.0	5	230
Methyl tert-butyl ether	U	230	1.0	5	230
Acetone	U	1200	1.0	25	1200
2-Butanone	U	1200	1.0	25	1200
4-methyl-2-pentanone	U	1200	1.0	25	1200
2-Hexanone	U	1200	1.0	25	1200
m+p-Xylenes	U	470	1.0	10	470
o-Xylene	U	230	1.0	5	230
Xylenes (total)	U	700	1.0	15	700
1,3,5-Trichlorobenzene	U	230	1.0	5	230
Vinyl Acetate	U	230	1.0	5	230
Carbon Disulfide	U	230	1.0	5	230
Diethyl Ether	U	230	1.0	5	230
Tetrahydrofuran	U	2300	1.0	50	2300
Dibromofluoromethane		108%			
1,2-Dichloroethane-D4		101%			
Toluene-D8		107%			
P-Bromofluorobenzene		105%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-7	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-1	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	01-FEB-12
Prep Method:	SW846 3540	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	91.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	51	21	mg/Kgdrywt	1	07-FEB-12	
C19-C36 Aliphatics	300	21	mg/Kgdrywt	1	07-FEB-12	
Unadjusted C11-C22 Aromatics	2000	86	mg/Kgdrywt	4	07-FEB-12	
C11-C22 Aromatics	1400	86	mg/Kgdrywt	4	07-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	3.1	.21	mg/Kgdrywt	1	07-FEB-12	
2-Methylnaphthalene	6.6	.21	mg/Kgdrywt	1	07-FEB-12	
Acenaphthylene	15	.21	mg/Kgdrywt	1	07-FEB-12	
Acenaphthene	2.6	.21	mg/Kgdrywt	1	07-FEB-12	
Anthracene	24	.21	mg/Kgdrywt	1	07-FEB-12	
Benzo(a)pyrene	34	.21	mg/Kgdrywt	1	07-FEB-12	
Benzo(b)fluoranthene	35	.21	mg/Kgdrywt	1	07-FEB-12	
Benzo(g,h,i)perylene	30	.21	mg/Kgdrywt	1	07-FEB-12	
Benzo(k)fluoranthene	31	.21	mg/Kgdrywt	1	07-FEB-12	
Chrysene	34	.21	mg/Kgdrywt	1	07-FEB-12	
Dibenzo(a,h)anthracene	4.6	.21	mg/Kgdrywt	1	07-FEB-12	
Fluorene	21	.21	mg/Kgdrywt	1	07-FEB-12	
Indeno(1,2,3-cd)pyrene	25	.21	mg/Kgdrywt	1	07-FEB-12	
Phenanthrene	100	.86	mg/Kgdrywt	4	07-FEB-12	
Benzo(a)anthracene	52	.86	mg/Kgdrywt	4	07-FEB-12	
Fluoranthene	84	.86	mg/Kgdrywt	4	07-FEB-12	
Pyrene	80	.86	mg/Kgdrywt	4	07-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	65	40-140	07-FEB-12	
o-Terphenyl	87	40-140	07-FEB-12	
2-Fluorobiphenyl	74	40-140	07-FEB-12	
2-Bromonaphthalene	94	40-140	07-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

600 Technology Way
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sales@katahdinlab.com

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-7	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-1RA	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	91.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	29	29	mg/Kgdrywt	1	13-FEB-12	U
C9-C12 Aliphatics	29	29	mg/Kgdrywt	1	13-FEB-12	U
C9-C10 Aromatics	29	29	mg/Kgdrywt	1	13-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.5	1.5	mg/Kgdrywt	1	13-FEB-12	U
Ethylbenzene	1.5	1.5	mg/Kgdrywt	1	13-FEB-12	U
Methyl tert-butylether	1.5	1.5	mg/Kgdrywt	1	13-FEB-12	U
Naphthalene	13	1.5	mg/Kgdrywt	1	13-FEB-12	
Toluene	1.5	1.5	mg/Kgdrywt	1	13-FEB-12	U
m+p-Xylenes	2.9	2.9	mg/Kgdrywt	1	13-FEB-12	U
o-Xylene	1.5	1.5	mg/Kgdrywt	1	13-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	76	70-130	13-FEB-12	
2,5-Dibromotoluene (PID)	71	70-130	13-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0553-001
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
RD-7	SL	90.8	01/30/2012	01/31/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	39.9	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0553-1
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0553

Sample Description	Matrix	Date Sampled	Date Received
RD-7	SL	30-JAN-12	31-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	91. %	1		SM2540G	WG104307	03-FEB-12 12:54:33	ASTM D2216	02-FEB-12	RO	

Katahdin Analytical Services SF0553 page 0000010 of 0000076

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 02-FEB-2012 17:13
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 91.9

Lab ID: SF0553-2DL
Client ID: RD-9
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	500	1.0	10	500
Chloromethane	U	500	1.0	10	500
Vinyl chloride	U	500	1.0	10	500
Bromomethane	U	500	1.0	10	500
Chloroethane	U	500	1.0	10	500
Trichlorofluoromethane	U	500	1.0	10	500
1,1-Dichloroethene	U	250	1.0	5	250
Methylene Chloride	U	1200	1.0	25	1200
trans-1,2-Dichloroethene	U	250	1.0	5	250
1,1-Dichloroethane	U	250	1.0	5	250
cis-1,2-Dichloroethene	U	250	1.0	5	250
1,2-Dichloroethylene (total)	U	500	1.0	10	500
2,2-Dichloropropane	U	250	1.0	5	250
Chloroform	U	250	1.0	5	250
Bromochloromethane	U	250	1.0	5	250
1,1,1-Trichloroethane	U	250	1.0	5	250
1,2-Dichloroethane	U	250	1.0	5	250
1,1-Dichloropropene	U	250	1.0	5	250
Carbon Tetrachloride	U	250	1.0	5	250
Benzene	U	250	1.0	5	250
1,2-Dichloropropane	U	250	1.0	5	250
Trichloroethene	U	250	1.0	5	250
Dibromomethane	U	250	1.0	5	250
Bromodichloromethane	U	250	1.0	5	250
cis-1,3-dichloropropene	U	250	1.0	5	250
Toluene	U	250	1.0	5	250
trans-1,3-Dichloropropene	U	250	1.0	5	250
1,1,2-Trichloroethane	U	250	1.0	5	250
1,3-Dichloropropane	U	250	1.0	5	250
Dibromochloromethane	U	250	1.0	5	250
Tetrachloroethene	U	250	1.0	5	250
1,2-Dibromoethane	U	250	1.0	5	250
Chlorobenzene	U	250	1.0	5	250
1,1,1,2-Tetrachloroethane	U	250	1.0	5	250
Ethylbenzene	U	250	1.0	5	250
Bromoform	U	250	1.0	5	250
Styrene	U	250	1.0	5	250
1,1,2,2-Tetrachloroethane	U	250	1.0	5	250
1,2,3-Trichloropropane	U	250	1.0	5	250
Isopropylbenzene	U	250	1.0	5	250
Bromobenzene	U	250	1.0	5	250
2-Chlorotoluene	U	250	1.0	5	250
N-Propylbenzene	U	250	1.0	5	250

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 02-FEB-2012 17:13
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 91.9

Lab ID: SF0553-2DL
Client ID: RD-9
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	250	1.0	5	250
1,3,5-Trimethylbenzene	U	250	1.0	5	250
tert-Butylbenzene	U	250	1.0	5	250
1,2,4-Trichlorobenzene	U	250	1.0	5	250
sec-Butylbenzene	U	250	1.0	5	250
1,3-Dichlorobenzene	U	250	1.0	5	250
P-Isopropyltoluene	U	250	1.0	5	250
1,4-Dichlorobenzene	U	250	1.0	5	250
1,2-Dichlorobenzene	U	250	1.0	5	250
N-Butylbenzene	U	250	1.0	5	250
1,2-Dibromo-3-Chloropropane	U	250	1.0	5	250
1,2,4-Trimethylbenzene	U	250	1.0	5	250
Naphthalene		6300	1.0	5	250
Hexachlorobutadiene	U	250	1.0	5	250
1,2,3-Trichlorobenzene	U	250	1.0	5	250
Methyl tert-butyl ether	U	250	1.0	5	250
Acetone	U	1200	1.0	25	1200
2-Butanone	U	1200	1.0	25	1200
4-methyl-2-pentanone	U	1200	1.0	25	1200
2-Hexanone	U	1200	1.0	25	1200
m+p-Xylenes	U	500	1.0	10	500
o-Xylene	U	250	1.0	5	250
Xylenes (total)	U	750	1.0	15	750
1,3,5-Trichlorobenzene	U	250	1.0	5	250
Vinyl Acetate	U	250	1.0	5	250
Carbon Disulfide	U	250	1.0	5	250
Diethyl Ether	U	250	1.0	5	250
Tetrahydrofuran	U	2500	1.0	50	2500
Dibromofluoromethane		102%			
1,2-Dichloroethane-D4		97%			
Toluene-D8		104%			
P-Bromofluorobenzene		99%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-9	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-2	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	01-FEB-12
Prep Method:	SW846 3540	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	92.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	63	41	mg/Kgdrywt	2	07-FEB-12	
C19-C36 Aliphatics	390	41	mg/Kgdrywt	2	07-FEB-12	
Unadjusted C11-C22 Aromatics	2600	83	mg/Kgdrywt	4	07-FEB-12	
C11-C22 Aromatics	1900	83	mg/Kgdrywt	4	07-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	7.5	.41	mg/Kgdrywt	2	07-FEB-12	
2-Methylnaphthalene	7.5	.41	mg/Kgdrywt	2	07-FEB-12	
Acenaphthylene	15	.41	mg/Kgdrywt	2	07-FEB-12	
Acenaphthene	4.0	.41	mg/Kgdrywt	2	07-FEB-12	
Anthracene	26	.41	mg/Kgdrywt	2	07-FEB-12	
Benzo(a)anthracene	62	.41	mg/Kgdrywt	2	07-FEB-12	
Benzo(a)pyrene	44	.41	mg/Kgdrywt	2	07-FEB-12	
Benzo(b)fluoranthene	43	.41	mg/Kgdrywt	2	07-FEB-12	
Benzo(g,h,i)perylene	29	.41	mg/Kgdrywt	2	07-FEB-12	
Benzo(k)fluoranthene	46	.41	mg/Kgdrywt	2	07-FEB-12	
Chrysene	46	.41	mg/Kgdrywt	2	07-FEB-12	
Dibenzo(a,h)anthracene	6.4	.41	mg/Kgdrywt	2	07-FEB-12	
Fluorene	30	.41	mg/Kgdrywt	2	07-FEB-12	
Indeno(1,2,3-cd)pyrene	33	.41	mg/Kgdrywt	2	07-FEB-12	
Phenanthrene	100	.83	mg/Kgdrywt	4	07-FEB-12	
Fluoranthene	100	.83	mg/Kgdrywt	4	07-FEB-12	
Pyrene	100	.83	mg/Kgdrywt	4	07-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	67	40-140	07-FEB-12	
o-Terphenyl	78	40-140	07-FEB-12	
2-Fluorobiphenyl	67	40-140	07-FEB-12	
2-Bromonaphthalene	94	40-140	07-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-9	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-2	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	92.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	30	30	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	30	30	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	30	30	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.5	1.5	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.5	1.5	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.5	1.5	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	10	1.5	mg/Kgdrywt	1	09-FEB-12	
Toluene	1.5	1.5	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	3.0	3	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.5	1.5	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	98	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	88	70-130	09-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0553-002
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
RD-9	SL	91.9	01/30/2012	01/31/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	65.4	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0553-2
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0553

Sample Description	Matrix	Date Sampled	Date Received
RD-9	SL	30-JAN-12	31-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	92. %	1		SM2540G	WG104307	03-FEB-12 12:54:44	ASTM D2216	02-FEB-12	RO	

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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 02-FEB-2012 17:47
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 98.8

Lab ID: SF0553-8DL
Client ID: RD-18
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	540	1.0	10	540
Chloromethane	U	540	1.0	10	540
Vinyl chloride	U	540	1.0	10	540
Bromomethane	U	540	1.0	10	540
Chloroethane	U	540	1.0	10	540
Trichlorofluoromethane	U	540	1.0	10	540
1,1-Dichloroethene	U	270	1.0	5	270
Methylene Chloride	U	1400	1.0	25	1400
trans-1,2-Dichloroethene	U	270	1.0	5	270
1,1-Dichloroethane	U	270	1.0	5	270
cis-1,2-Dichloroethene	U	270	1.0	5	270
1,2-Dichloroethylene (total)	U	540	1.0	10	540
2,2-Dichloropropane	U	270	1.0	5	270
Chloroform	U	270	1.0	5	270
Bromochloromethane	U	270	1.0	5	270
1,1,1-Trichloroethane	U	270	1.0	5	270
1,2-Dichloroethane	U	270	1.0	5	270
1,1-Dichloropropene	U	270	1.0	5	270
Carbon Tetrachloride	U	270	1.0	5	270
Benzene	U	270	1.0	5	270
1,2-Dichloropropane	U	270	1.0	5	270
Trichloroethene	U	270	1.0	5	270
Dibromomethane	U	270	1.0	5	270
Bromodichloromethane	U	270	1.0	5	270
cis-1,3-dichloropropene	U	270	1.0	5	270
Toluene	U	270	1.0	5	270
trans-1,3-Dichloropropene	U	270	1.0	5	270
1,1,2-Trichloroethane	U	270	1.0	5	270
1,3-Dichloropropane	U	270	1.0	5	270
Dibromochloromethane	U	270	1.0	5	270
Tetrachloroethene	U	270	1.0	5	270
1,2-Dibromoethane	U	270	1.0	5	270
Chlorobenzene	U	270	1.0	5	270
1,1,1,2-Tetrachloroethane	U	270	1.0	5	270
Ethylbenzene	U	270	1.0	5	270
Bromoform	U	270	1.0	5	270
Styrene	U	270	1.0	5	270
1,1,2,2-Tetrachloroethane	U	270	1.0	5	270
1,2,3-Trichloropropane	U	270	1.0	5	270
Isopropylbenzene	U	270	1.0	5	270
Bromobenzene	U	270	1.0	5	270
2-Chlorotoluene	U	270	1.0	5	270
N-Propylbenzene	U	270	1.0	5	270

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 02-FEB-2012 17:47
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 98.8

Lab ID: SF0553-8DL
Client ID: RD-18
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	270	1.0	5	270
1,3,5-Trimethylbenzene	U	270	1.0	5	270
tert-Butylbenzene	U	270	1.0	5	270
1,2,4-Trichlorobenzene	U	270	1.0	5	270
sec-Butylbenzene	U	270	1.0	5	270
1,3-Dichlorobenzene	U	270	1.0	5	270
P-Isopropyltoluene	U	270	1.0	5	270
1,4-Dichlorobenzene	U	270	1.0	5	270
1,2-Dichlorobenzene	U	270	1.0	5	270
N-Butylbenzene	U	270	1.0	5	270
1,2-Dibromo-3-Chloropropane	U	270	1.0	5	270
1,2,4-Trimethylbenzene	U	270	1.0	5	270
Naphthalene		6800	1.0	5	270
Hexachlorobutadiene	U	270	1.0	5	270
1,2,3-Trichlorobenzene	U	270	1.0	5	270
Methyl tert-butyl ether	U	270	1.0	5	270
Acetone	U	1400	1.0	25	1400
2-Butanone	U	1400	1.0	25	1400
4-methyl-2-pentanone	U	1400	1.0	25	1400
2-Hexanone	U	1400	1.0	25	1400
m+p-Xylenes	U	540	1.0	10	540
o-Xylene	U	270	1.0	5	270
Xylenes (total)	U	810	1.0	15	810
1,3,5-Trichlorobenzene	U	270	1.0	5	270
Vinyl Acetate	U	270	1.0	5	270
Carbon Disulfide	U	270	1.0	5	270
Diethyl Ether	U	270	1.0	5	270
Tetrahydrofuran	U	2700	1.0	50	2700
Dibromofluoromethane		100%			
1,2-Dichloroethane-D4		95%			
Toluene-D8		100%			
P-Bromofluorobenzene		96%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-18	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-8	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	01-FEB-12
Prep Method:	SW846 3540	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	99.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C11-C22 Aromatics	210	20	mg/Kgdrywt	1	07-FEB-12	
C9-C18 Aliphatics	20	20	mg/Kgdrywt	1	07-FEB-12	U
C19-C36 Aliphatics	83	20	mg/Kgdrywt	1	07-FEB-12	
C11-C22 Aromatics	160	20	mg/Kgdrywt	1	07-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	1.9	.2	mg/Kgdrywt	1	07-FEB-12	
2-Methylnaphthalene	1.9	.2	mg/Kgdrywt	1	07-FEB-12	
Phenanthrene	8.4	.2	mg/Kgdrywt	1	07-FEB-12	
Acenaphthylene	0.92	.2	mg/Kgdrywt	1	07-FEB-12	
Acenaphthene	0.63	.2	mg/Kgdrywt	1	07-FEB-12	
Anthracene	1.5	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(a)anthracene	4.3	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(a)pyrene	3.0	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(b)fluoranthene	3.6	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(g,h,i)perylene	2.0	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(k)fluoranthene	2.7	.2	mg/Kgdrywt	1	07-FEB-12	
Chrysene	3.7	.2	mg/Kgdrywt	1	07-FEB-12	
Dibenzo(a,h)anthracene	0.41	.2	mg/Kgdrywt	1	07-FEB-12	
Fluoranthene	7.1	.2	mg/Kgdrywt	1	07-FEB-12	
Fluorene	1.2	.2	mg/Kgdrywt	1	07-FEB-12	
Indeno(1,2,3-cd)pyrene	2.2	.2	mg/Kgdrywt	1	07-FEB-12	
Pyrene	7.6	.2	mg/Kgdrywt	1	07-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	85	40-140	07-FEB-12	
o-Terphenyl	85	40-140	07-FEB-12	
2-Fluorobiphenyl	80	40-140	07-FEB-12	
2-Bromonaphthalene	92	40-140	07-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-18	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-8	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	99.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	27	27	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	27	27	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	27	27	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	5.1	1.3	mg/Kgdrywt	1	09-FEB-12	
Toluene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	2.7	2.7	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	110	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	94	70-130	09-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0553-008
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
RD-18	SL	98.8	01/30/2012	01/31/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	7.50	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0553-8
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0553

Sample Description	Matrix	Date Sampled	Date Received
RD-18	SL	30-JAN-12	31-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	99. %	1		SM2540G	WG104307	03-FEB-12 12:54:53	ASTM D2216	02-FEB-12	RO	

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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 01-FEB-2012 18:25
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 98.5

Lab ID: SF0553-9
Client ID: RD-19
SDG: SF0553
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	14	1.0	10	14
Chloromethane	U	14	1.0	10	14
Vinyl chloride	U	14	1.0	10	14
Bromomethane	U	14	1.0	10	14
Chloroethane	U	14	1.0	10	14
Trichlorofluoromethane	U	14	1.0	10	14
1,1-Dichloroethene	U	7	1.0	5	7
Methylene Chloride	U	36	1.0	25	36
trans-1,2-Dichloroethene	U	7	1.0	5	7
1,1-Dichloroethane	U	7	1.0	5	7
cis-1,2-Dichloroethene	U	7	1.0	5	7
1,2-Dichloroethylene (total)	U	14	1.0	10	14
2,2-Dichloropropane	U	7	1.0	5	7
Chloroform	U	7	1.0	5	7
Bromochloromethane	U	7	1.0	5	7
1,1,1-Trichloroethane	U	7	1.0	5	7
1,2-Dichloroethane	U	7	1.0	5	7
1,1-Dichloropropene	U	7	1.0	5	7
Carbon Tetrachloride	U	7	1.0	5	7
Benzene	U	7	1.0	5	7
1,2-Dichloropropane	U	7	1.0	5	7
Trichloroethene	U	7	1.0	5	7
Dibromomethane	U	7	1.0	5	7
Bromodichloromethane	U	7	1.0	5	7
cis-1,3-dichloropropene	U	7	1.0	5	7
Toluene	U	7	1.0	5	7
trans-1,3-Dichloropropene	U	7	1.0	5	7
1,1,2-Trichloroethane	U	7	1.0	5	7
1,3-Dichloropropane	U	7	1.0	5	7
Dibromochloromethane	U	7	1.0	5	7
Tetrachloroethene	U	7	1.0	5	7
1,2-Dibromoethane	U	7	1.0	5	7
Chlorobenzene	U	7	1.0	5	7
1,1,1,2-Tetrachloroethane	U	7	1.0	5	7
Ethylbenzene	U	7	1.0	5	7
Bromoform	U	7	1.0	5	7
Styrene	U	7	1.0	5	7
1,1,2,2-Tetrachloroethane	U	7	1.0	5	7
1,2,3-Trichloropropane	U	7	1.0	5	7
Isopropylbenzene	U	7	1.0	5	7
Bromobenzene	U	7	1.0	5	7
2-Chlorotoluene	U	7	1.0	5	7
N-Propylbenzene	U	7	1.0	5	7

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 01-FEB-2012 18:25
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 98.5

Lab ID: SF0553-9
Client ID: RD-19
SDG: SF0553
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	7	1.0	5	7
1,3,5-Trimethylbenzene	U	7	1.0	5	7
tert-Butylbenzene	U	7	1.0	5	7
1,2,4-Trichlorobenzene	U	7	1.0	5	7
sec-Butylbenzene	U	7	1.0	5	7
1,3-Dichlorobenzene	U	7	1.0	5	7
P-Isopropyltoluene	U	7	1.0	5	7
1,4-Dichlorobenzene	U	7	1.0	5	7
1,2-Dichlorobenzene	U	7	1.0	5	7
N-Butylbenzene	U	7	1.0	5	7
1,2-Dibromo-3-Chloropropane	U	7	1.0	5	7
1,2,4-Trimethylbenzene	U	7	1.0	5	7
Naphthalene		170	1.0	5	7
Hexachlorobutadiene	U	7	1.0	5	7
1,2,3-Trichlorobenzene	U	7	1.0	5	7
Methyl tert-butyl ether	U	7	1.0	5	7
Acetone	U	36	1.0	25	36
2-Butanone	U	36	1.0	25	36
4-methyl-2-pentanone	U	36	1.0	25	36
2-Hexanone	U	36	1.0	25	36
m+p-Xylenes	U	14	1.0	10	14
o-Xylene	U	7	1.0	5	7
Xylenes (total)	U	21	1.0	15	21
1,3,5-Trichlorobenzene	U	7	1.0	5	7
Vinyl Acetate	U	7	1.0	5	7
Carbon Disulfide	U	7	1.0	5	7
Diethyl Ether	U	7	1.0	5	7
Tetrahydrofuran	U	71	1.0	50	71
Dibromofluoromethane		79%			
1,2-Dichloroethane-D4		78%			
Toluene-D8		74%			
P-Bromofluorobenzene		50%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-19	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-9	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	01-FEB-12
Prep Method:	SW846 3540	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	98.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	20	20	mg/Kgdrywt	1	07-FEB-12	U
C19-C36 Aliphatics	160	20	mg/Kgdrywt	1	07-FEB-12	
Unadjusted C11-C22 Aromatics	960	40	mg/Kgdrywt	2	07-FEB-12	
C11-C22 Aromatics	700	40	mg/Kgdrywt	2	07-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	1.2	.2	mg/Kgdrywt	1	07-FEB-12	
2-Methylnaphthalene	1.1	.2	mg/Kgdrywt	1	07-FEB-12	
Phenanthrene	11	.2	mg/Kgdrywt	1	07-FEB-12	
Acenaphthylene	5.0	.2	mg/Kgdrywt	1	07-FEB-12	
Acenaphthene	0.69	.2	mg/Kgdrywt	1	07-FEB-12	
Anthracene	3.7	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(a)anthracene	23	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(a)pyrene	25	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(b)fluoranthene	29	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(g,h,i)perylene	17	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(k)fluoranthene	24	.2	mg/Kgdrywt	1	07-FEB-12	
Chrysene	19	.2	mg/Kgdrywt	1	07-FEB-12	
Dibenzo(a,h)anthracene	3.8	.2	mg/Kgdrywt	1	07-FEB-12	
Fluoranthene	28	.2	mg/Kgdrywt	1	07-FEB-12	
Fluorene	1.4	.2	mg/Kgdrywt	1	07-FEB-12	
Indeno(1,2,3-cd)pyrene	20	.2	mg/Kgdrywt	1	07-FEB-12	
Pyrene	44	.4	mg/Kgdrywt	2	07-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	66	40-140	07-FEB-12	
o-Terphenyl	73	40-140	07-FEB-12	
2-Fluorobiphenyl	77	40-140	07-FEB-12	
2-Bromonaphthalene	79	40-140	07-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-19	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-9	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	98.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	24	24	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	2.4	2.4	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	96	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	88	70-130	09-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0553-009
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
RD-19	SL	98.5	01/30/2012	01/31/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	10.2	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0553-9
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0553

Sample Description	Matrix	Date Sampled	Date Received
RD-19	SL	30-JAN-12	31-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	98. %	1		SM2540G	WG104307	03-FEB-12 12:55:05	ASTM D2216	02-FEB-12	RO	

Katahdin Analytical Services SF0553 page 0000028 of 0000076

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 02-FEB-2012 18:20
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 98.3

Lab ID: SF0553-10DL
Client ID: RD-20
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	540	1.0	10	540
Chloromethane	U	540	1.0	10	540
Vinyl chloride	U	540	1.0	10	540
Bromomethane	U	540	1.0	10	540
Chloroethane	U	540	1.0	10	540
Trichlorofluoromethane	U	540	1.0	10	540
1,1-Dichloroethene	U	270	1.0	5	270
Methylene Chloride	U	1300	1.0	25	1300
trans-1,2-Dichloroethene	U	270	1.0	5	270
1,1-Dichloroethane	U	270	1.0	5	270
cis-1,2-Dichloroethene	U	270	1.0	5	270
1,2-Dichloroethylene (total)	U	540	1.0	10	540
2,2-Dichloropropane	U	270	1.0	5	270
Chloroform	U	270	1.0	5	270
Bromochloromethane	U	270	1.0	5	270
1,1,1-Trichloroethane	U	270	1.0	5	270
1,2-Dichloroethane	U	270	1.0	5	270
1,1-Dichloropropene	U	270	1.0	5	270
Carbon Tetrachloride	U	270	1.0	5	270
Benzene	U	270	1.0	5	270
1,2-Dichloropropane	U	270	1.0	5	270
Trichloroethene	U	270	1.0	5	270
Dibromomethane	U	270	1.0	5	270
Bromodichloromethane	U	270	1.0	5	270
cis-1,3-dichloropropene	U	270	1.0	5	270
Toluene	U	270	1.0	5	270
trans-1,3-Dichloropropene	U	270	1.0	5	270
1,1,2-Trichloroethane	U	270	1.0	5	270
1,3-Dichloropropane	U	270	1.0	5	270
Dibromochloromethane	U	270	1.0	5	270
Tetrachloroethene	U	270	1.0	5	270
1,2-Dibromoethane	U	270	1.0	5	270
Chlorobenzene	U	270	1.0	5	270
1,1,1,2-Tetrachloroethane	U	270	1.0	5	270
Ethylbenzene	U	270	1.0	5	270
Bromoform	U	270	1.0	5	270
Styrene	U	270	1.0	5	270
1,1,2,2-Tetrachloroethane	U	270	1.0	5	270
1,2,3-Trichloropropane	U	270	1.0	5	270
Isopropylbenzene	U	270	1.0	5	270
Bromobenzene	U	270	1.0	5	270
2-Chlorotoluene	U	270	1.0	5	270
N-Propylbenzene	U	270	1.0	5	270

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/30/12
Received Date: 01/31/12
Extraction Date:
Analysis Date: 02-FEB-2012 18:20
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 98.3

Lab ID: SF0553-10DL
Client ID: RD-20
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	270	1.0	5	270
1,3,5-Trimethylbenzene	U	270	1.0	5	270
tert-Butylbenzene	U	270	1.0	5	270
1,2,4-Trichlorobenzene	U	270	1.0	5	270
sec-Butylbenzene	U	270	1.0	5	270
1,3-Dichlorobenzene	U	270	1.0	5	270
P-Isopropyltoluene	U	270	1.0	5	270
1,4-Dichlorobenzene	U	270	1.0	5	270
1,2-Dichlorobenzene	U	270	1.0	5	270
N-Butylbenzene	U	270	1.0	5	270
1,2-Dibromo-3-Chloropropane	U	270	1.0	5	270
1,2,4-Trimethylbenzene	U	270	1.0	5	270
Naphthalene		3700	1.0	5	270
Hexachlorobutadiene	U	270	1.0	5	270
1,2,3-Trichlorobenzene	U	270	1.0	5	270
Methyl tert-butyl ether	U	270	1.0	5	270
Acetone	U	1300	1.0	25	1300
2-Butanone	U	1300	1.0	25	1300
4-methyl-2-pentanone	U	1300	1.0	25	1300
2-Hexanone	U	1300	1.0	25	1300
m+p-Xylenes	U	540	1.0	10	540
o-Xylene	U	270	1.0	5	270
Xylenes (total)	U	800	1.0	15	800
1,3,5-Trichlorobenzene	U	270	1.0	5	270
Vinyl Acetate	U	270	1.0	5	270
Carbon Disulfide	U	270	1.0	5	270
Diethyl Ether	U	270	1.0	5	270
Tetrahydrofuran	U	2700	1.0	50	2700
Dibromofluoromethane		102%			
1,2-Dichloroethane-D4		97%			
Toluene-D8		100%			
P-Bromofluorobenzene		93%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-20	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-10	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	01-FEB-12
Prep Method:	SW846 3540	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	98.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	50	20	mg/Kgdrywt	1	07-FEB-12	
C19-C36 Aliphatics	160	20	mg/Kgdrywt	1	07-FEB-12	
Unadjusted C11-C22 Aromatics	1800	60	mg/Kgdrywt	3	07-FEB-12	
C11-C22 Aromatics	1400	60	mg/Kgdrywt	3	07-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	3.3	.2	mg/Kgdrywt	1	07-FEB-12	
2-Methylnaphthalene	5.1	.2	mg/Kgdrywt	1	07-FEB-12	
Acenaphthylene	10	.2	mg/Kgdrywt	1	07-FEB-12	
Acenaphthene	1.8	.2	mg/Kgdrywt	1	07-FEB-12	
Anthracene	9.0	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(a)anthracene	30	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(a)pyrene	19	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(b)fluoranthene	18	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(g,h,i)perylene	14	.2	mg/Kgdrywt	1	07-FEB-12	
Benzo(k)fluoranthene	21	.2	mg/Kgdrywt	1	07-FEB-12	
Chrysene	27	.2	mg/Kgdrywt	1	07-FEB-12	
Dibenzo(a,h)anthracene	2.8	.2	mg/Kgdrywt	1	07-FEB-12	
Fluorene	8.2	.2	mg/Kgdrywt	1	07-FEB-12	
Indeno(1,2,3-cd)pyrene	14	.2	mg/Kgdrywt	1	07-FEB-12	
Phenanthrene	78	.6	mg/Kgdrywt	3	07-FEB-12	
Fluoranthene	58	.6	mg/Kgdrywt	3	07-FEB-12	
Pyrene	72	.6	mg/Kgdrywt	3	07-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	52	40-140	07-FEB-12	
o-Terphenyl	95	40-140	07-FEB-12	
2-Fluorobiphenyl	72	40-140	07-FEB-12	
2-Bromonaphthalene	94	40-140	07-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0553
Client Sample ID:	RD-20	**Date Collected:**	30-JAN-12
KAS Sample ID:	SF0553-10	**Date Received:**	31-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	98.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	26	26	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	26	26	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	26	26	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
Toluene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	2.6	2.6	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.3	1.3	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	82	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	76	70-130	09-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0553-010
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
RD-20	SL	98.3	01/30/2012	01/31/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	14.2	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0553-10
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0553

Sample Description	Matrix	Date Sampled	Date Received
RD-20	SL	30-JAN-12	31-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	98. %	1		SM2540G	WG104307	03-FEB-12 12:55:19	ASTM D2216	02-FEB-12	RO	

600 Technology Way
P.O. Box 540, Scarborough, ME 04070

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FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104253-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: M6465 Lab Sample ID: WG104253-2

Date Analyzed: 02/01/12 Time Analyzed: 1158

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) Y

Instrument ID: GCMS-M

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104253-LCS	WG104253-1	M6462	02/01/12	0954
02	RD-19	SF0553-9	M6475	02/01/12	1825
03					
04					
05					
06					
07					
08					
09					
10					
11					
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28					
29					
30					

COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104253-1
Client ID: WG104253-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	35		70	45-167
Chloromethane	50	NA	46		93	69-127
Vinyl chloride	50	NA	44		88	73-134
Bromomethane	50	NA	44		87	64-136
Chloroethane	50	NA	37		74	71-127
Trichlorofluoromethane	50	NA	36	*	71	73-145
Diethyl Ether	50	NA	44		87	76-135
Tertiary-butyl alcohol	250	NA	252		101	62-148
1,1-Dichloroethene	50	NA	45		91	71-137
Carbon Disulfide	50	NA	38		75	69-138
Freon-113	50	NA	43		87	67-135
Iodomethane	50	NA	44		88	51-150
Acrolein	250	NA	202		81	48-175
Methylene Chloride	50	NA	43		85	56-152
Acetone	50	NA	69		137	76-213
Isobutyl Alcohol	1000	NA	1090		109	72-142
trans-1,2-Dichloroethene	50	NA	44		87	67-133
Allyl Chloride	50	NA	42		83	69-135
Methyl tert-butyl ether	100	NA	95		95	81-125
Acetonitrile	500	NA	396		79	63-143
Di-isopropyl ether	50	NA	50		100	68-131
Chloroprene	50	NA	47		95	67-130
Methacrylonitrile	500	NA	468		94	79-129
Propionitrile	500	NA	477		95	73-133
1,1-Dichloroethane	50	NA	45		90	75-126
Acrylonitrile	250	NA	250		100	69-139
Ethyl tertiary-butyl ether	50	NA	49		98	83-122
Vinyl Acetate	50	NA	46		92	77-119
cis-1,2-Dichloroethene	50	NA	46		91	82-123
1,2-Dichloroethylene (total)	100	NA	89		89	82-120
Methyl Methacrylate	50	NA	46		91	82-130
2,2-Dichloropropane	50	NA	41		82	78-124
Bromochloromethane	50	NA	45		91	84-115
Chloroform	50	NA	42		85	83-118
Carbon Tetrachloride	50	NA	42		83	78-124
Tetrahydrofuran	50	NA	52		103	78-137
1,1,1-Trichloroethane	50	NA	41		83	80-120
1,1-Dichloropropene	50	NA	46		93	81-119
2-Butanone	50	NA	55		110	78-148
Benzene	50	NA	47		95	82-113
Cyclohexane	50	NA	53		107	75-128
Ethyl Methacrylate	50	NA	47		94	78-128
Tertiary-amyl methyl ether	50	NA	51		103	80-123
1,2-Dichloroethane	50	NA	40	*	79	83-121
Trichloroethene	50	NA	44		88	83-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104253-1
Client ID: WG104253-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dibromomethane	50	NA	44	87	85-118
1,2-Dichloropropane	50	NA	48	97	84-115
Bromodichloromethane	50	NA	43	86	82-118
cis-1,3-dichloropropene	50	NA	48	96	80-115
1,4-Dioxane	1000	NA	933	93	69-137
2-Chloroethylvinylether	50	NA	62	124	16-150
Toluene	50	NA	45	90	80-113
4-methyl-2-pentanone	50	NA	51	103	75-137
Tetrachloroethene	50	NA	46	91	73-122
trans-1,3-Dichloropropene	50	NA	52	105	87-136
1,1,2-Trichloroethane	50	NA	47	94	78-117
Dibromochloromethane	50	NA	46	92	80-120
1,3-Dichloropropane	50	NA	48	96	80-114
1,2-Dibromoethane	50	NA	43	85	81-119
2-Hexanone	50	NA	56	112	72-149
Chlorobenzene	50	NA	46	92	85-111
Ethylbenzene	50	NA	46	91	81-112
1,1,1,2-Tetrachloroethane	50	NA	46	92	83-114
Xylenes (total)	150	NA	134	89	81-114
m+p-Xylenes	100	NA	90	90	80-115
o-Xylene	50	NA	45	90	82-115
Styrene	50	NA	45	90	84-112
Bromoform	50	NA	47	94	76-126
Isopropylbenzene	50	NA	52	105	89-136
cis-1,4-Dichloro-2-Butene	50	NA	44	87	73-139
trans-1,4-Dichloro-2-Butene	50	NA	39	78	65-137
Bromobenzene	50	NA	45	90	78-118
N-Propylbenzene	50	NA	45	90	77-121
1,1,2,2-Tetrachloroethane	50	NA	50	99	78-122
1,3,5-Trimethylbenzene	50	NA	42	84	79-116
2-Chlorotoluene	50	NA	44	87	78-118
1,2,3-Trichloropropane	50	NA	48	96	81-118
4-Chlorotoluene	50	NA	45	90	77-121
tert-Butylbenzene	50	NA	44	89	79-118
Pentachloroethane	50	NA	45	90	78-127
1,2,4-Trimethylbenzene	50	NA	44	87	76-115
P-Isopropyltoluene	50	NA	47	94	80-124
1,3-Dichlorobenzene	50	NA	45	91	79-119
1,4-Dichlorobenzene	50	NA	46	92	80-117
N-Butylbenzene	50	NA	45	90	70-124
sec-Butylbenzene	50	NA	45	91	75-122
1,2-Dichlorobenzene	50	NA	45	91	76-118
1,2-Dibromo-3-Chloropropane	50	NA	36	72	66-132
1,3,5-Trichlorobenzene	50	NA	39	78	64-133
Hexachlorobutadiene	50	NA	41	83	27-154

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104253-1
Client ID: WG104253-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	47		95	61-135
1,2,3-Trimethylbenzene	50	NA	40	*	81	82-116
Naphthalene	50	NA	46		91	51-131
1,2,3-Trichlorobenzene	50	NA	45		90	55-134
Methyl Acetate	50	NA	45		89	72-133
Methylcyclohexane	50	NA	48		96	71-127
1-Chlorohexane	50	NA	48		95	70-122
Total Alkylbenzenes	350	NA	313		89	79-118

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 11:58
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104253-2
Client ID: WG104253-Blank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	5	1.0	5	5
Chloromethane	U	5	1.0	5	5
Vinyl chloride	U	5	1.0	5	5
Bromomethane	U	5	1.0	5	5
Chloroethane	U	5	1.0	5	5
Trichlorofluoromethane	U	5	1.0	5	5
1,1-Dichloroethene	U	5	1.0	5	5
Methylene Chloride	U	25	1.0	25	25
trans-1,2-Dichloroethene	U	5	1.0	5	5
1,1-Dichloroethane	U	5	1.0	5	5
cis-1,2-Dichloroethene	U	5	1.0	5	5
1,2-Dichloroethylene (total)	U	10	1.0	10	10
2,2-Dichloropropane	U	5	1.0	5	5
Chloroform	U	5	1.0	5	5
Bromochloromethane	U	5	1.0	5	5
1,1,1-Trichloroethane	U	5	1.0	5	5
1,2-Dichloroethane	U	5	1.0	5	5
1,1-Dichloropropene	U	5	1.0	5	5
Carbon Tetrachloride	U	5	1.0	5	5
Benzene	U	5	1.0	5	5
1,2-Dichloropropane	U	5	1.0	5	5
Trichloroethene	U	5	1.0	5	5
Dibromomethane	U	5	1.0	5	5
Bromodichloromethane	U	5	1.0	5	5
cis-1,3-dichloropropene	U	5	1.0	5	5
Toluene	U	5	1.0	5	5
trans-1,3-Dichloropropene	U	5	1.0	5	5
1,1,2-Trichloroethane	U	5	1.0	5	5
1,3-Dichloropropane	U	5	1.0	5	5
Dibromochloromethane	U	5	1.0	5	5
Tetrachloroethene	U	5	1.0	5	5
1,2-Dibromoethane	U	5	1.0	5	5
Chlorobenzene	U	5	1.0	5	5
1,1,1,2-Tetrachloroethane	U	5	1.0	5	5
Ethylbenzene	U	5	1.0	5	5
Bromoform	U	5	1.0	5	5
Styrene	U	5	1.0	5	5
1,1,2,2-Tetrachloroethane	U	5	1.0	5	5
1,2,3-Trichloropropane	U	5	1.0	5	5
Isopropylbenzene	U	5	1.0	5	5
Bromobenzene	U	5	1.0	5	5
2-Chlorotoluene	U	5	1.0	5	5
N-Propylbenzene	U	5	1.0	5	5

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 11:58
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104253-2
Client ID: WG104253-Blank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	5	1.0	5	5
1,3,5-Trimethylbenzene	U	5	1.0	5	5
tert-Butylbenzene	U	5	1.0	5	5
1,2,4-Trichlorobenzene	U	5	1.0	5	5
sec-Butylbenzene	U	5	1.0	5	5
1,3-Dichlorobenzene	U	5	1.0	5	5
P-Isopropyltoluene	U	5	1.0	5	5
1,4-Dichlorobenzene	U	5	1.0	5	5
1,2-Dichlorobenzene	U	5	1.0	5	5
N-Butylbenzene	U	5	1.0	5	5
1,2-Dibromo-3-Chloropropane	U	5	1.0	5	5
1,2,4-Trimethylbenzene	U	5	1.0	5	5
Naphthalene	U	5	1.0	5	5
Hexachlorobutadiene	U	5	1.0	5	5
1,2,3-Trichlorobenzene	U	5	1.0	5	5
Methyl tert-butyl ether	U	5	1.0	5	5
Acetone	U	25	1.0	25	25
2-Butanone	U	25	1.0	25	25
4-methyl-2-pentanone	U	25	1.0	25	25
2-Hexanone	U	25	1.0	25	25
m+p-Xylenes	U	10	1.0	10	10
o-Xylene	U	5	1.0	5	5
Xylenes (total)	U	15	1.0	15	15
1,3,5-Trichlorobenzene	U	5	1.0	5	5
Vinyl Acetate	U	5	1.0	5	5
Carbon Disulfide	U	5	1.0	5	5
Diethyl Ether	U	5	1.0	5	5
Tetrahydrofuran	U	25	1.0	25	25
Dibromofluoromethane		91%			
1,2-Dichloroethane-D4		87%			
Toluene-D8		98%			
P-Bromofluorobenzene		92%			

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104315-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: T5181 Lab Sample ID: WG104315-2

Date Analyzed: 02/02/12 Time Analyzed: 1133

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS-T

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104315-LCS	WG104315-1	T5178	02/02/12	0942
02	WG104315-MEOHBLANK	WG104315-3	T5182	02/02/12	1205
03	RD-9	SF0553-2DL	T5191	02/02/12	1713
04	RD-18	SF0553-8DL	T5192	02/02/12	1747
05	RD-20	SF0553-10DL	T5193	02/02/12	1820
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/02/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104315-1
Client ID: WG104315-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	45	90	29-164
Chloromethane	50	NA	49	97	59-123
Vinyl chloride	50	NA	46	93	64-131
Bromomethane	50	NA	47	94	57-135
Chloroethane	50	NA	47	94	53-157
Trichlorofluoromethane	50	NA	43	87	70-149
Diethyl Ether	50	NA	48	96	78-124
Tertiary-butyl alcohol	250	NA	182	73	11-151
1,1-Dichloroethene	50	NA	51	102	88-127
Carbon Disulfide	50	NA	44	89	71-129
Freon-113	50	NA	52	104	73-126
Iodomethane	50	NA	52	104	54-155
Acrolein	250	NA	196	78	62-135
Methylene Chloride	50	NA	50	99	72-129
Acetone	50	NA	44	88	62-172
Isobutyl Alcohol	1000	NA	646	65	16-147
trans-1,2-Dichloroethene	50	NA	49	98	78-125
Allyl Chloride	50	NA	51	102	78-121
Methyl tert-butyl ether	100	NA	104	104	81-125
Acetonitrile	500	NA	404	81	61-125
Di-isopropyl ether	50	NA	51	102	81-123
Chloroprene	50	NA	51	102	75-128
Methacrylonitrile	500	NA	374	* 75	78-123
Propionitrile	500	NA	426	85	75-118
1,1-Dichloroethane	50	NA	48	95	76-130
Acrylonitrile	250	NA	213	85	76-120
Ethyl tertiary-butyl ether	50	NA	52	103	85-119
Vinyl Acetate	50	NA	43	86	56-129
cis-1,2-Dichloroethene	50	NA	50	101	85-123
1,2-Dichloroethylene (total)	100	NA	100	100	84-121
Methyl Methacrylate	50	NA	44	88	79-121
2,2-Dichloropropane	50	NA	52	105	70-132
Bromochloromethane	50	NA	56	113	85-117
Chloroform	50	NA	48	96	78-128
Carbon Tetrachloride	50	NA	51	102	87-126
Tetrahydrofuran	50	NA	45	90	74-123
1,1,1-Trichloroethane	50	NA	48	96	77-129
1,1-Dichloropropene	50	NA	50	101	87-118
2-Butanone	50	NA	45	90	71-132
Benzene	50	NA	50	99	86-116
Cyclohexane	50	NA	48	95	71-133
Ethyl Methacrylate	50	NA	46	92	80-125
Tertiary-amyl methyl ether	50	NA	52	103	80-121
1,2-Dichloroethane	50	NA	46	92	81-125
Trichloroethene	50	NA	50	101	79-121

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/02/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104315-1
Client ID: WG104315-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dibromomethane	50	NA	50		100	85-117
1,2-Dichloropropane	50	NA	50		99	84-118
Bromodichloromethane	50	NA	51		101	85-122
cis-1,3-dichloropropene	50	NA	53		106	83-119
1,4-Dioxane	1000	NA	710		71	10-149
2-Chloroethylvinylether	50	NA	42		84	39-135
Toluene	50	NA	52		103	84-118
4-methyl-2-pentanone	50	NA	41	*	81	83-122
Tetrachloroethene	50	NA	49		98	47-155
trans-1,3-Dichloropropene	50	NA	50		101	85-135
1,1,2-Trichloroethane	50	NA	44		88	84-115
Dibromochloromethane	50	NA	52		104	85-119
1,3-Dichloropropane	50	NA	48		95	80-119
1,2-Dibromoethane	50	NA	49		99	84-116
2-Hexanone	50	NA	41		83	80-124
Chlorobenzene	50	NA	49		98	89-113
Ethylbenzene	50	NA	48		96	88-113
1,1,1,2-Tetrachloroethane	50	NA	51		103	88-118
Xylenes (total)	150	NA	153		102	89-116
m+p-Xylenes	100	NA	102		102	88-116
o-Xylene	50	NA	51		103	90-116
Styrene	50	NA	50		99	88-117
Bromoform	50	NA	50		99	86-117
Isopropylbenzene	50	NA	59		119	96-136
cis-1,4-Dichloro-2-Butene	50	NA	45		90	59-136
trans-1,4-Dichloro-2-Butene	50	NA	47		93	63-132
Bromobenzene	50	NA	53		107	84-113
N-Propylbenzene	50	NA	52		104	83-121
1,1,2,2-Tetrachloroethane	50	NA	44		88	79-121
1,3,5-Trimethylbenzene	50	NA	50		100	80-123
2-Chlorotoluene	50	NA	51		102	81-120
1,2,3-Trichloropropane	50	NA	43		86	77-120
4-Chlorotoluene	50	NA	51		102	81-122
tert-Butylbenzene	50	NA	49		98	84-121
Pentachloroethane	50	NA	54		109	19-186
1,2,4-Trimethylbenzene	50	NA	52		103	83-118
P-Isopropyltoluene	50	NA	47		93	88-121
1,3-Dichlorobenzene	50	NA	50		100	86-110
1,4-Dichlorobenzene	50	NA	47		94	86-111
N-Butylbenzene	50	NA	42		84	78-121
sec-Butylbenzene	50	NA	50		100	82-122
1,2-Dichlorobenzene	50	NA	49		98	86-112
1,2-Dibromo-3-Chloropropane	50	NA	32	*	64	67-124
1,3,5-Trichlorobenzene	50	NA	44		89	77-120
Hexachlorobutadiene	50	NA	38		77	73-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/02/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104315-1
Client ID: WG104315-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	28	*	55	76-126
1,2,3-Trimethylbenzene	50	NA	52		103	85-119
Naphthalene	50	NA	25	*	50	62-126
1,2,3-Trichlorobenzene	50	NA	19	*	38	70-122
Methyl Acetate	50	NA	48		95	70-132
Methylcyclohexane	50	NA	46		93	73-125
1-Chlorohexane	50	NA	44		88	73-119
Total Alkylbenzenes	350	NA	342		98	85-119

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 11:33
Report Date: 02/06/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104315-2
Client ID: WG104315-Blank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	1	1.0	1	1
Chloromethane	U	1	1.0	1	1
Vinyl chloride	U	1	1.0	1	1
Bromomethane	U	1	1.0	1	1
Chloroethane	U	1	1.0	1	1
Trichlorofluoromethane	U	1	1.0	1	1
1,1-Dichloroethene	U	1	1.0	1	1
Methylene Chloride	U	5	1.0	5	5
trans-1,2-Dichloroethene	U	1	1.0	1	1
1,1-Dichloroethane	U	1	1.0	1	1
cis-1,2-Dichloroethene	U	1	1.0	1	1
1,2-Dichloroethylene (total)	U	2	1.0	2	2
2,2-Dichloropropane	U	1	1.0	1	1
Chloroform	U	1	1.0	1	1
Bromochloromethane	U	1	1.0	1	1
1,1,1-Trichloroethane	U	1	1.0	1	1
1,2-Dichloroethane	U	1	1.0	1	1
1,1-Dichloropropene	U	1	1.0	1	1
Carbon Tetrachloride	U	1	1.0	1	1
Benzene	U	1	1.0	1	1
1,2-Dichloropropane	U	1	1.0	1	1
Trichloroethene	U	1	1.0	1	1
Dibromomethane	U	1	1.0	1	1
Bromodichloromethane	U	1	1.0	1	1
cis-1,3-dichloropropene	U	1	1.0	1	1
Toluene	U	1	1.0	1	1
trans-1,3-Dichloropropene	U	1	1.0	1	1
1,1,2-Trichloroethane	U	1	1.0	1	1
1,3-Dichloropropane	U	1	1.0	1	1
Dibromochloromethane	U	1	1.0	1	1
Tetrachloroethene	U	1	1.0	1	1
1,2-Dibromoethane	U	1	1.0	1	1
Chlorobenzene	U	1	1.0	1	1
1,1,1,2-Tetrachloroethane	U	1	1.0	1	1
Ethylbenzene	U	1	1.0	1	1
Bromoform	U	1	1.0	1	1
Styrene	U	1	1.0	1	1
1,1,2,2-Tetrachloroethane	U	1	1.0	1	1
1,2,3-Trichloropropane	U	1	1.0	1	1
Isopropylbenzene	U	1	1.0	1	1
Bromobenzene	U	1	1.0	1	1
2-Chlorotoluene	U	1	1.0	1	1
N-Propylbenzene	U	1	1.0	1	1

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 11:33
Report Date: 02/06/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104315-2
Client ID: WG104315-Blank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	1	1.0	1	1
1,3,5-Trimethylbenzene	U	1	1.0	1	1
tert-Butylbenzene	U	1	1.0	1	1
1,2,4-Trichlorobenzene	U	1	1.0	1	1
sec-Butylbenzene	U	1	1.0	1	1
1,3-Dichlorobenzene	U	1	1.0	1	1
P-Isopropyltoluene	U	1	1.0	1	1
1,4-Dichlorobenzene	U	1	1.0	1	1
1,2-Dichlorobenzene	U	1	1.0	1	1
N-Butylbenzene	U	1	1.0	1	1
1,2-Dibromo-3-Chloropropane	U	1	1.0	1	1
1,2,4-Trimethylbenzene	U	1	1.0	1	1
Naphthalene		1	1.0	1	1
Hexachlorobutadiene	U	1	1.0	1	1
1,2,3-Trichlorobenzene		1	1.0	1	1
Methyl tert-butyl ether	U	1	1.0	1	1
Acetone	U	5	1.0	5	5
2-Butanone	U	5	1.0	5	5
4-methyl-2-pentanone	U	5	1.0	5	5
2-Hexanone	U	5	1.0	5	5
m+p-Xylenes	U	2	1.0	2	2
o-Xylene	U	1	1.0	1	1
Xylenes (total)	U	3	1.0	3	3
1,3,5-Trichlorobenzene	U	1	1.0	1	1
Vinyl Acetate	U	1	1.0	1	1
Carbon Disulfide	U	1	1.0	1	1
Diethyl Ether	U	1	1.0	1	1
Tetrahydrofuran	U	5	1.0	5	5
Dibromofluoromethane		102%			
1,2-Dichloroethane-D4		94%			
Toluene-D8		103%			
P-Bromofluorobenzene		93%			

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 12:05
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104315-3
Client ID: WG104315-MeOHBlank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	500	1.0	10	500
Chloromethane	U	500	1.0	10	500
Vinyl chloride	U	500	1.0	10	500
Bromomethane	U	500	1.0	10	500
Chloroethane	U	500	1.0	10	500
Trichlorofluoromethane	U	500	1.0	10	500
1,1-Dichloroethene	U	250	1.0	5	250
Methylene Chloride	U	1200	1.0	25	1200
trans-1,2-Dichloroethene	U	250	1.0	5	250
1,1-Dichloroethane	U	250	1.0	5	250
cis-1,2-Dichloroethene	U	250	1.0	5	250
1,2-Dichloroethylene (total)	U	500	1.0	10	500
2,2-Dichloropropane	U	250	1.0	5	250
Chloroform	U	250	1.0	5	250
Bromochloromethane	U	250	1.0	5	250
1,1,1-Trichloroethane	U	250	1.0	5	250
1,2-Dichloroethane	U	250	1.0	5	250
1,1-Dichloropropene	U	250	1.0	5	250
Carbon Tetrachloride	U	250	1.0	5	250
Benzene	U	250	1.0	5	250
1,2-Dichloropropane	U	250	1.0	5	250
Trichloroethene	U	250	1.0	5	250
Dibromomethane	U	250	1.0	5	250
Bromodichloromethane	U	250	1.0	5	250
cis-1,3-dichloropropene	U	250	1.0	5	250
Toluene	U	250	1.0	5	250
trans-1,3-Dichloropropene	U	250	1.0	5	250
1,1,2-Trichloroethane	U	250	1.0	5	250
1,3-Dichloropropane	U	250	1.0	5	250
Dibromochloromethane	U	250	1.0	5	250
Tetrachloroethene	U	250	1.0	5	250
1,2-Dibromoethane	U	250	1.0	5	250
Chlorobenzene	U	250	1.0	5	250
1,1,1,2-Tetrachloroethane	U	250	1.0	5	250
Ethylbenzene	U	250	1.0	5	250
Bromoform	U	250	1.0	5	250
Styrene	U	250	1.0	5	250
1,1,2,2-Tetrachloroethane	U	250	1.0	5	250
1,2,3-Trichloropropane	U	250	1.0	5	250
Isopropylbenzene	U	250	1.0	5	250
Bromobenzene	U	250	1.0	5	250
2-Chlorotoluene	U	250	1.0	5	250
N-Propylbenzene	U	250	1.0	5	250

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 12:05
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104315-3
Client ID: WG104315-MeOHBlank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	250	1.0	5	250
1,3,5-Trimethylbenzene	U	250	1.0	5	250
tert-Butylbenzene	U	250	1.0	5	250
1,2,4-Trichlorobenzene	U	250	1.0	5	250
sec-Butylbenzene	U	250	1.0	5	250
1,3-Dichlorobenzene	U	250	1.0	5	250
P-Isopropyltoluene	U	250	1.0	5	250
1,4-Dichlorobenzene	U	250	1.0	5	250
1,2-Dichlorobenzene	U	250	1.0	5	250
N-Butylbenzene	U	250	1.0	5	250
1,2-Dibromo-3-Chloropropane	U	250	1.0	5	250
1,2,4-Trimethylbenzene	U	250	1.0	5	250
Naphthalene	U	250	1.0	5	250
Hexachlorobutadiene	U	250	1.0	5	250
1,2,3-Trichlorobenzene	U	250	1.0	5	250
Methyl tert-butyl ether	U	250	1.0	5	250
Acetone	U	1200	1.0	25	1200
2-Butanone	U	1200	1.0	25	1200
4-methyl-2-pentanone	U	1200	1.0	25	1200
2-Hexanone	U	1200	1.0	25	1200
m+p-Xylenes	U	500	1.0	10	500
o-Xylene	U	250	1.0	5	250
Xylenes (total)	U	750	1.0	15	750
1,3,5-Trichlorobenzene	U	250	1.0	5	250
Vinyl Acetate	U	250	1.0	5	250
Carbon Disulfide	U	250	1.0	5	250
Diethyl Ether	U	250	1.0	5	250
Tetrahydrofuran	U	2500	1.0	50	2500
Dibromofluoromethane		106%			
1,2-Dichloroethane-D4		100%			
Toluene-D8		108%			
P-Bromofluorobenzene		100%			

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104403-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: T5226 Lab Sample ID: WG104403-2

Date Analyzed: 02/06/12 Time Analyzed: 1133

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS-T

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104403-LCS	WG104403-1	T5223	02/06/12	0944
02	WG104403-MEOHBLANK	WG104403-3	T5227	02/06/12	1207
03	RD-7	SF0553-1DL	T5228	02/06/12	1240
04					
05					
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07					
08					
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COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/06/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104403-1
Client ID: WG104403-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	54		107	29-164
Chloromethane	50	NA	50		101	59-123
Vinyl chloride	50	NA	50		100	64-131
Bromomethane	50	NA	53		106	57-135
Chloroethane	50	NA	50		101	53-157
Trichlorofluoromethane	50	NA	46		91	70-149
Diethyl Ether	50	NA	48		95	78-124
Tertiary-butyl alcohol	250	NA	165		66	11-151
1,1-Dichloroethene	50	NA	52		104	88-127
Carbon Disulfide	50	NA	49		98	71-129
Freon-113	50	NA	50		100	73-126
Iodomethane	50	NA	53		106	54-155
Acrolein	250	NA	200		80	62-135
Methylene Chloride	50	NA	50		99	72-129
Acetone	50	NA	47		95	62-172
Isobutyl Alcohol	1000	NA	625		62	16-147
trans-1,2-Dichloroethene	50	NA	49		97	78-125
Allyl Chloride	50	NA	49		98	78-121
Methyl tert-butyl ether	100	NA	105		105	81-125
Acetonitrile	500	NA	369		74	61-125
Di-isopropyl ether	50	NA	50		99	81-123
Chloroprene	50	NA	48		97	75-128
Methacrylonitrile	500	NA	373	*	75	78-123
Propionitrile	500	NA	413		83	75-118
1,1-Dichloroethane	50	NA	48		96	76-130
Acrylonitrile	250	NA	202		81	76-120
Ethyl tertiary-butyl ether	50	NA	51		102	85-119
Vinyl Acetate	50	NA	42		84	56-129
cis-1,2-Dichloroethene	50	NA	50		101	85-123
1,2-Dichloroethylene (total)	100	NA	99		99	84-121
Methyl Methacrylate	50	NA	42		84	79-121
2,2-Dichloropropane	50	NA	53		106	70-132
Bromochloromethane	50	NA	59	*	118	85-117
Chloroform	50	NA	48		97	78-128
Carbon Tetrachloride	50	NA	52		103	87-126
Tetrahydrofuran	50	NA	43		86	74-123
1,1,1-Trichloroethane	50	NA	49		97	77-129
1,1-Dichloropropene	50	NA	50		99	87-118
2-Butanone	50	NA	46		92	71-132
Benzene	50	NA	49		98	86-116
Cyclohexane	50	NA	50		100	71-133
Ethyl Methacrylate	50	NA	44		88	80-125
Tertiary-amyl methyl ether	50	NA	51		103	80-121
1,2-Dichloroethane	50	NA	46		92	81-125
Trichloroethene	50	NA	49		99	79-121

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/06/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104403-1
Client ID: WG104403-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dibromomethane	50	NA	50	99	85-117
1,2-Dichloropropane	50	NA	48	96	84-118
Bromodichloromethane	50	NA	50	100	85-122
cis-1,3-dichloropropene	50	NA	52	105	83-119
1,4-Dioxane	1000	NA	679	68	10-149
2-Chloroethylvinylether	50	NA	44	87	39-135
Toluene	50	NA	51	102	84-118
4-methyl-2-pentanone	50	NA	38	* 77	83-122
Tetrachloroethene	50	NA	50	101	47-155
trans-1,3-Dichloropropene	50	NA	51	101	85-135
1,1,2-Trichloroethane	50	NA	43	86	84-115
Dibromochloromethane	50	NA	52	103	85-119
1,3-Dichloropropane	50	NA	47	93	80-119
1,2-Dibromoethane	50	NA	48	97	84-116
2-Hexanone	50	NA	40	80	80-124
Chlorobenzene	50	NA	49	99	89-113
Ethylbenzene	50	NA	49	98	88-113
1,1,1,2-Tetrachloroethane	50	NA	51	101	88-118
Xylenes (total)	150	NA	154	103	89-116
m+p-Xylenes	100	NA	103	103	88-116
o-Xylene	50	NA	51	103	90-116
Styrene	50	NA	50	100	88-117
Bromoform	50	NA	52	103	86-117
Isopropylbenzene	50	NA	57	113	96-136
cis-1,4-Dichloro-2-Butene	50	NA	44	88	59-136
trans-1,4-Dichloro-2-Butene	50	NA	47	94	63-132
Bromobenzene	50	NA	51	101	84-113
N-Propylbenzene	50	NA	50	100	83-121
1,1,2,2-Tetrachloroethane	50	NA	43	86	79-121
1,3,5-Trimethylbenzene	50	NA	48	97	80-123
2-Chlorotoluene	50	NA	49	97	81-120
1,2,3-Trichloropropane	50	NA	41	82	77-120
4-Chlorotoluene	50	NA	49	98	81-122
tert-Butylbenzene	50	NA	56	112	84-121
Pentachloroethane	50	NA	52	105	19-186
1,2,4-Trimethylbenzene	50	NA	50	100	83-118
P-Isopropyltoluene	50	NA	45	90	88-121
1,3-Dichlorobenzene	50	NA	49	98	86-110
1,4-Dichlorobenzene	50	NA	47	94	86-111
N-Butylbenzene	50	NA	41	82	78-121
sec-Butylbenzene	50	NA	49	98	82-122
1,2-Dichlorobenzene	50	NA	49	98	86-112
1,2-Dibromo-3-Chloropropane	50	NA	38	77	67-124
1,3,5-Trichlorobenzene	50	NA	49	98	77-120
Hexachlorobutadiene	50	NA	40	80	73-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/06/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104403-1
Client ID: WG104403-LCS
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	42	83	76-126
1,2,3-Trimethylbenzene	50	NA	50	100	85-119
Naphthalene	50	NA	41	82	62-126
1,2,3-Trichlorobenzene	50	NA	35	71	70-122
Methyl Acetate	50	NA	46	92	70-132
Methylcyclohexane	50	NA	46	93	73-125
1-Chlorohexane	50	NA	47	93	73-119
Total Alkylbenzenes	350	NA	340	97	85-119

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 06-FEB-2012 11:33
Report Date: 02/09/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104403-2
Client ID: WG104403-Blank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	1	1.0	1	1
Chloromethane	U	1	1.0	1	1
Vinyl chloride	U	1	1.0	1	1
Bromomethane	U	1	1.0	1	1
Chloroethane	U	1	1.0	1	1
Trichlorofluoromethane	U	1	1.0	1	1
1,1-Dichloroethene	U	1	1.0	1	1
Methylene Chloride	U	5	1.0	5	5
trans-1,2-Dichloroethene	U	1	1.0	1	1
1,1-Dichloroethane	U	1	1.0	1	1
cis-1,2-Dichloroethene	U	1	1.0	1	1
1,2-Dichloroethylene (total)	U	2	1.0	2	2
2,2-Dichloropropane	U	1	1.0	1	1
Chloroform	U	1	1.0	1	1
Bromochloromethane	U	1	1.0	1	1
1,1,1-Trichloroethane	U	1	1.0	1	1
1,2-Dichloroethane	U	1	1.0	1	1
1,1-Dichloropropene	U	1	1.0	1	1
Carbon Tetrachloride	U	1	1.0	1	1
Benzene	U	1	1.0	1	1
1,2-Dichloropropane	U	1	1.0	1	1
Trichloroethene	U	1	1.0	1	1
Dibromomethane	U	1	1.0	1	1
Bromodichloromethane	U	1	1.0	1	1
cis-1,3-dichloropropene	U	1	1.0	1	1
Toluene	U	1	1.0	1	1
trans-1,3-Dichloropropene	U	1	1.0	1	1
1,1,2-Trichloroethane	U	1	1.0	1	1
1,3-Dichloropropane	U	1	1.0	1	1
Dibromochloromethane	U	1	1.0	1	1
Tetrachloroethene	U	1	1.0	1	1
1,2-Dibromoethane	U	1	1.0	1	1
Chlorobenzene	U	1	1.0	1	1
1,1,1,2-Tetrachloroethane	U	1	1.0	1	1
Ethylbenzene	U	1	1.0	1	1
Bromoform	U	1	1.0	1	1
Styrene	U	1	1.0	1	1
1,1,2,2-Tetrachloroethane	U	1	1.0	1	1
1,2,3-Trichloropropane	U	1	1.0	1	1
Isopropylbenzene	U	1	1.0	1	1
Bromobenzene	U	1	1.0	1	1
2-Chlorotoluene	U	1	1.0	1	1
N-Propylbenzene	U	1	1.0	1	1

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 06-FEB-2012 11:33
Report Date: 02/09/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104403-2
Client ID: WG104403-Blank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	1	1.0	1	1
1,3,5-Trimethylbenzene	U	1	1.0	1	1
tert-Butylbenzene	U	1	1.0	1	1
1,2,4-Trichlorobenzene	U	1	1.0	1	1
sec-Butylbenzene	U	1	1.0	1	1
1,3-Dichlorobenzene	U	1	1.0	1	1
P-Isopropyltoluene	U	1	1.0	1	1
1,4-Dichlorobenzene	U	1	1.0	1	1
1,2-Dichlorobenzene	U	1	1.0	1	1
N-Butylbenzene	U	1	1.0	1	1
1,2-Dibromo-3-Chloropropane	U	1	1.0	1	1
1,2,4-Trimethylbenzene	U	1	1.0	1	1
Naphthalene	U	1	1.0	1	1
Hexachlorobutadiene	U	1	1.0	1	1
1,2,3-Trichlorobenzene	U	1	1.0	1	1
Methyl tert-butyl ether	U	1	1.0	1	1
Acetone	U	5	1.0	5	5
2-Butanone	U	5	1.0	5	5
4-methyl-2-pentanone	U	5	1.0	5	5
2-Hexanone	U	5	1.0	5	5
m+p-Xylenes	U	2	1.0	2	2
o-Xylene	U	1	1.0	1	1
Xylenes (total)	U	3	1.0	3	3
1,3,5-Trichlorobenzene	U	1	1.0	1	1
Vinyl Acetate	U	1	1.0	1	1
Carbon Disulfide	U	1	1.0	1	1
Diethyl Ether	U	1	1.0	1	1
Tetrahydrofuran	U	5	1.0	5	5
Dibromofluoromethane		107%			
1,2-Dichloroethane-D4		98%			
Toluene-D8		105%			
P-Bromofluorobenzene		96%			

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 06-FEB-2012 12:07
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104403-3
Client ID: WG104403-MeOHBlank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	500	1.0	10	500
Chloromethane	U	500	1.0	10	500
Vinyl chloride	U	500	1.0	10	500
Bromomethane	U	500	1.0	10	500
Chloroethane	U	500	1.0	10	500
Trichlorofluoromethane	U	500	1.0	10	500
1,1-Dichloroethene	U	250	1.0	5	250
Methylene Chloride	U	1200	1.0	25	1200
trans-1,2-Dichloroethene	U	250	1.0	5	250
1,1-Dichloroethane	U	250	1.0	5	250
cis-1,2-Dichloroethene	U	250	1.0	5	250
1,2-Dichloroethylene (total)	U	500	1.0	10	500
2,2-Dichloropropane	U	250	1.0	5	250
Chloroform	U	250	1.0	5	250
Bromochloromethane	U	250	1.0	5	250
1,1,1-Trichloroethane	U	250	1.0	5	250
1,2-Dichloroethane	U	250	1.0	5	250
1,1-Dichloropropene	U	250	1.0	5	250
Carbon Tetrachloride	U	250	1.0	5	250
Benzene	U	250	1.0	5	250
1,2-Dichloropropane	U	250	1.0	5	250
Trichloroethene	U	250	1.0	5	250
Dibromomethane	U	250	1.0	5	250
Bromodichloromethane	U	250	1.0	5	250
cis-1,3-dichloropropene	U	250	1.0	5	250
Toluene	U	250	1.0	5	250
trans-1,3-Dichloropropene	U	250	1.0	5	250
1,1,2-Trichloroethane	U	250	1.0	5	250
1,3-Dichloropropane	U	250	1.0	5	250
Dibromochloromethane	U	250	1.0	5	250
Tetrachloroethene	U	250	1.0	5	250
1,2-Dibromoethane	U	250	1.0	5	250
Chlorobenzene	U	250	1.0	5	250
1,1,1,2-Tetrachloroethane	U	250	1.0	5	250
Ethylbenzene	U	250	1.0	5	250
Bromoform	U	250	1.0	5	250
Styrene	U	250	1.0	5	250
1,1,2,2-Tetrachloroethane	U	250	1.0	5	250
1,2,3-Trichloropropane	U	250	1.0	5	250
Isopropylbenzene	U	250	1.0	5	250
Bromobenzene	U	250	1.0	5	250
2-Chlorotoluene	U	250	1.0	5	250
N-Propylbenzene	U	250	1.0	5	250

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 06-FEB-2012 12:07
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104403-3
Client ID: WG104403-MeOHBlank
SDG: SF0553
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104403
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	250	1.0	5	250
1,3,5-Trimethylbenzene	U	250	1.0	5	250
tert-Butylbenzene	U	250	1.0	5	250
1,2,4-Trichlorobenzene	U	250	1.0	5	250
sec-Butylbenzene	U	250	1.0	5	250
1,3-Dichlorobenzene	U	250	1.0	5	250
P-Isopropyltoluene	U	250	1.0	5	250
1,4-Dichlorobenzene	U	250	1.0	5	250
1,2-Dichlorobenzene	U	250	1.0	5	250
N-Butylbenzene	U	250	1.0	5	250
1,2-Dibromo-3-Chloropropane	U	250	1.0	5	250
1,2,4-Trimethylbenzene	U	250	1.0	5	250
Naphthalene	U	250	1.0	5	250
Hexachlorobutadiene	U	250	1.0	5	250
1,2,3-Trichlorobenzene	U	250	1.0	5	250
Methyl tert-butyl ether	U	250	1.0	5	250
Acetone	U	1200	1.0	25	1200
2-Butanone	U	1200	1.0	25	1200
4-methyl-2-pentanone	U	1200	1.0	25	1200
2-Hexanone	U	1200	1.0	25	1200
m+p-Xylenes	U	500	1.0	10	500
o-Xylene	U	250	1.0	5	250
Xylenes (total)	U	750	1.0	15	750
1,3,5-Trichlorobenzene	U	250	1.0	5	250
Vinyl Acetate	U	250	1.0	5	250
Carbon Disulfide	U	250	1.0	5	250
Diethyl Ether	U	250	1.0	5	250
Tetrahydrofuran	U	2500	1.0	50	2500
Dibromofluoromethane		106%			
1,2-Dichloroethane-D4		100%			
Toluene-D8		108%			
P-Bromofluorobenzene		100%			

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104234-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: CFB1028 Lab Sample ID: WG104234-1

Instrument ID: GC12 Date Extracted: 02/01/12

Matrix: (soil/water) SOIL Date Analyzed: 02/06/12

Level:(low/med) LOW Time Analyzed: 1545

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104234-LCS	WG104234-2	CFB1029	02/06/12	1647
02	WG104234-LCSD	WG104234-3	CFB1030	02/06/12	1751
03	RD-18	SF0553-8	CFB1053	02/07/12	1834
04	RD-7	SF0553-1DL	CFB1119	02/10/12	1713
05	RD-9	SF0553-2DL	CFB1120	02/10/12	1816
06	RD-19	SF0553-9DL	CFB1121	02/10/12	1919
07	RD-20	SF0553-10DL	CFB1122	02/10/12	2022
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COMMENTS:

FORM IVDRO

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104234-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: CFB1028A Lab Sample ID: WG104234-1

Instrument ID: GC12 Date Extracted: 02/01/12

Matrix: (soil/water) SOIL Date Analyzed: 02/06/12

Level:(low/med) LOW Time Analyzed: 1545

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104234-LCS	WG104234-2	CFB1029A	02/06/12	1647
02	WG104234-LCSD	WG104234-3	CFB1030A	02/06/12	1751
03	RD-18	SF0553-8	CFB1053A	02/07/12	1834
04	RD-9	SF0553-2	CFB1054A	02/07/12	1937
05	RD-20	SF0553-10	CFB1055A	02/07/12	2040
06	RD-19	SF0553-9	CFB1056A	02/07/12	2143
07	RD-7	SF0553-1	CFB1057A	02/07/12	2245
08	RD-7	SF0553-1DL	CFB1119A	02/10/12	1713
09	RD-9	SF0553-2DL	CFB1120A	02/10/12	1816
10	RD-19	SF0553-9DL	CFB1121A	02/10/12	1919
11	RD-20	SF0553-10DL	CFB1122A	02/10/12	2022
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COMMENTS:

FORM IVDRO

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104234-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: CFB2028 Lab Sample ID: WG104234-1

Instrument ID: GC12 Date Extracted: 02/01/12

Matrix: (soil/water) SOIL Date Analyzed: 02/06/12

Level:(low/med) LOW Time Analyzed: 1545

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104234-LCS	WG104234-2	CFB2029	02/06/12	1647
02	WG104234-LCSD	WG104234-3	CFB2030	02/06/12	1751
03	RD-18	SF0553-8	CFB2053	02/07/12	1834
04	RD-9	SF0553-2	CFB2054	02/07/12	1937
05	RD-20	SF0553-10	CFB2055	02/07/12	2040
06	RD-19	SF0553-9	CFB2056	02/07/12	2143
07	RD-7	SF0553-1	CFB2057	02/07/12	2245
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COMMENTS:

FORM IVDRO

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SF0553
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG104234-1	**Date Received:**	
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	01-FEB-12
Prep Method:	SW846 3540	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	NA

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C11-C22 Aromatics	20	20	mg/Kgdrywt	1	06-FEB-12 15:45	U
C9-C18 Aliphatics	20	20	mg/Kgdrywt	1	06-FEB-12 15:45	U
C19-C36 Aliphatics	20	20	mg/Kgdrywt	1	06-FEB-12 15:45	U
C11-C22 Aromatics	20.	20	mg/Kgdrywt	1	06-FEB-12 15:45	U

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
2-Methylnaphthalene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Phenanthrene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Acenaphthylene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Acenaphthene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Anthracene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Benzo(a)anthracene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Benzo(a)pyrene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Benzo(b)fluoranthene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Benzo(g,h,i)perylene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Benzo(k)fluoranthene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Chrysene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Dibenzo(a,h)anthracene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Fluoranthene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Fluorene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Indeno(1,2,3-cd)pyrene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U
Pyrene	0.20	.2	mg/Kgdrywt	1	06-FEB-12 15:45	U

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	75	40-140	06-FEB-12 15:45	
o-Terphenyl	68	40-140	06-FEB-12 15:45	
2-Fluorobiphenyl	79	40-140	06-FEB-12 15:45	
2-Bromonaphthalene	84	40-140	06-FEB-12 15:45	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG104234-2,WG104234-3
Preparative Method: SW846 3540
Analytical Method: MA DEP EPH 04-1.1
Analytical Batch: WG104234
Matrix: SL
Preparative Date: 01-FEB-12
Analytical Date: 06-FEB-12

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
2-Methylnaphthalene	mg/Kgdrywt	9.0	4.2	4.9	47	54	40-140	15	25
Acenaphthene	mg/Kgdrywt	9.0	4.5	5.2	50	58	40-140	14	25
Acenaphthylene	mg/Kgdrywt	9.0	4.5	5.3	50	58	40-140	16	25
Anthracene	mg/Kgdrywt	9.0	5.2	6	58	67	40-140	14	25
Benzo(a)anthracene	mg/Kgdrywt	9.0	7.3	8.1	81	90	40-140	10	25
Benzo(a)pyrene	mg/Kgdrywt	9.0	5.9	6.6	65	73	40-140	11	25
Benzo(b)fluoranthene	mg/Kgdrywt	9.0	6.8	7.2	75	80	40-140	6	25
Benzo(g,h,i)perylene	mg/Kgdrywt	9.0	6	6.6	67	74	40-140	10	25
Benzo(k)fluoranthene	mg/Kgdrywt	9.0	6	6.8	66	75	40-140	12	25
C19-C36 Aliphatics	mg/Kgdrywt	72	52	59	73	82	40-140	13	25
C9-C18 Aliphatics	mg/Kgdrywt	54	29	35	54	65	40-140	19	25
Chrysene	mg/Kgdrywt	9.0	6	6.6	67	73	40-140	10	25
Dibenzo(a,h)anthracene	mg/Kgdrywt	9.0	6.3	6.8	70	75	40-140	8	25
Fluoranthene	mg/Kgdrywt	9.0	6.1	6.8	68	76	40-140	11	25
Fluorene	mg/Kgdrywt	9.0	5	5.9	56	65	40-140	16	25
Indeno(1,2,3-cd)pyrene	mg/Kgdrywt	9.0	6.3	7	70	78	40-140	10	25
Naphthalene	mg/Kgdrywt	9.0	4.1	4.8	46	54	40-140	16	25
Phenanthrene	mg/Kgdrywt	9.0	5.9	6.7	66	75	40-140	13	25
Pyrene	mg/Kgdrywt	9.0	6	6.8	66	75	40-140	12	25
Unadjusted C11-C22 Aromatics	mg/Kgdrywt	153	98	110	64	72	40-140	12	25

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104470-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: 2FB10091 Lab Sample ID: WG104470-1

Date Analyzed: 02/08/12 Time Analyzed: 1216

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC02

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104470-LCS	WG104470-2	2FB10092	02/08/12	1309
02	WG104470-LCSD	WG104470-3	2FB10093	02/08/12	1403
03					
04					
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COMMENTS:

FORM IVVPH

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104470-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: 2FB10111 Lab Sample ID: WG104470-1RA

Date Analyzed: 02/09/12 Time Analyzed: 1106

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC02

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RD-9	SF0553-2	2FB10118	02/09/12	1814
02	RD-18	SF0553-8	2FB10119	02/09/12	1909
03	RD-19	SF0553-9	2FB10120	02/09/12	2005
04	RD-20	SF0553-10	2FB10121	02/09/12	2100
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COMMENTS:

FORM IVVPH

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104470-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0553

Lab File ID: 2FB10138 Lab Sample ID: WG104470-1RA2

Date Analyzed: 02/13/12 Time Analyzed: 1032

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC02

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RD-7	SF0553-1RA	2FB10139	02/13/12	1148
02					
03					
04					
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COMMENTS:

FORM IVVPH

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SF0553
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG104470-1	**Date Received:**	
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C9-C12 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C9-C10 Aromatics	25	25	mg/Kgdrywt	1	08-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
m+p-Xylenes	2.5	2.5	mg/Kgdrywt	1	08-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	99	70-130	08-FEB-12	
2,5-Dibromotoluene (PID)	96	70-130	08-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SF0553
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG104470-1RA	**Date Received:**	
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	25	25	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	25	25	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	25	25	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	2.5	2.5	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	102	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	97	70-130	09-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SF0553
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG104470-1RA2	**Date Received:**	
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	13-FEB-12
Matrix:	SL	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C5-C8 Aliphatics	25	25	mg/Kgdrywt	1	13-FEB-12	U
C9-C12 Aliphatics	25	25	mg/Kgdrywt	1	13-FEB-12	U
C9-C10 Aromatics	25	25	mg/Kgdrywt	1	13-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	13-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	13-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	13-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	13-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	13-FEB-12	U
m+p-Xylenes	2.5	2.5	mg/Kgdrywt	1	13-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	13-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	102	70-130	13-FEB-12	
2,5-Dibromotoluene (PID)	97	70-130	13-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG104470-2,WG104470-3
Preparative Method: MA DEP VPH 04-1.1
Analytical Method: MA DEP VPH 04-1.1
Analytical Batch: WG104470

Matrix: SL
Preparative Date: 08-FEB-12
Analytical Date: 08-FEB-12

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
C5-C8 Aliphatics	mg/Kgdrywt	70	66	64	94	92	70-130	3	25
C9-C12 Aliphatics	mg/Kgdrywt	47	51	45	108	96	70-130	12	25
C9-C10 Aromatics	mg/Kgdrywt	23	24	22	105	96	70-130	9	25
Benzene	mg/Kgdrywt	23	20	20	88	88	70-130	0	25
Ethylbenzene	mg/Kgdrywt	23	20	20	88	87	70-130	0	25
Methyl tert-butylether	mg/Kgdrywt	23	20	21	86	89	70-130	5	25
Naphthalene	mg/Kgdrywt	23	23	26	100	110	70-130	12	25
Toluene	mg/Kgdrywt	23	20	20	86	86	70-130	0	25
m+p-Xylenes	mg/Kgdrywt	47	41	41	89	89	70-130	0	25
o-Xylene	mg/Kgdrywt	23	21	21	89	90	70-130	0	25
2,5-Dibromotoluene (FID)		93	0	24	104	102	70-130		
2,5-Dibromotoluene (PID)		93	1.3	23	99	98	70-130		

Katahdin ANALYTICAL SERVICES

PREPARATION BLANK REPORT

Sample ID: PBSFB02ICS1 **Batch ID:** FB02ICS1

Element Name	Result	Units	Flag	PQL	File
ALUMINUM	1.	mg/kgdrywt	U	30.0	IFB06A
ANTIMONY	0.2	mg/kgdrywt	U	0.800	IFB06A
ARSENIC	0.2	mg/kgdrywt	U	0.800	IFB06A
BARIUM	0.08	mg/kgdrywt	J	0.500	IFB06A
BERYLLIUM	0.003	mg/kgdrywt	U	0.500	IFB06A
BORON	0.1	mg/kgdrywt	U	10.0	IFB06A
CADMIUM	0.09	mg/kgdrywt	U	1.00	IFB06A
CALCIUM	14.	mg/kgdrywt	H	10.0	IFB06A
CHROMIUM	0.23	mg/kgdrywt	J	1.50	IFB06A
COBALT	0.03	mg/kgdrywt	U	3.00	IFB06A
COPPER	0.18	mg/kgdrywt	J	2.50	IFB06A
IRON	12.7	mg/kgdrywt	H	10.0	IFB06A
LEAD	0.1	mg/kgdrywt	U	0.500	IFB06A
LITHIUM	0.3	mg/kgdrywt	J	10.0	IFB06A
MAGNESIUM	3.7	mg/kgdrywt	J	10.0	IFB06A
MANGANESE	0.43	mg/kgdrywt	J	0.500	IFB06A
MOLYBDENUM	0.2	mg/kgdrywt	U	1.00	IFB06A
NICKEL	0.13	mg/kgdrywt	J	4.00	IFB06A
POTASSIUM	30.	mg/kgdrywt	J	100.	IFB06A
SELENIUM	0.2	mg/kgdrywt	U	1.00	IFB06A
SILICON	4.	mg/kgdrywt	J	20.0	IFB06A
SILVER	0.05	mg/kgdrywt	U	1.50	IFB06A
SODIUM	40.	mg/kgdrywt	J	100.	IFB06A
STRONTIUM	0.05	mg/kgdrywt	J	10.0	IFB06A
THALLIUM	0.2	mg/kgdrywt	U	1.50	IFB06A
TIN	1.5	mg/kgdrywt	J	10.0	IFB06A
TITANIUM	0.04	mg/kgdrywt	U	1.50	IFB06A
VANADIUM	0.04	mg/kgdrywt	U	2.50	IFB06A
ZINC	0.68	mg/kgdrywt	J	2.50	IFB06A

U The analyte was not detected in the sample at a level greater than the instrument detection limit.

J The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

Katahdin ANALYTICAL SERVICES

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSOFB02ICS1 **Batch ID:** FB02ICS1

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (mg/kgdrywt)		File
ALUMINUM	200.	211.	mg/kgdrywt	105.5%		159	241	IFB06A
ANTIMONY	10.0	10.1	mg/kgdrywt	101.0%		7.95	12.0	IFB06A
ARSENIC	10.0	10.3	mg/kgdrywt	103.0%		7.95	12.0	IFB06A
BARIUM	200.	214.	mg/kgdrywt	107.0%		159	241	IFB06A
BERYLLIUM	5.00	5.46	mg/kgdrywt	109.2%		3.98	6.02	IFB06A
BORON	50.0	44.9	mg/kgdrywt	89.8%		39.8	60.2	IFB06A
CADMIUM	25.0	26.7	mg/kgdrywt	106.8%		19.9	30.1	IFB06A
CALCIUM	250.	284.	mg/kgdrywt	113.6%		199	301	IFB06A
CHROMIUM	20.0	21.8	mg/kgdrywt	109.0%		15.9	24.1	IFB06A
COBALT	50.0	54.2	mg/kgdrywt	108.4%		39.8	60.2	IFB06A
COPPER	25.0	26.8	mg/kgdrywt	107.2%		19.9	30.1	IFB06A
IRON	100.	110.	mg/kgdrywt	110.0%		79.5	120	IFB06A
LEAD	10.0	10.6	mg/kgdrywt	106.0%		7.95	12.0	IFB06A
LITHIUM	50.0	46.5	mg/kgdrywt	93.0%		39.8	60.2	IFB06A
MAGNESIUM	500.	533.	mg/kgdrywt	106.6%		398	602	IFB06A
MANGANESE	50.0	53.4	mg/kgdrywt	106.8%		39.8	60.2	IFB06A
MOLYBDENUM	30.0	32.9	mg/kgdrywt	109.7%		23.8	36.1	IFB06A
NICKEL	50.0	54.0	mg/kgdrywt	108.0%		39.8	60.2	IFB06A
POTASSIUM	1000.	1060.	mg/kgdrywt	106.0%		795	1200	IFB06A
SELENIUM	10.0	10.2	mg/kgdrywt	102.0%		7.95	12.0	IFB06A
SILICON	500.	440.	mg/kgdrywt	88.0%		398	602	IFB06A
SILVER	5.00	5.34	mg/kgdrywt	106.8%		3.98	6.02	IFB06A
SODIUM	750.	780.	mg/kgdrywt	104.0%		596	904	IFB06A
STRONTIUM	50.0	48.3	mg/kgdrywt	96.6%		39.8	60.2	IFB06A
THALLIUM	10.0	10.6	mg/kgdrywt	106.0%		7.95	12.0	IFB06A
TIN	50.0	50.2	mg/kgdrywt	100.4%		39.8	60.2	IFB06A
TITANIUM	50.0	49.8	mg/kgdrywt	99.6%		39.8	60	IFB06A
VANADIUM	50.0	54.1	mg/kgdrywt	108.2%		39.8	60.2	IFB06A
ZINC	50.0	54.9	mg/kgdrywt	109.8%		39.8	60.2	IFB06A

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.

Quality Control Report

Blank Sample Summary Report

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG104307	ASTM D2216	03-FEB-12	02-FEB-12	U 1 %	1 %

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://katahdinlab.com
sales@katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Quality Control Report

Laboratory Control Sample Summary Report

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG104307-2	LCS	WG104307	03-FEB-12	02-FEB-12	%	90	92.	102	80-120	

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Katahdin Analytical Services, Inc. **Sample Receipt Condition Report**

Client:	Woodard + Curran	KAS PM:	JD	Sampled By:	Client
Project:		KIMS Entry By:	DM	Delivered By:	Client
KAS Work Order#:	SF0553	KIMS Review By:	JD	Received By:	DM
SDG #:	Cooler: 1 of 1			Date/Time Rec.:	1-31-12 1030

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 2.8
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?	✓				
Methanol covering soil?	✓				
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: Woodard & Curran
Contact: Karen Lambek
Phone #: (207)774-2112
Fax #: (207)774-6635
Address: 41 Hutchins Drive
City: Portland
State: Maine
Zip Code: 04102
Purchase Order #: 203970.19
Proj. Name / No.: Auburn - Riverside Drive
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Karen Lambek Karen Lambek
Copies To: Karen Lambek

LAB USE ONLY
WORK ORDER #:
KATAHDIN PROJECT NUMBER: SF0553

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	VOC Filt. ☐Y ☐N	EPH Filt. ☐Y ☐N	VPH Filt. ☐Y ☐N	Total Lead Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	RD-7	1/30/12/1615	SO	7	X	X	X	X						
	RD-9	/1525			X	X	X	X						
	RD-10	/1440												
	RD-11	/1400												
	RD-13	/1310												
	RD-16	/1110												
	RD-17	/1035												
	RD-18	/0945			X	X	X	X						
	RD-19	/0850			X	X	X	X						
	RD-20	/0750			X	X	X	X						
	~~TB-1~~ KL	/												
		/												
		/												
		/												
		/												
		/												
		/												

COMMENTS
Karen Lambek 1/31/12 1030

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	1/31/12 1030	Don Medli			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS OF KATAHDIN ANALYTICAL SERVICES CHAIN OF CUSTODY SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jan. 31, 2012
11:40 AM

Login Number: SF0553

Account: WOODAR001 Web
Woodard & Curran

Project:

Primary Report Address:
Karen Lambek
Woodard & Curran
41 Hutchins Drive

Portland,ME 04102
klambek@woodardcurran.com

Primary Invoice Address:
Accounts Payable
Woodard & Curran
41 Hutchins Drive

Portland,ME 04102

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming:

Login Information:

ANALYSIS INSTRUCTIONS	:	
CHECK NO.	:	
CLIENT PO#	:	203970.19
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	2.8
DELIVERY SERVICES	:	Client
EDD FORMAT	:	KAS027-XLS & KAS064-XLS
LOGIN INITIALS	:	DM
PM	:	JO
PROJECT NAME	:	Auburn-Riverside Drive
QC LEVEL	:	II
REGULATORY LIST	:	
REPORT INSTRUCTIONS	:	Email PDF & EDDs to Karen, no HC.
SDG ID	:	
SDG STATUS	:	

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SF0553-1	RD-7	30-JAN-12 16:15	31-JAN-12			13-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	13-FEB-12	4oz Glass		
Solid	S	MA-VPH	27-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	28-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	28-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	13-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	29-FEB-12	4oz Glass		

SF0553-2	RD-9	30-JAN-12 15:25	31-JAN-12			13-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	13-FEB-12	4oz Glass		
Solid	S	MA-VPH	27-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	28-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	28-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	13-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	29-FEB-12	4oz Glass		

SF0553-3	RD-10	30-JAN-12 14:40	31-JAN-12			13-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

SF0553-4	RD-11	30-JAN-12 14:00	31-JAN-12			13-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

SF0553-5	RD-13	30-JAN-12 13:10	31-JAN-12			13-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

JO 01.31.12

SF0553-6	RD-16	30-JAN-12 11:10	31-JAN-12			13-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jan. 31, 2012
11:40 AM

Login Number: SF0553

Quote/Incoming:

Account: WOODAR001 Web
Woodard & Curran

Project:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SF0553-7	RD-17	30-JAN-12 10:35	31-JAN-12			13-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

SF0553-8	RD-18	30-JAN-12 09:45	31-JAN-12		13-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	13-FEB-12	4oz Glass		
Solid	S	MA-VPH	27-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	28-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	28-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	13-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	29-FEB-12	4oz Glass		

SF0553-9	RD-19	30-JAN-12 08:50	31-JAN-12		13-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	13-FEB-12	4oz Glass		
Solid	S	MA-VPH	27-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	28-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	28-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	13-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	29-FEB-12	4oz Glass		

SF0553-10	RD-20	30-JAN-12 07:50	31-JAN-12		13-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	13-FEB-12	4oz Glass		
Solid	S	MA-VPH	27-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	28-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	28-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	13-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	29-FEB-12	4oz Glass		

Total Samples: *5* ***Total Analyses:*** *30*

01·31·12

Katahdin
ANALYTICAL SERVICES

nelac
Cert. No. E87604

February 13, 2012

Ms. Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

RE: Katahdin Lab Number: SF0504
Project ID: Auburn-Riverside Drive
Project Manager: Ms. Jennifer Obrin
Sample Receipt Date(s): January 27, 2012

Dear Ms. Lambek:

Please find enclosed the following information:

* Report of Analysis (Analytical and/or Field)
* Quality Control Data Summary
* Chain of Custody (COC)
* Login Report

A copy of the Chain of Custody is included in the paginated report. The original COC is attached as an addendum to this report.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact the project manager listed above. The results contained in this report relate only to the submitted samples. This cover letter is an integral part of the ROA.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in an attached technical narrative or in the Report of Analysis.

We appreciate your continued use of our laboratory and look forward to working with you in the future. The following signature indicates technical review and acceptance of the data.

Please go to http://www.katahdinlab.com/cert.html for copies of Katahdin Analytical Services Inc. current certificates and analyte lists.

Sincerely,
KATAHDIN ANALYTICAL SERVICES

Deborah J. Nadeau
Authorized Signature

02/13/2012
Date

TECHNICAL NARRATIVE

Organics Analysis

The samples of work order SF0504 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MADEP, May 2004, Revision 1.1, and/or Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MADEP, May 2004, Revision 1.1, and/or for the specific methods listed below or on the Report of Analysis.

8260B Analysis

The target analyte naphthalene was detected in the method blank WG104251-2 above the PQL. If the analyte was also detected in the associated samples, the analyte is flagged with a "B" qualifier indicating that it was detected in the method blank analyzed concurrently with the sample.

The target analytes naphthalene and 1,2,3-trichlorobenzene were detected in the method blank WG104315-2 above the PQL. If the analytes were also detected in the associated samples, the analytes are flagged with a "B" qualifier indicating they were detected in the method blank analyzed concurrently with the sample.

The target analyte tetrachloroethene was detected in the methanol blank WG104251-4 above the PQL. This analyte was not detected in any of the associated samples; therefore, no further action was taken.

Sample SF0504-2RA had low recoveries for three surrogates which were outside of the laboratory established acceptance limits. The initial analysis had similar surrogate deviations, possibly indicating a matrix effect. The results from the reanalysis are reported.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than ten percent of the client compound list. The LCS report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long as the LCS is acceptable.

MADEP VPH Analysis

Samples SF0504-5 and 11 had low recoveries for the surrogate 2,5-dibromotoluene on the PID that were outside of the method acceptance limits. Since the surrogate recoveries on the FID were acceptable, no further action was taken.

MADEP EPH Analysis

Sample SF0504-3 had no recovery for the aliphatic extraction surrogate 5-alpha androstane. The sample was reextracted within hold time and had similar results indicating matrix interference. The results from the analyses of both extractions are reported.

Samples SF0504-1 and 5 had low recoveries for the aliphatic extraction surrogate 5-alpha androstane that were outside of method acceptance limits. Based on the sample chromatograms and the samples were diluted before fractionation the low recoveries are likely attributable to matrix interference.

Sample SF0504-5 had a low recovery for the fractionation surrogate 2-fluorobiphenyl, which was outside the method acceptance limit. Since the second fractionation surrogate, 2-bromonaphthalene, had an acceptable recovery, the sample was not refractionated.

The LCS WG104436-2 had a low recovery for naphthalene which was outside of the method acceptance limits. Since the LCSD WG104436-3 had acceptable recoveries, the associated sample was not reextracted.

There were no other protocol deviations or observations noted by the organics laboratory staff.

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS
(Refer to BOD Qualifiers Page for BOD footnotes)

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

MCL Maximum Contaminant Level

NL No limit

NFL No Free Liquid Present

FLP Free Liquid Present

NOD No Odor Detected

TON Threshold Odor Number

H1 Please note that the regulatory holding time for pH is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. pH for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H2 Please note that the regulatory holding time for DO is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. DO for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H3 Please note that the regulatory holding time for sulfite is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Sulfite for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H4 Please note that the regulatory holding time for residual chlorine is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. Residual chlorine for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 18:55
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 92.6

Lab ID: SF0504-1DL
Client ID: MS-1
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	640	1.0	10	640
Chloromethane	U	640	1.0	10	640
Vinyl chloride	U	640	1.0	10	640
Bromomethane	U	640	1.0	10	640
Chloroethane	U	640	1.0	10	640
Trichlorofluoromethane	U	640	1.0	10	640
1,1-Dichloroethene	U	320	1.0	5	320
Methylene Chloride	U	1600	1.0	25	1600
trans-1,2-Dichloroethene	U	320	1.0	5	320
1,1-Dichloroethane	U	320	1.0	5	320
cis-1,2-Dichloroethene	U	320	1.0	5	320
1,2-Dichloroethylene (total)	U	640	1.0	10	640
2,2-Dichloropropane	U	320	1.0	5	320
Chloroform	U	320	1.0	5	320
Bromochloromethane	U	320	1.0	5	320
1,1,1-Trichloroethane	U	320	1.0	5	320
1,2-Dichloroethane	U	320	1.0	5	320
1,1-Dichloropropene	U	320	1.0	5	320
Carbon Tetrachloride	U	320	1.0	5	320
Benzene	U	320	1.0	5	320
1,2-Dichloropropane	U	320	1.0	5	320
Trichloroethene	U	320	1.0	5	320
Dibromomethane	U	320	1.0	5	320
Bromodichloromethane	U	320	1.0	5	320
cis-1,3-dichloropropene	U	320	1.0	5	320
Toluene	U	320	1.0	5	320
trans-1,3-Dichloropropene	U	320	1.0	5	320
1,1,2-Trichloroethane	U	320	1.0	5	320
1,3-Dichloropropane	U	320	1.0	5	320
Dibromochloromethane	U	320	1.0	5	320
Tetrachloroethene	U	320	1.0	5	320
1,2-Dibromoethane	U	320	1.0	5	320
Chlorobenzene	U	320	1.0	5	320
1,1,1,2-Tetrachloroethane	U	320	1.0	5	320
Ethylbenzene	U	320	1.0	5	320
Bromoform	U	320	1.0	5	320
Styrene	U	320	1.0	5	320
1,1,2,2-Tetrachloroethane	U	320	1.0	5	320
1,2,3-Trichloropropane	U	320	1.0	5	320
Isopropylbenzene	U	320	1.0	5	320
Bromobenzene	U	320	1.0	5	320
2-Chlorotoluene	U	320	1.0	5	320
N-Propylbenzene	U	320	1.0	5	320

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 18:55
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 92.6

Lab ID: SF0504-1DL
Client ID: MS-1
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	320	1.0	5	320
1,3,5-Trimethylbenzene	U	320	1.0	5	320
tert-Butylbenzene	U	320	1.0	5	320
1,2,4-Trichlorobenzene	U	320	1.0	5	320
sec-Butylbenzene	U	320	1.0	5	320
1,3-Dichlorobenzene	U	320	1.0	5	320
P-Isopropyltoluene	U	320	1.0	5	320
1,4-Dichlorobenzene	U	320	1.0	5	320
1,2-Dichlorobenzene	U	320	1.0	5	320
N-Butylbenzene	U	320	1.0	5	320
1,2-Dibromo-3-Chloropropane	U	320	1.0	5	320
1,2,4-Trimethylbenzene	U	320	1.0	5	320
Naphthalene	B	13000	1.0	5	320
Hexachlorobutadiene	U	320	1.0	5	320
1,2,3-Trichlorobenzene	U	320	1.0	5	320
Methyl tert-butyl ether	U	320	1.0	5	320
Acetone	U	1600	1.0	25	1600
2-Butanone	U	1600	1.0	25	1600
4-methyl-2-pentanone	U	1600	1.0	25	1600
2-Hexanone	U	1600	1.0	25	1600
m+p-Xylenes	U	640	1.0	10	640
o-Xylene	U	320	1.0	5	320
Xylenes (total)	U	970	1.0	15	970
1,3,5-Trichlorobenzene	U	320	1.0	5	320
Vinyl Acetate	U	320	1.0	5	320
Carbon Disulfide	U	320	1.0	5	320
Diethyl Ether	U	320	1.0	5	320
Tetrahydrofuran	U	3200	1.0	50	3200
Dibromofluoromethane		103%			
1,2-Dichloroethane-D4		98%			
Toluene-D8		104%			
P-Bromofluorobenzene		100%			

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-1	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-1	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	92.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	38	38	mg/Kgdrywt	2	02-FEB-12	
C19-C36 Aliphatics	220	38	mg/Kgdrywt	2	02-FEB-12	
Unadjusted C11-C22 Aromatics	1500	76	mg/Kgdrywt	4	02-FEB-12	
C11-C22 Aromatics	1100	76	mg/Kgdrywt	4	02-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	3.4	.38	mg/Kgdrywt	2	02-FEB-12	
2-Methylnaphthalene	4.0	.38	mg/Kgdrywt	2	02-FEB-12	
Phenanthrene	41	.38	mg/Kgdrywt	2	02-FEB-12	
Acenaphthylene	8.9	.38	mg/Kgdrywt	2	02-FEB-12	
Acenaphthene	1.2	.38	mg/Kgdrywt	2	02-FEB-12	
Anthracene	8.4	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(a)anthracene	41	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(a)pyrene	35	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(b)fluoranthene	36	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(g,h,i)perylene	26	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(k)fluoranthene	36	.38	mg/Kgdrywt	2	02-FEB-12	
Chrysene	33	.38	mg/Kgdrywt	2	02-FEB-12	
Dibenzo(a,h)anthracene	5.4	.38	mg/Kgdrywt	2	02-FEB-12	
Fluoranthene	44	.38	mg/Kgdrywt	2	02-FEB-12	
Fluorene	5.8	.38	mg/Kgdrywt	2	02-FEB-12	
Indeno(1,2,3-cd)pyrene	27	.38	mg/Kgdrywt	2	02-FEB-12	
Pyrene	54	.38	mg/Kgdrywt	2	02-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	36	40-140	02-FEB-12	*
o-Terphenyl	53	40-140	02-FEB-12	
2-Fluorobiphenyl	54	40-140	02-FEB-12	
2-Bromonaphthalene	66	40-140	02-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-1	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-1	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	92.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
Unadjusted C9-C12 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C5-C8 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C9-C12 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C9-C10 Aromatics	25	25	mg/Kgdrywt	1	08-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
m+p-Xylenes	2.5	2.5	mg/Kgdrywt	1	08-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	90	70-130	08-FEB-12	
2,5-Dibromotoluene (PID)	82	70-130	08-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-001
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
MS-1	SL	92.6	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	170.	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-1
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
MS-1	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	92. %	1		SM2540G	WG104307	03-FEB-12 12:52:12	ASTM D2216	02-FEB-12	RO	

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P.O. Box 540, Scarborough, ME 04070

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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 13:15
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 96.9

Lab ID: SF0504-2RA
Client ID: MS-2
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	9	1.0	10	9
Chloromethane	U	9	1.0	10	9
Vinyl chloride	U	9	1.0	10	9
Bromomethane	U	9	1.0	10	9
Chloroethane	U	9	1.0	10	9
Trichlorofluoromethane	U	9	1.0	10	9
1,1-Dichloroethene	U	5	1.0	5	5
Methylene Chloride	U	23	1.0	25	23
trans-1,2-Dichloroethene	U	5	1.0	5	5
1,1-Dichloroethane	U	5	1.0	5	5
cis-1,2-Dichloroethene	U	5	1.0	5	5
1,2-Dichloroethylene (total)	U	9	1.0	10	9
2,2-Dichloropropane	U	5	1.0	5	5
Chloroform	U	5	1.0	5	5
Bromochloromethane	U	5	1.0	5	5
1,1,1-Trichloroethane	U	5	1.0	5	5
1,2-Dichloroethane	U	5	1.0	5	5
1,1-Dichloropropene	U	5	1.0	5	5
Carbon Tetrachloride	U	5	1.0	5	5
Benzene	U	5	1.0	5	5
1,2-Dichloropropane	U	5	1.0	5	5
Trichloroethene	U	5	1.0	5	5
Dibromomethane	U	5	1.0	5	5
Bromodichloromethane	U	5	1.0	5	5
cis-1,3-dichloropropene	U	5	1.0	5	5
Toluene	U	5	1.0	5	5
trans-1,3-Dichloropropene	U	5	1.0	5	5
1,1,2-Trichloroethane	U	5	1.0	5	5
1,3-Dichloropropane	U	5	1.0	5	5
Dibromochloromethane	U	5	1.0	5	5
Tetrachloroethene	U	5	1.0	5	5
1,2-Dibromoethane	U	5	1.0	5	5
Chlorobenzene	U	5	1.0	5	5
1,1,1,2-Tetrachloroethane	U	5	1.0	5	5
Ethylbenzene	U	5	1.0	5	5
Bromoform	U	5	1.0	5	5
Styrene	U	5	1.0	5	5
1,1,2,2-Tetrachloroethane	U	5	1.0	5	5
1,2,3-Trichloropropane	U	5	1.0	5	5
Isopropylbenzene	U	5	1.0	5	5
Bromobenzene	U	5	1.0	5	5
2-Chlorotoluene	U	5	1.0	5	5
N-Propylbenzene	U	5	1.0	5	5

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 13:15
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 96.9

Lab ID: SF0504-2RA
Client ID: MS-2
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	5	1.0	5	5
1,3,5-Trimethylbenzene	U	5	1.0	5	5
tert-Butylbenzene	U	5	1.0	5	5
1,2,4-Trichlorobenzene	U	5	1.0	5	5
sec-Butylbenzene	U	5	1.0	5	5
1,3-Dichlorobenzene	U	5	1.0	5	5
P-Isopropyltoluene	U	5	1.0	5	5
1,4-Dichlorobenzene	U	5	1.0	5	5
1,2-Dichlorobenzene	U	5	1.0	5	5
N-Butylbenzene	U	5	1.0	5	5
1,2-Dibromo-3-Chloropropane	U	5	1.0	5	5
1,2,4-Trimethylbenzene	U	5	1.0	5	5
Naphthalene		160	1.0	5	5
Hexachlorobutadiene	U	5	1.0	5	5
1,2,3-Trichlorobenzene	U	5	1.0	5	5
Methyl tert-butyl ether	U	5	1.0	5	5
Acetone	U	23	1.0	25	23
2-Butanone	U	23	1.0	25	23
4-methyl-2-pentanone	U	23	1.0	25	23
2-Hexanone	U	23	1.0	25	23
m+p-Xylenes	U	9	1.0	10	9
o-Xylene	U	5	1.0	5	5
Xylenes (total)	U	14	1.0	15	14
1,3,5-Trichlorobenzene	U	5	1.0	5	5
Vinyl Acetate	U	5	1.0	5	5
Carbon Disulfide	U	5	1.0	5	5
Diethyl Ether	U	5	1.0	5	5
Tetrahydrofuran	U	46	1.0	50	46
Dibromofluoromethane		* 63%			
1,2-Dichloroethane-D4		62%			
Toluene-D8		* 56%			
P-Bromofluorobenzene		* 31%			

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-2	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-2	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	97.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	200	38	mg/Kgdrywt	2	02-FEB-12	
C19-C36 Aliphatics	220	38	mg/Kgdrywt	2	02-FEB-12	
Unadjusted C11-C22 Aromatics	2500	110	mg/Kgdrywt	6	02-FEB-12	
C11-C22 Aromatics	1800	110	mg/Kgdrywt	6	02-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	2.8	.38	mg/Kgdrywt	2	02-FEB-12	
2-Methylnaphthalene	3.2	.38	mg/Kgdrywt	2	02-FEB-12	
Phenanthrene	75	.38	mg/Kgdrywt	2	02-FEB-12	
Acenaphthylene	13	.38	mg/Kgdrywt	2	02-FEB-12	
Acenaphthene	1.6	.38	mg/Kgdrywt	2	02-FEB-12	
Anthracene	14	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(a)anthracene	69	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(a)pyrene	51	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(b)fluoranthene	55	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(g,h,i)perylene	34	.38	mg/Kgdrywt	2	02-FEB-12	
Benzo(k)fluoranthene	50	.38	mg/Kgdrywt	2	02-FEB-12	
Chrysene	56	.38	mg/Kgdrywt	2	02-FEB-12	
Dibenzo(a,h)anthracene	6.7	.38	mg/Kgdrywt	2	02-FEB-12	
Fluorene	7.1	.38	mg/Kgdrywt	2	02-FEB-12	
Indeno(1,2,3-cd)pyrene	37	.38	mg/Kgdrywt	2	02-FEB-12	
Fluoranthene	110	1.1	mg/Kgdrywt	6	02-FEB-12	
Pyrene	130	1.1	mg/Kgdrywt	6	02-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	44	40-140	02-FEB-12	
o-Terphenyl	67	40-140	02-FEB-12	
2-Fluorobiphenyl	60	40-140	02-FEB-12	
2-Bromonaphthalene	64	40-140	02-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-2	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-2	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	97.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	23	23	mg/Kgdrywt	1	08-FEB-12	U
Unadjusted C9-C12 Aliphatics	23	23	mg/Kgdrywt	1	08-FEB-12	U
C5-C8 Aliphatics	23	23	mg/Kgdrywt	1	08-FEB-12	U
C9-C12 Aliphatics	23	23	mg/Kgdrywt	1	08-FEB-12	U
C9-C10 Aromatics	23	23	mg/Kgdrywt	1	08-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Naphthalene	3.1	1.2	mg/Kgdrywt	1	08-FEB-12	
Toluene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
m+p-Xylenes	2.3	2.3	mg/Kgdrywt	1	08-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	92	70-130	08-FEB-12	
2,5-Dibromotoluene (PID)	80	70-130	08-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-002
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
MS-2	SL	96.9	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	45.6	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-2
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
MS-2	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	97. %	1		SM2540G	WG104307	03-FEB-12 12:52:22	ASTM D2216	02-FEB-12	RO	

Katahdin Analytical Services SF0504 page 0000017 of 0000112

200 Technology Way
P.O. Box 540, Scarborough, ME 04070

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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 19:29
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 95.0

Lab ID: SF0504-3DL
Client ID: MS-3
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	590	1.0	10	590
Chloromethane	U	590	1.0	10	590
Vinyl chloride	U	590	1.0	10	590
Bromomethane	U	590	1.0	10	590
Chloroethane	U	590	1.0	10	590
Trichlorofluoromethane	U	590	1.0	10	590
1,1-Dichloroethene	U	300	1.0	5	300
Methylene Chloride	U	1500	1.0	25	1500
trans-1,2-Dichloroethene	U	300	1.0	5	300
1,1-Dichloroethane	U	300	1.0	5	300
cis-1,2-Dichloroethene	U	300	1.0	5	300
1,2-Dichloroethylene (total)	U	590	1.0	10	590
2,2-Dichloropropane	U	300	1.0	5	300
Chloroform	U	300	1.0	5	300
Bromochloromethane	U	300	1.0	5	300
1,1,1-Trichloroethane	U	300	1.0	5	300
1,2-Dichloroethane	U	300	1.0	5	300
1,1-Dichloropropene	U	300	1.0	5	300
Carbon Tetrachloride	U	300	1.0	5	300
Benzene	U	300	1.0	5	300
1,2-Dichloropropane	U	300	1.0	5	300
Trichloroethene	U	300	1.0	5	300
Dibromomethane	U	300	1.0	5	300
Bromodichloromethane	U	300	1.0	5	300
cis-1,3-dichloropropene	U	300	1.0	5	300
Toluene	U	300	1.0	5	300
trans-1,3-Dichloropropene	U	300	1.0	5	300
1,1,2-Trichloroethane	U	300	1.0	5	300
1,3-Dichloropropane	U	300	1.0	5	300
Dibromochloromethane	U	300	1.0	5	300
Tetrachloroethene	U	300	1.0	5	300
1,2-Dibromoethane	U	300	1.0	5	300
Chlorobenzene	U	300	1.0	5	300
1,1,1,2-Tetrachloroethane	U	300	1.0	5	300
Ethylbenzene	U	300	1.0	5	300
Bromoform	U	300	1.0	5	300
Styrene	U	300	1.0	5	300
1,1,2,2-Tetrachloroethane	U	300	1.0	5	300
1,2,3-Trichloropropane	U	300	1.0	5	300
Isopropylbenzene	U	300	1.0	5	300
Bromobenzene	U	300	1.0	5	300
2-Chlorotoluene	U	300	1.0	5	300
N-Propylbenzene	U	300	1.0	5	300

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 19:29
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 95.0

Lab ID: SF0504-3DL
Client ID: MS-3
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	300	1.0	5	300
1,3,5-Trimethylbenzene	U	300	1.0	5	300
tert-Butylbenzene	U	300	1.0	5	300
1,2,4-Trichlorobenzene	U	300	1.0	5	300
sec-Butylbenzene	U	300	1.0	5	300
1,3-Dichlorobenzene	U	300	1.0	5	300
P-Isopropyltoluene	U	300	1.0	5	300
1,4-Dichlorobenzene	U	300	1.0	5	300
1,2-Dichlorobenzene	U	300	1.0	5	300
N-Butylbenzene	U	300	1.0	5	300
1,2-Dibromo-3-Chloropropane	U	300	1.0	5	300
1,2,4-Trimethylbenzene	U	300	1.0	5	300
Naphthalene	B	6900	1.0	5	300
Hexachlorobutadiene	U	300	1.0	5	300
1,2,3-Trichlorobenzene	U	300	1.0	5	300
Methyl tert-butyl ether	U	300	1.0	5	300
Acetone	U	1500	1.0	25	1500
2-Butanone	U	1500	1.0	25	1500
4-methyl-2-pentanone	U	1500	1.0	25	1500
2-Hexanone	U	1500	1.0	25	1500
m+p-Xylenes	U	590	1.0	10	590
o-Xylene	U	300	1.0	5	300
Xylenes (total)	U	890	1.0	15	890
1,3,5-Trichlorobenzene	U	300	1.0	5	300
Vinyl Acetate	U	300	1.0	5	300
Carbon Disulfide	U	300	1.0	5	300
Diethyl Ether	U	300	1.0	5	300
Tetrahydrofuran	U	3000	1.0	50	3000
Dibromofluoromethane		99%			
1,2-Dichloroethane-D4		98%			
Toluene-D8		101%			
P-Bromofluorobenzene		96%			

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-3	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-3	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	95.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	19	19	mg/Kgdrywt	1	03-FEB-12	U
C19-C36 Aliphatics	19	19	mg/Kgdrywt	1	03-FEB-12	U
Unadjusted C11-C22 Aromatics	770	37	mg/Kgdrywt	2	03-FEB-12	
C11-C22 Aromatics	630	37	mg/Kgdrywt	2	03-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	3.1	.19	mg/Kgdrywt	1	03-FEB-12	
2-Methylnaphthalene	5.0	.19	mg/Kgdrywt	1	03-FEB-12	
Phenanthrene	28	.19	mg/Kgdrywt	1	03-FEB-12	
Acenaphthylene	4.7	.19	mg/Kgdrywt	1	03-FEB-12	
Acenaphthene	1.2	.19	mg/Kgdrywt	1	03-FEB-12	
Anthracene	3.3	.19	mg/Kgdrywt	1	03-FEB-12	
Benzo(a)anthracene	11	.19	mg/Kgdrywt	1	03-FEB-12	
Benzo(a)pyrene	6.7	.19	mg/Kgdrywt	1	03-FEB-12	
Benzo(b)fluoranthene	6.2	.19	mg/Kgdrywt	1	03-FEB-12	
Benzo(g,h,i)perylene	4.8	.19	mg/Kgdrywt	1	03-FEB-12	
Benzo(k)fluoranthene	7.0	.19	mg/Kgdrywt	1	03-FEB-12	
Chrysene	9.0	.19	mg/Kgdrywt	1	03-FEB-12	
Dibenzo(a,h)anthracene	0.86	.19	mg/Kgdrywt	1	03-FEB-12	
Fluoranthene	16	.19	mg/Kgdrywt	1	03-FEB-12	
Fluorene	4.2	.19	mg/Kgdrywt	1	03-FEB-12	
Indeno(1,2,3-cd)pyrene	4.6	.19	mg/Kgdrywt	1	03-FEB-12	
Pyrene	19	.19	mg/Kgdrywt	1	03-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	0	40-140	03-FEB-12	*
o-Terphenyl	70	40-140	03-FEB-12	
2-Fluorobiphenyl	69	40-140	03-FEB-12	
2-Bromonaphthalene	89	40-140	03-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-3	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-3RE	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	07-FEB-12
Prep Method:	SW846 3546	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	95.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C11-C22 Aromatics	1100	42	mg/Kgdrywt	2	10-FEB-12	
C9-C18 Aliphatics	42	42	mg/Kgdrywt	2	10-FEB-12	U
C19-C36 Aliphatics	42	42	mg/Kgdrywt	2	10-FEB-12	U
C11-C22 Aromatics	870	42	mg/Kgdrywt	2	10-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	6.8	.42	mg/Kgdrywt	2	10-FEB-12	
2-Methylnaphthalene	10	.42	mg/Kgdrywt	2	10-FEB-12	
Phenanthrene	56	.42	mg/Kgdrywt	2	10-FEB-12	
Acenaphthylene	8.6	.42	mg/Kgdrywt	2	10-FEB-12	
Acenaphthene	2.7	.42	mg/Kgdrywt	2	10-FEB-12	
Anthracene	6.8	.42	mg/Kgdrywt	2	10-FEB-12	
Benzo(a)anthracene	17	.42	mg/Kgdrywt	2	10-FEB-12	
Benzo(a)pyrene	8.1	.42	mg/Kgdrywt	2	10-FEB-12	
Benzo(b)fluoranthene	7.2	.42	mg/Kgdrywt	2	10-FEB-12	
Benzo(g,h,i)perylene	4.6	.42	mg/Kgdrywt	2	10-FEB-12	
Benzo(k)fluoranthene	9.3	.42	mg/Kgdrywt	2	10-FEB-12	
Chrysene	14	.42	mg/Kgdrywt	2	10-FEB-12	
Dibenzo(a,h)anthracene	1.0	.42	mg/Kgdrywt	2	10-FEB-12	
Fluoranthene	29	.42	mg/Kgdrywt	2	10-FEB-12	
Fluorene	10	.42	mg/Kgdrywt	2	10-FEB-12	
Indeno(1,2,3-cd)pyrene	4.9	.42	mg/Kgdrywt	2	10-FEB-12	
Pyrene	34	.42	mg/Kgdrywt	2	10-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	0	40-140	10-FEB-12	*
o-Terphenyl	39	40-140	10-FEB-12	*
2-Fluorobiphenyl	62	40-140	10-FEB-12	
2-Bromonaphthalene	87	40-140	10-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-3	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-3	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	95.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	32	32	mg/Kgdrywt	1	09-FEB-12	U
Unadjusted C9-C12 Aliphatics	32	32	mg/Kgdrywt	1	09-FEB-12	U
C5-C8 Aliphatics	32	32	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	32	32	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	32	32	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	24	1.6	mg/Kgdrywt	1	09-FEB-12	
Toluene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	3.2	3.2	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	106	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	84	70-130	09-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-003
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
MS-3	SL	95.0	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	36.1	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-3
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
MS-3	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	95. %	1		SM2540G	WG104307	03-FEB-12 12:52:36	ASTM D2216	02-FEB-12	RO	

500 Technology Way
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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 02-FEB-2012 15:35
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 91.4

Lab ID: SF0504-4DL
Client ID: MS-4
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	520	1.0	10	520
Chloromethane	U	520	1.0	10	520
Vinyl chloride	U	520	1.0	10	520
Bromomethane	U	520	1.0	10	520
Chloroethane	U	520	1.0	10	520
Trichlorofluoromethane	U	520	1.0	10	520
1,1-Dichloroethene	U	260	1.0	5	260
Methylene Chloride	U	1300	1.0	25	1300
trans-1,2-Dichloroethene	U	260	1.0	5	260
1,1-Dichloroethane	U	260	1.0	5	260
cis-1,2-Dichloroethene	U	260	1.0	5	260
1,2-Dichloroethylene (total)	U	520	1.0	10	520
2,2-Dichloropropane	U	260	1.0	5	260
Chloroform	U	260	1.0	5	260
Bromochloromethane	U	260	1.0	5	260
1,1,1-Trichloroethane	U	260	1.0	5	260
1,2-Dichloroethane	U	260	1.0	5	260
1,1-Dichloropropene	U	260	1.0	5	260
Carbon Tetrachloride	U	260	1.0	5	260
Benzene	U	260	1.0	5	260
1,2-Dichloropropane	U	260	1.0	5	260
Trichloroethene	U	260	1.0	5	260
Dibromomethane	U	260	1.0	5	260
Bromodichloromethane	U	260	1.0	5	260
cis-1,3-dichloropropene	U	260	1.0	5	260
Toluene	U	260	1.0	5	260
trans-1,3-Dichloropropene	U	260	1.0	5	260
1,1,2-Trichloroethane	U	260	1.0	5	260
1,3-Dichloropropane	U	260	1.0	5	260
Dibromochloromethane	U	260	1.0	5	260
Tetrachloroethene	U	260	1.0	5	260
1,2-Dibromoethane	U	260	1.0	5	260
Chlorobenzene	U	260	1.0	5	260
1,1,1,2-Tetrachloroethane	U	260	1.0	5	260
Ethylbenzene	U	260	1.0	5	260
Bromoform	U	260	1.0	5	260
Styrene	U	260	1.0	5	260
1,1,2,2-Tetrachloroethane	U	260	1.0	5	260
1,2,3-Trichloropropane	U	260	1.0	5	260
Isopropylbenzene	U	260	1.0	5	260
Bromobenzene	U	260	1.0	5	260
2-Chlorotoluene	U	260	1.0	5	260
N-Propylbenzene	U	260	1.0	5	260

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 02-FEB-2012 15:35
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 91.4

Lab ID: SF0504-4DL
Client ID: MS-4
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	260	1.0	5	260
1,3,5-Trimethylbenzene	U	260	1.0	5	260
tert-Butylbenzene	U	260	1.0	5	260
1,2,4-Trichlorobenzene	U	260	1.0	5	260
sec-Butylbenzene	U	260	1.0	5	260
1,3-Dichlorobenzene	U	260	1.0	5	260
P-Isopropyltoluene	U	260	1.0	5	260
1,4-Dichlorobenzene	U	260	1.0	5	260
1,2-Dichlorobenzene	U	260	1.0	5	260
N-Butylbenzene	U	260	1.0	5	260
1,2-Dibromo-3-Chloropropane	U	260	1.0	5	260
1,2,4-Trimethylbenzene	U	260	1.0	5	260
Naphthalene	B	6600	1.0	5	260
Hexachlorobutadiene	U	260	1.0	5	260
1,2,3-Trichlorobenzene	U	260	1.0	5	260
Methyl tert-butyl ether	U	260	1.0	5	260
Acetone	U	1300	1.0	25	1300
2-Butanone	U	1300	1.0	25	1300
4-methyl-2-pentanone	U	1300	1.0	25	1300
2-Hexanone	U	1300	1.0	25	1300
m+p-Xylenes	U	520	1.0	10	520
o-Xylene	U	260	1.0	5	260
Xylenes (total)	U	770	1.0	15	770
1,3,5-Trichlorobenzene	U	260	1.0	5	260
Vinyl Acetate	U	260	1.0	5	260
Carbon Disulfide	U	260	1.0	5	260
Diethyl Ether	U	260	1.0	5	260
Tetrahydrofuran	U	2600	1.0	50	2600
Dibromofluoromethane		103%			
1,2-Dichloroethane-D4		98%			
Toluene-D8		105%			
P-Bromofluorobenzene		100%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-4	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-4	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	91.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C11-C22 Aromatics	270	20	mg/Kgdrywt	1	03-FEB-12	
C9-C18 Aliphatics	20	20	mg/Kgdrywt	1	03-FEB-12	U
C19-C36 Aliphatics	59	20	mg/Kgdrywt	1	03-FEB-12	
C11-C22 Aromatics	220	20	mg/Kgdrywt	1	03-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	0.23	.2	mg/Kgdrywt	1	03-FEB-12	
2-Methylnaphthalene	0.30	.2	mg/Kgdrywt	1	03-FEB-12	
Phenanthrene	5.1	.2	mg/Kgdrywt	1	03-FEB-12	
Acenaphthylene	1.4	.2	mg/Kgdrywt	1	03-FEB-12	
Acenaphthene	0.20	.2	mg/Kgdrywt	1	03-FEB-12	U
Anthracene	1.3	.2	mg/Kgdrywt	1	03-FEB-12	
Benzo(a)anthracene	4.2	.2	mg/Kgdrywt	1	03-FEB-12	
Benzo(a)pyrene	3.5	.2	mg/Kgdrywt	1	03-FEB-12	
Benzo(b)fluoranthene	3.6	.2	mg/Kgdrywt	1	03-FEB-12	
Benzo(g,h,i)perylene	3.8	.2	mg/Kgdrywt	1	03-FEB-12	
Benzo(k)fluoranthene	3.3	.2	mg/Kgdrywt	1	03-FEB-12	
Chrysene	3.2	.2	mg/Kgdrywt	1	03-FEB-12	
Dibenzo(a,h)anthracene	1.0	.2	mg/Kgdrywt	1	03-FEB-12	
Fluoranthene	5.4	.2	mg/Kgdrywt	1	03-FEB-12	
Fluorene	0.81	.2	mg/Kgdrywt	1	03-FEB-12	
Indeno(1,2,3-cd)pyrene	3.3	.2	mg/Kgdrywt	1	03-FEB-12	
Pyrene	6.0	.2	mg/Kgdrywt	1	03-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	68	40-140	03-FEB-12	
o-Terphenyl	75	40-140	03-FEB-12	
2-Fluorobiphenyl	79	40-140	03-FEB-12	
2-Bromonaphthalene	84	40-140	03-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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ANALYTICAL SERVICES

Cert No E87604

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-4	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-4	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	91.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
Unadjusted C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	24	24	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	2.4	2.4	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	93	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	76	70-130	09-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

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P.O. Box 540, Scarborough, ME 04070
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Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-004
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
MS-4	SL	91.4	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	40.7	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-4
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
MS-4	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	91. %	1		SM2540G	WG104307	03-FEB-12 12:52:53	ASTM D2216	02-FEB-12	RO	

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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 20:03
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 97.0

Lab ID: SF0504-5DL
Client ID: MS-5
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	500	1.0	10	500
Chloromethane	U	500	1.0	10	500
Vinyl chloride	U	500	1.0	10	500
Bromomethane	U	500	1.0	10	500
Chloroethane	U	500	1.0	10	500
Trichlorofluoromethane	U	500	1.0	10	500
1,1-Dichloroethene	U	250	1.0	5	250
Methylene Chloride	U	1200	1.0	25	1200
trans-1,2-Dichloroethene	U	250	1.0	5	250
1,1-Dichloroethane	U	250	1.0	5	250
cis-1,2-Dichloroethene	U	250	1.0	5	250
1,2-Dichloroethylene (total)	U	500	1.0	10	500
2,2-Dichloropropane	U	250	1.0	5	250
Chloroform	U	250	1.0	5	250
Bromochloromethane	U	250	1.0	5	250
1,1,1-Trichloroethane	U	250	1.0	5	250
1,2-Dichloroethane	U	250	1.0	5	250
1,1-Dichloropropene	U	250	1.0	5	250
Carbon Tetrachloride	U	250	1.0	5	250
Benzene	U	250	1.0	5	250
1,2-Dichloropropane	U	250	1.0	5	250
Trichloroethene	U	250	1.0	5	250
Dibromomethane	U	250	1.0	5	250
Bromodichloromethane	U	250	1.0	5	250
cis-1,3-dichloropropene	U	250	1.0	5	250
Toluene	U	250	1.0	5	250
trans-1,3-Dichloropropene	U	250	1.0	5	250
1,1,2-Trichloroethane	U	250	1.0	5	250
1,3-Dichloropropane	U	250	1.0	5	250
Dibromochloromethane	U	250	1.0	5	250
Tetrachloroethene	U	250	1.0	5	250
1,2-Dibromoethane	U	250	1.0	5	250
Chlorobenzene	U	250	1.0	5	250
1,1,1,2-Tetrachloroethane	U	250	1.0	5	250
Ethylbenzene	U	250	1.0	5	250
Bromoform	U	250	1.0	5	250
Styrene	U	250	1.0	5	250
1,1,2,2-Tetrachloroethane	U	250	1.0	5	250
1,2,3-Trichloropropane	U	250	1.0	5	250
Isopropylbenzene	U	250	1.0	5	250
Bromobenzene	U	250	1.0	5	250
2-Chlorotoluene	U	250	1.0	5	250
N-Propylbenzene	U	250	1.0	5	250

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 01-FEB-2012 20:03
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 97.0

Lab ID: SF0504-5DL
Client ID: MS-5
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	250	1.0	5	250
1,3,5-Trimethylbenzene	U	250	1.0	5	250
tert-Butylbenzene	U	250	1.0	5	250
1,2,4-Trichlorobenzene	U	250	1.0	5	250
sec-Butylbenzene	U	250	1.0	5	250
1,3-Dichlorobenzene	U	250	1.0	5	250
P-Isopropyltoluene	U	250	1.0	5	250
1,4-Dichlorobenzene	U	250	1.0	5	250
1,2-Dichlorobenzene	U	250	1.0	5	250
N-Butylbenzene	U	250	1.0	5	250
1,2-Dibromo-3-Chloropropane	U	250	1.0	5	250
1,2,4-Trimethylbenzene	U	250	1.0	5	250
Naphthalene	B	4600	1.0	5	250
Hexachlorobutadiene	U	250	1.0	5	250
1,2,3-Trichlorobenzene	U	250	1.0	5	250
Methyl tert-butyl ether	U	250	1.0	5	250
Acetone	U	1200	1.0	25	1200
2-Butanone	U	1200	1.0	25	1200
4-methyl-2-pentanone	U	1200	1.0	25	1200
2-Hexanone	U	1200	1.0	25	1200
m+p-Xylenes	U	500	1.0	10	500
o-Xylene	U	250	1.0	5	250
Xylenes (total)	U	750	1.0	15	750
1,3,5-Trichlorobenzene	U	250	1.0	5	250
Vinyl Acetate	U	250	1.0	5	250
Carbon Disulfide	U	250	1.0	5	250
Diethyl Ether	U	250	1.0	5	250
Tetrahydrofuran	U	2500	1.0	50	2500
Dibromofluoromethane		99%			
1,2-Dichloroethane-D4		95%			
Toluene-D8		98%			
P-Bromofluorobenzene		92%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-5	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-5	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	97.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	61	38	mg/Kgdrywt	2	03-FEB-12	
C19-C36 Aliphatics	310	38	mg/Kgdrywt	2	03-FEB-12	
Unadjusted C11-C22 Aromatics	2600	110	mg/Kgdrywt	6	03-FEB-12	
C11-C22 Aromatics	1900	110	mg/Kgdrywt	6	03-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	3.8	.38	mg/Kgdrywt	2	03-FEB-12	
2-Methylnaphthalene	5.0	.38	mg/Kgdrywt	2	03-FEB-12	
Acenaphthylene	12	.38	mg/Kgdrywt	2	03-FEB-12	
Acenaphthene	3.4	.38	mg/Kgdrywt	2	03-FEB-12	
Anthracene	19	.38	mg/Kgdrywt	2	03-FEB-12	
Benzo(a)anthracene	58	.38	mg/Kgdrywt	2	03-FEB-12	
Benzo(a)pyrene	32	.38	mg/Kgdrywt	2	03-FEB-12	
Benzo(b)fluoranthene	36	.38	mg/Kgdrywt	2	03-FEB-12	
Benzo(g,h,i)perylene	19	.38	mg/Kgdrywt	2	03-FEB-12	
Benzo(k)fluoranthene	34	.38	mg/Kgdrywt	2	03-FEB-12	
Chrysene	47	.38	mg/Kgdrywt	2	03-FEB-12	
Dibenzo(a,h)anthracene	4.3	.38	mg/Kgdrywt	2	03-FEB-12	
Fluorene	19	.38	mg/Kgdrywt	2	03-FEB-12	
Indeno(1,2,3-cd)pyrene	21	.38	mg/Kgdrywt	2	03-FEB-12	
Phenanthrene	150	1.1	mg/Kgdrywt	6	03-FEB-12	
Fluoranthene	120	1.1	mg/Kgdrywt	6	03-FEB-12	
Pyrene	130	1.1	mg/Kgdrywt	6	03-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	26	40-140	03-FEB-12	*
o-Terphenyl	61	40-140	03-FEB-12	
2-Fluorobiphenyl	35	40-140	03-FEB-12	*
2-Bromonaphthalene	61	40-140	03-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-5	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-5	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	97.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
Unadjusted C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	24	24	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	2.8	1.2	mg/Kgdrywt	1	09-FEB-12	
Toluene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	2.4	2.4	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	76	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	68	70-130	09-FEB-12	*

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-005
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
MS-5	SL	97.0	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	25.0	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-5
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
MS-5	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	97. %	1		SM2540G	WG104307	03-FEB-12 12:53:09	ASTM D2216	02-FEB-12	RO	

Katahdin Analytical Services SF0504 page 0000036 of 0000111

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 02-FEB-2012 16:07
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 93.6

Lab ID: SF0504-6DL
Client ID: MS-6
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	980	1.0	10	980
Chloromethane	U	980	1.0	10	980
Vinyl chloride	U	980	1.0	10	980
Bromomethane	U	980	1.0	10	980
Chloroethane	U	980	1.0	10	980
Trichlorofluoromethane	U	980	1.0	10	980
1,1-Dichloroethene	U	490	1.0	5	490
Methylene Chloride	U	2400	1.0	25	2400
trans-1,2-Dichloroethene	U	490	1.0	5	490
1,1-Dichloroethane	U	490	1.0	5	490
cis-1,2-Dichloroethene	U	490	1.0	5	490
1,2-Dichloroethylene (total)	U	980	1.0	10	980
2,2-Dichloropropane	U	490	1.0	5	490
Chloroform	U	490	1.0	5	490
Bromochloromethane	U	490	1.0	5	490
1,1,1-Trichloroethane	U	490	1.0	5	490
1,2-Dichloroethane	U	490	1.0	5	490
1,1-Dichloropropene	U	490	1.0	5	490
Carbon Tetrachloride	U	490	1.0	5	490
Benzene	U	490	1.0	5	490
1,2-Dichloropropane	U	490	1.0	5	490
Trichloroethene	U	490	1.0	5	490
Dibromomethane	U	490	1.0	5	490
Bromodichloromethane	U	490	1.0	5	490
cis-1,3-dichloropropene	U	490	1.0	5	490
Toluene	U	490	1.0	5	490
trans-1,3-Dichloropropene	U	490	1.0	5	490
1,1,2-Trichloroethane	U	490	1.0	5	490
1,3-Dichloropropane	U	490	1.0	5	490
Dibromochloromethane	U	490	1.0	5	490
Tetrachloroethene	U	490	1.0	5	490
1,2-Dibromoethane	U	490	1.0	5	490
Chlorobenzene	U	490	1.0	5	490
1,1,1,2-Tetrachloroethane	U	490	1.0	5	490
Ethylbenzene	U	490	1.0	5	490
Bromoform	U	490	1.0	5	490
Styrene	U	490	1.0	5	490
1,1,2,2-Tetrachloroethane	U	490	1.0	5	490
1,2,3-Trichloropropane	U	490	1.0	5	490
Isopropylbenzene	U	490	1.0	5	490
Bromobenzene	U	490	1.0	5	490
2-Chlorotoluene	U	490	1.0	5	490
N-Propylbenzene	U	490	1.0	5	490

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 02-FEB-2012 16:07
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 93.6

Lab ID: SF0504-6DL
Client ID: MS-6
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	490	1.0	5	490
1,3,5-Trimethylbenzene	U	490	1.0	5	490
tert-Butylbenzene	U	490	1.0	5	490
1,2,4-Trichlorobenzene	U	490	1.0	5	490
sec-Butylbenzene	U	490	1.0	5	490
1,3-Dichlorobenzene	U	490	1.0	5	490
P-Isopropyltoluene	U	490	1.0	5	490
1,4-Dichlorobenzene	U	490	1.0	5	490
1,2-Dichlorobenzene	U	490	1.0	5	490
N-Butylbenzene	U	490	1.0	5	490
1,2-Dibromo-3-Chloropropane	U	490	1.0	5	490
1,2,4-Trimethylbenzene	U	490	1.0	5	490
Naphthalene	B	5000	1.0	5	490
Hexachlorobutadiene	U	490	1.0	5	490
1,2,3-Trichlorobenzene	U	490	1.0	5	490
Methyl tert-butyl ether	U	490	1.0	5	490
Acetone	U	2400	1.0	25	2400
2-Butanone	U	2400	1.0	25	2400
4-methyl-2-pentanone	U	2400	1.0	25	2400
2-Hexanone	U	2400	1.0	25	2400
m+p-Xylenes	U	980	1.0	10	980
o-Xylene	U	490	1.0	5	490
Xylenes (total)	U	1500	1.0	15	1500
1,3,5-Trichlorobenzene	U	490	1.0	5	490
Vinyl Acetate	U	490	1.0	5	490
Carbon Disulfide	U	490	1.0	5	490
Diethyl Ether	U	490	1.0	5	490
Tetrahydrofuran	U	4900	1.0	50	4900
Dibromofluoromethane		102%			
1,2-Dichloroethane-D4		96%			
Toluene-D8		104%			
P-Bromofluorobenzene		98%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-6	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-6	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	94.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	140	41	mg/Kgdrywt	2	03-FEB-12	
C19-C36 Aliphatics	510	41	mg/Kgdrywt	2	03-FEB-12	
Unadjusted C11-C22 Aromatics	5200	200	mg/Kgdrywt	10	03-FEB-12	
C11-C22 Aromatics	3700	200	mg/Kgdrywt	10	03-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	27	.41	mg/Kgdrywt	2	03-FEB-12	
2-Methylnaphthalene	35	.41	mg/Kgdrywt	2	03-FEB-12	
Acenaphthylene	34	.41	mg/Kgdrywt	2	03-FEB-12	
Acenaphthene	13	.41	mg/Kgdrywt	2	03-FEB-12	
Anthracene	58	.41	mg/Kgdrywt	2	03-FEB-12	
Benzo(a)pyrene	57	.41	mg/Kgdrywt	2	03-FEB-12	
Benzo(b)fluoranthene	54	.41	mg/Kgdrywt	2	03-FEB-12	
Benzo(g,h,i)perylene	33	.41	mg/Kgdrywt	2	03-FEB-12	
Benzo(k)fluoranthene	58	.41	mg/Kgdrywt	2	03-FEB-12	
Chrysene	74	.41	mg/Kgdrywt	2	03-FEB-12	
Dibenzo(a,h)anthracene	6.7	.41	mg/Kgdrywt	2	03-FEB-12	
Fluorene	64	.41	mg/Kgdrywt	2	03-FEB-12	
Indeno(1,2,3-cd)pyrene	36	.41	mg/Kgdrywt	2	03-FEB-12	
Phenanthrene	350	2	mg/Kgdrywt	10	03-FEB-12	
Benzo(a)anthracene	120	2	mg/Kgdrywt	10	03-FEB-12	
Fluoranthene	240	2	mg/Kgdrywt	10	03-FEB-12	
Pyrene	230	2	mg/Kgdrywt	10	03-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	66	40-140	03-FEB-12	
o-Terphenyl	0	40-140	03-FEB-12	D
2-Fluorobiphenyl	0	40-140	03-FEB-12	D
2-Bromonaphthalene	0	40-140	03-FEB-12	D

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	MS-6	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-6	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	94.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
Unadjusted C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
C9-C10 Aromatics	24	24	mg/Kgdrywt	1	08-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Naphthalene	7.3	1.2	mg/Kgdrywt	1	08-FEB-12	
Toluene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
m+p-Xylenes	2.4	2.4	mg/Kgdrywt	1	08-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	81	70-130	08-FEB-12	
2,5-Dibromotoluene (PID)	72	70-130	08-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

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Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-006
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
MS-6	SL	93.6	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	73.7	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-6
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
MS-6	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	94. %	1		SM2540G	WG104307	03-FEB-12 12:53:22	ASTM D2216	02-FEB-12	RO	

Katahdin Analytical Services SF0504 page 0000042 of 0000111

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 03-FEB-2012 12:52
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 97.3

Lab ID: SF0504-8
Client ID: RD-2
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DJP
Analysis Method: SW846 8260B
Lab Prep Batch: WG104344
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	10	1.0	10	10
Chloromethane	U	10	1.0	10	10
Vinyl chloride	U	10	1.0	10	10
Bromomethane	U	10	1.0	10	10
Chloroethane	U	10	1.0	10	10
Trichlorofluoromethane	U	10	1.0	10	10
1,1-Dichloroethene	U	5	1.0	5	5
Methylene Chloride	U	25	1.0	25	25
trans-1,2-Dichloroethene	U	5	1.0	5	5
1,1-Dichloroethane	U	5	1.0	5	5
cis-1,2-Dichloroethene	U	5	1.0	5	5
1,2-Dichloroethylene (total)	U	10	1.0	10	10
2,2-Dichloropropane	U	5	1.0	5	5
Chloroform	U	5	1.0	5	5
Bromochloromethane	U	5	1.0	5	5
1,1,1-Trichloroethane	U	5	1.0	5	5
1,2-Dichloroethane	U	5	1.0	5	5
1,1-Dichloropropene	U	5	1.0	5	5
Carbon Tetrachloride	U	5	1.0	5	5
Benzene	U	5	1.0	5	5
1,2-Dichloropropane	U	5	1.0	5	5
Trichloroethene	U	5	1.0	5	5
Dibromomethane	U	5	1.0	5	5
Bromodichloromethane	U	5	1.0	5	5
cis-1,3-dichloropropene	U	5	1.0	5	5
Toluene	U	5	1.0	5	5
trans-1,3-Dichloropropene	U	5	1.0	5	5
1,1,2-Trichloroethane	U	5	1.0	5	5
1,3-Dichloropropane	U	5	1.0	5	5
Dibromochloromethane	U	5	1.0	5	5
Tetrachloroethene	U	5	1.0	5	5
1,2-Dibromoethane	U	5	1.0	5	5
Chlorobenzene	U	5	1.0	5	5
1,1,1,2-Tetrachloroethane	U	5	1.0	5	5
Ethylbenzene	U	5	1.0	5	5
Bromoform	U	5	1.0	5	5
Styrene	U	5	1.0	5	5
1,1,2,2-Tetrachloroethane	U	5	1.0	5	5
1,2,3-Trichloropropane	U	5	1.0	5	5
Isopropylbenzene	U	5	1.0	5	5
Bromobenzene	U	5	1.0	5	5
2-Chlorotoluene	U	5	1.0	5	5
N-Propylbenzene	U	5	1.0	5	5

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 03-FEB-2012 12:52
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 97.3

Lab ID: SF0504-8
Client ID: RD-2
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DJP
Analysis Method: SW846 8260B
Lab Prep Batch: WG104344
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	5	1.0	5	5
1,3,5-Trimethylbenzene	U	5	1.0	5	5
tert-Butylbenzene	U	5	1.0	5	5
1,2,4-Trichlorobenzene	U	5	1.0	5	5
sec-Butylbenzene	U	5	1.0	5	5
1,3-Dichlorobenzene	U	5	1.0	5	5
P-Isopropyltoluene	U	5	1.0	5	5
1,4-Dichlorobenzene	U	5	1.0	5	5
1,2-Dichlorobenzene	U	5	1.0	5	5
N-Butylbenzene	U	5	1.0	5	5
1,2-Dibromo-3-Chloropropane	U	5	1.0	5	5
1,2,4-Trimethylbenzene	U	5	1.0	5	5
Naphthalene		27	1.0	5	5
Hexachlorobutadiene	U	5	1.0	5	5
1,2,3-Trichlorobenzene	U	5	1.0	5	5
Methyl tert-butyl ether	U	5	1.0	5	5
Acetone	U	25	1.0	25	25
2-Butanone	U	25	1.0	25	25
4-methyl-2-pentanone	U	25	1.0	25	25
2-Hexanone	U	25	1.0	25	25
m+p-Xylenes	U	10	1.0	10	10
o-Xylene	U	5	1.0	5	5
Xylenes (total)	U	15	1.0	15	15
1,3,5-Trichlorobenzene	U	5	1.0	5	5
Vinyl Acetate	U	5	1.0	5	5
Carbon Disulfide	U	5	1.0	5	5
Diethyl Ether	U	5	1.0	5	5
Tetrahydrofuran	U	51	1.0	50	51
Dibromofluoromethane		93%			
1,2-Dichloroethane-D4		89%			
Toluene-D8		100%			
P-Bromofluorobenzene		95%			

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ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	RD-2	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-8	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	97.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C11-C22 Aromatics	20	20	mg/Kgdrywt	1	02-FEB-12	U
C9-C18 Aliphatics	20	20	mg/Kgdrywt	1	02-FEB-12	U
C19-C36 Aliphatics	20	20	mg/Kgdrywt	1	02-FEB-12	U
C11-C22 Aromatics	20.	20	mg/Kgdrywt	1	02-FEB-12	U

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
2-Methylnaphthalene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Phenanthrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Acenaphthylene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Acenaphthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Anthracene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Benzo(a)anthracene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Benzo(a)pyrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Benzo(b)fluoranthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Benzo(g,h,i)perylene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Benzo(k)fluoranthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Chrysene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Dibenzo(a,h)anthracene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Fluoranthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Fluorene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Indeno(1,2,3-cd)pyrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U
Pyrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12	U

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	71	40-140	02-FEB-12	
o-Terphenyl	65	40-140	02-FEB-12	
2-Fluorobiphenyl	72	40-140	02-FEB-12	
2-Bromonaphthalene	77	40-140	02-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	RD-2	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-8	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	97.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
Unadjusted C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
C5-C8 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
C9-C12 Aliphatics	24	24	mg/Kgdrywt	1	08-FEB-12	U
C9-C10 Aromatics	24	24	mg/Kgdrywt	1	08-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
m+p-Xylenes	2.4	2.4	mg/Kgdrywt	1	08-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	92	70-130	08-FEB-12	
2,5-Dibromotoluene (PID)	87	70-130	08-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-008
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
RD-2	SL	97.3	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	8.01	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-8
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
RD-2	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	97. %	1		SM2540G	WG104307	03-FEB-12 12:53:34	ASTM D2216	02-FEB-12	RO	

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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 02-FEB-2012 16:40
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 94.3

Lab ID: SF0504-11DL
Client ID: RD-6
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	510	1.0	10	510
Chloromethane	U	510	1.0	10	510
Vinyl chloride	U	510	1.0	10	510
Bromomethane	U	510	1.0	10	510
Chloroethane	U	510	1.0	10	510
Trichlorofluoromethane	U	510	1.0	10	510
1,1-Dichloroethene	U	260	1.0	5	260
Methylene Chloride	U	1300	1.0	25	1300
trans-1,2-Dichloroethene	U	260	1.0	5	260
1,1-Dichloroethane	U	260	1.0	5	260
cis-1,2-Dichloroethene	U	260	1.0	5	260
1,2-Dichloroethylene (total)	U	510	1.0	10	510
2,2-Dichloropropane	U	260	1.0	5	260
Chloroform	U	260	1.0	5	260
Bromochloromethane	U	260	1.0	5	260
1,1,1-Trichloroethane	U	260	1.0	5	260
1,2-Dichloroethane	U	260	1.0	5	260
1,1-Dichloropropene	U	260	1.0	5	260
Carbon Tetrachloride	U	260	1.0	5	260
Benzene	U	260	1.0	5	260
1,2-Dichloropropane	U	260	1.0	5	260
Trichloroethene	U	260	1.0	5	260
Dibromomethane	U	260	1.0	5	260
Bromodichloromethane	U	260	1.0	5	260
cis-1,3-dichloropropene	U	260	1.0	5	260
Toluene	U	260	1.0	5	260
trans-1,3-Dichloropropene	U	260	1.0	5	260
1,1,2-Trichloroethane	U	260	1.0	5	260
1,3-Dichloropropane	U	260	1.0	5	260
Dibromochloromethane	U	260	1.0	5	260
Tetrachloroethene		300	1.0	5	260
1,2-Dibromoethane	U	260	1.0	5	260
Chlorobenzene	U	260	1.0	5	260
1,1,1,2-Tetrachloroethane	U	260	1.0	5	260
Ethylbenzene	U	260	1.0	5	260
Bromoform	U	260	1.0	5	260
Styrene	U	260	1.0	5	260
1,1,2,2-Tetrachloroethane	U	260	1.0	5	260
1,2,3-Trichloropropane	U	260	1.0	5	260
Isopropylbenzene	U	260	1.0	5	260
Bromobenzene	U	260	1.0	5	260
2-Chlorotoluene	U	260	1.0	5	260
N-Propylbenzene	U	260	1.0	5	260

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 02-FEB-2012 16:40
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 94.3

Lab ID: SF0504-11DL
Client ID: RD-6
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	260	1.0	5	260
1,3,5-Trimethylbenzene	U	260	1.0	5	260
tert-Butylbenzene	U	260	1.0	5	260
1,2,4-Trichlorobenzene	U	260	1.0	5	260
sec-Butylbenzene	U	260	1.0	5	260
1,3-Dichlorobenzene	U	260	1.0	5	260
P-Isopropyltoluene	U	260	1.0	5	260
1,4-Dichlorobenzene	U	260	1.0	5	260
1,2-Dichlorobenzene	U	260	1.0	5	260
N-Butylbenzene	U	260	1.0	5	260
1,2-Dibromo-3-Chloropropane	U	260	1.0	5	260
1,2,4-Trimethylbenzene	U	260	1.0	5	260
Naphthalene	B	2000	1.0	5	260
Hexachlorobutadiene	U	260	1.0	5	260
1,2,3-Trichlorobenzene	U	260	1.0	5	260
Methyl tert-butyl ether	U	260	1.0	5	260
Acetone	U	1300	1.0	25	1300
2-Butanone	U	1300	1.0	25	1300
4-methyl-2-pentanone	U	1300	1.0	25	1300
2-Hexanone	U	1300	1.0	25	1300
m+p-Xylenes	U	510	1.0	10	510
o-Xylene	U	260	1.0	5	260
Xylenes (total)	U	770	1.0	15	770
1,3,5-Trichlorobenzene	U	260	1.0	5	260
Vinyl Acetate	U	260	1.0	5	260
Carbon Disulfide	U	260	1.0	5	260
Diethyl Ether	U	260	1.0	5	260
Tetrahydrofuran	U	2600	1.0	50	2600
Dibromofluoromethane		101%			
1,2-Dichloroethane-D4		96%			
Toluene-D8		102%			
P-Bromofluorobenzene		98%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Extractable Petroleum Hydrocarbon (EPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	RD-6	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-11	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	94.

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
C9-C18 Aliphatics	23	21	mg/Kgdrywt	1	03-FEB-12	
C19-C36 Aliphatics	120	21	mg/Kgdrywt	1	03-FEB-12	
Unadjusted C11-C22 Aromatics	1200	42	mg/Kgdrywt	2	03-FEB-12	
C11-C22 Aromatics	840	42	mg/Kgdrywt	2	03-FEB-12	

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	0.50	.21	mg/Kgdrywt	1	03-FEB-12	
2-Methylnaphthalene	0.60	.21	mg/Kgdrywt	1	03-FEB-12	
Phenanthrene	22	.21	mg/Kgdrywt	1	03-FEB-12	
Acenaphthylene	6.1	.21	mg/Kgdrywt	1	03-FEB-12	
Acenaphthene	0.46	.21	mg/Kgdrywt	1	03-FEB-12	
Anthracene	6.7	.21	mg/Kgdrywt	1	03-FEB-12	
Benzo(a)anthracene	40	.21	mg/Kgdrywt	1	03-FEB-12	
Benzo(a)pyrene	26	.21	mg/Kgdrywt	1	03-FEB-12	
Benzo(b)fluoranthene	29	.21	mg/Kgdrywt	1	03-FEB-12	
Benzo(g,h,i)perylene	16	.21	mg/Kgdrywt	1	03-FEB-12	
Benzo(k)fluoranthene	29	.21	mg/Kgdrywt	1	03-FEB-12	
Chrysene	31	.21	mg/Kgdrywt	1	03-FEB-12	
Dibenzo(a,h)anthracene	3.8	.21	mg/Kgdrywt	1	03-FEB-12	
Fluorene	2.4	.21	mg/Kgdrywt	1	03-FEB-12	
Indeno(1,2,3-cd)pyrene	18	.21	mg/Kgdrywt	1	03-FEB-12	
Fluoranthene	59	.42	mg/Kgdrywt	2	03-FEB-12	
Pyrene	60	.42	mg/Kgdrywt	2	03-FEB-12	

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	71	40-140	03-FEB-12	
o-Terphenyl	82	40-140	03-FEB-12	
2-Fluorobiphenyl	82	40-140	03-FEB-12	
2-Bromonaphthalene	94	40-140	03-FEB-12	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

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ANALYTICAL SERVICES

Cert No E87604

Volatile Petroleum Hydrocarbon (VPH) Analysis

Client:	Woodard & Curran	**SDG:**	SF0504
Client Sample ID:	RD-6	**Date Collected:**	26-JAN-12
KAS Sample ID:	SF0504-11	**Date Received:**	27-JAN-12
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	94.

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	33	33	mg/Kgdrywt	1	09-FEB-12	U
Unadjusted C9-C12 Aliphatics	33	33	mg/Kgdrywt	1	09-FEB-12	U
C5-C8 Aliphatics	33	33	mg/Kgdrywt	1	09-FEB-12	U
C9-C12 Aliphatics	33	33	mg/Kgdrywt	1	09-FEB-12	U
C9-C10 Aromatics	33	33	mg/Kgdrywt	1	09-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
Ethylbenzene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
Methyl tert-butylether	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
Naphthalene	9.4	1.6	mg/Kgdrywt	1	09-FEB-12	
Toluene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U
m+p-Xylenes	3.3	3.3	mg/Kgdrywt	1	09-FEB-12	U
o-Xylene	1.6	1.6	mg/Kgdrywt	1	09-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	71	70-130	09-FEB-12	
2,5-Dibromotoluene (PID)	59	70-130	09-FEB-12	*

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

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Katahdin ANALYTICAL SERVICES

REPORT OF ANALYTICAL RESULTS

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Lab Sample ID: SF0504-011
Report Date: 2/7/2012
PO No.: 203970.19
Project: Auburn-Riverside Drive

Sample Description	Matrix	Percent Solids(%)	Date Sampled	Date Received
RD-6	SL	94.3	01/26/2012	01/27/2012

Parameter	Result	Units	Adjusted PQL	Dilution Factor	PQL	Analytical Method	Analysis Date	By	Prep Method	Prepped Date	By	QC	Notes
LEAD	27.6	mg/Kgdrywt	0.5	1	0.5	SW846 6010	2/6/12	EAM	SW846 3050	2/2/12	NAT	FB02ICS1	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-11
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
RD-6	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	94. %	1		SM2540G	WG104307	03-FEB-12 12:53:42	ASTM D2216	02-FEB-12	RO	

Katahdin Analytical Services SF0504 page 0000054 of 0000111

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KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 31-JAN-2012 12:50
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: SF0504-12
Client ID: TB-1
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104210
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	10	1.0	10	10
Chloromethane	U	10	1.0	10	10
Vinyl chloride	U	10	1.0	10	10
Bromomethane	U	10	1.0	10	10
Chloroethane	U	10	1.0	10	10
Trichlorofluoromethane	U	10	1.0	10	10
1,1-Dichloroethene	U	5	1.0	5	5
Methylene Chloride	U	25	1.0	25	25
trans-1,2-Dichloroethene	U	5	1.0	5	5
1,1-Dichloroethane	U	5	1.0	5	5
cis-1,2-Dichloroethene	U	5	1.0	5	5
1,2-Dichloroethylene (total)	U	10	1.0	10	10
2,2-Dichloropropane	U	5	1.0	5	5
Chloroform	U	5	1.0	5	5
Bromochloromethane	U	5	1.0	5	5
1,1,1-Trichloroethane	U	5	1.0	5	5
1,2-Dichloroethane	U	5	1.0	5	5
1,1-Dichloropropene	U	5	1.0	5	5
Carbon Tetrachloride	U	5	1.0	5	5
Benzene	U	5	1.0	5	5
1,2-Dichloropropane	U	5	1.0	5	5
Trichloroethene	U	5	1.0	5	5
Dibromomethane	U	5	1.0	5	5
Bromodichloromethane	U	5	1.0	5	5
cis-1,3-dichloropropene	U	5	1.0	5	5
Toluene	U	5	1.0	5	5
trans-1,3-Dichloropropene	U	5	1.0	5	5
1,1,2-Trichloroethane	U	5	1.0	5	5
1,3-Dichloropropane	U	5	1.0	5	5
Dibromochloromethane	U	5	1.0	5	5
Tetrachloroethene	U	5	1.0	5	5
1,2-Dibromoethane	U	5	1.0	5	5
Chlorobenzene	U	5	1.0	5	5
1,1,1,2-Tetrachloroethane	U	5	1.0	5	5
Ethylbenzene	U	5	1.0	5	5
Bromoform	U	5	1.0	5	5
Styrene	U	5	1.0	5	5
1,1,2,2-Tetrachloroethane	U	5	1.0	5	5
1,2,3-Trichloropropane	U	5	1.0	5	5
Isopropylbenzene	U	5	1.0	5	5
Bromobenzene	U	5	1.0	5	5
2-Chlorotoluene	U	5	1.0	5	5
N-Propylbenzene	U	5	1.0	5	5

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Woodard & Curran
Project: Auburn-Riverside Drive
PO No:
Sample Date: 01/26/12
Received Date: 01/27/12
Extraction Date:
Analysis Date: 31-JAN-2012 12:50
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: SF0504-12
Client ID: TB-1
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104210
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	5	1.0	5	5
1,3,5-Trimethylbenzene	U	5	1.0	5	5
tert-Butylbenzene	U	5	1.0	5	5
1,2,4-Trichlorobenzene	U	5	1.0	5	5
sec-Butylbenzene	U	5	1.0	5	5
1,3-Dichlorobenzene	U	5	1.0	5	5
P-Isopropyltoluene	U	5	1.0	5	5
1,4-Dichlorobenzene	U	5	1.0	5	5
1,2-Dichlorobenzene	U	5	1.0	5	5
N-Butylbenzene	U	5	1.0	5	5
1,2-Dibromo-3-Chloropropane	U	5	1.0	5	5
1,2,4-Trimethylbenzene	U	5	1.0	5	5
Naphthalene	U	5	1.0	5	5
Hexachlorobutadiene	U	5	1.0	5	5
1,2,3-Trichlorobenzene	U	5	1.0	5	5
Methyl tert-butyl ether	U	5	1.0	5	5
Acetone	U	25	1.0	25	25
2-Butanone	U	25	1.0	25	25
4-methyl-2-pentanone	U	25	1.0	25	25
2-Hexanone	U	25	1.0	25	25
m+p-Xylenes	U	10	1.0	10	10
o-Xylene	U	5	1.0	5	5
Xylenes (total)	U	15	1.0	15	15
1,3,5-Trichlorobenzene	U	5	1.0	5	5
Vinyl Acetate	U	5	1.0	5	5
Carbon Disulfide	U	5	1.0	5	5
Diethyl Ether	U	5	1.0	5	5
Tetrahydrofuran	U	50	1.0	50	50
Dibromofluoromethane		86%			
1,2-Dichloroethane-D4		81%			
Toluene-D8		91%			
P-Bromofluorobenzene		88%			

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Karen Lambek
Woodard & Curran
41 Hutchins Drive
Portland,ME 04102

Lab Sample ID: SF0504-12
Report Date: 09-FEB-12
Client PO: 203970.19
Project: Auburn-Riverside Drive
SDG: SF0504

Sample Description	Matrix	Date Sampled	Date Received
TB-1	SL	26-JAN-12	27-JAN-12

Parameter	Result	Adj PQL	Adj MDL	Anal. Method	QC Batch	Analysis Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	100 %	1		SM2540G	WG104307	03-FEB-12 12:51:52	ASTM D2216	02-FEB-12	RO	

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FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104210-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: M6445 Lab Sample ID: WG104210-2

Date Analyzed: 01/31/12 Time Analyzed: 1212

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) Y

Instrument ID: GCMS-M

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104210-LCS	WG104210-1	M6442	01/31/12	1000
02	TB-1	SF0504-12	M6446	01/31/12	1250
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
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23					
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26					
27					
28					
29					
30					

COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01/31/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104210-1
Client ID: WG104210-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104210
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	36	73	45-167
Chloromethane	50	NA	52	103	69-127
Vinyl chloride	50	NA	47	93	73-134
Bromomethane	50	NA	46	91	64-136
Chloroethane	50	NA	38	75	71-127
Trichlorofluoromethane	50	NA	37	74	73-145
Diethyl Ether	50	NA	44	88	76-135
Tertiary-butyl alcohol	250	NA	261	104	62-148
1,1-Dichloroethene	50	NA	48	97	71-137
Carbon Disulfide	50	NA	40	80	69-138
Freon-113	50	NA	46	93	67-135
Iodomethane	50	NA	48	96	51-150
Acrolein	250	NA	217	87	48-175
Methylene Chloride	50	NA	48	95	56-152
Acetone	50	NA	67	134	76-213
Isobutyl Alcohol	1000	NA	1180	118	72-142
trans-1,2-Dichloroethene	50	NA	46	93	67-133
Allyl Chloride	50	NA	45	91	69-135
Methyl tert-butyl ether	100	NA	96	96	81-125
Acetonitrile	500	NA	427	85	63-143
Di-isopropyl ether	50	NA	54	107	68-131
Chloroprene	50	NA	50	101	67-130
Methacrylonitrile	500	NA	486	97	79-129
Propionitrile	500	NA	508	102	73-133
1,1-Dichloroethane	50	NA	47	95	75-126
Acrylonitrile	250	NA	259	104	69-139
Ethyl tertiary-butyl ether	50	NA	51	102	83-122
Vinyl Acetate	50	NA	47	94	77-119
cis-1,2-Dichloroethene	50	NA	47	94	82-123
1,2-Dichloroethylene (total)	100	NA	94	94	82-120
Methyl Methacrylate	50	NA	49	98	82-130
2,2-Dichloropropane	50	NA	42	83	78-124
Bromochloromethane	50	NA	46	92	84-115
Chloroform	50	NA	44	88	83-118
Carbon Tetrachloride	50	NA	42	85	78-124
Tetrahydrofuran	50	NA	53	105	78-137
1,1,1-Trichloroethane	50	NA	43	86	80-120
1,1-Dichloropropene	50	NA	47	95	81-119
2-Butanone	50	NA	55	110	78-148
Benzene	50	NA	49	97	82-113
Cyclohexane	50	NA	52	103	75-128
Ethyl Methacrylate	50	NA	49	98	78-128
Tertiary-amyl methyl ether	50	NA	52	104	80-123
1,2-Dichloroethane	50	NA	41	* 82	83-121
Trichloroethene	50	NA	46	92	83-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01/31/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104210-1
Client ID: WG104210-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104210
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dibromomethane	50	NA	45	91	85-118
1,2-Dichloropropane	50	NA	49	99	84-115
Bromodichloromethane	50	NA	44	88	82-118
cis-1,3-dichloropropene	50	NA	49	98	80-115
1,4-Dioxane	1000	NA	969	97	69-137
2-Chloroethylvinylether	50	NA	66	131	16-150
Toluene	50	NA	46	91	80-113
4-methyl-2-pentanone	50	NA	53	106	75-137
Tetrachloroethene	50	NA	49	99	73-122
trans-1,3-Dichloropropene	50	NA	54	109	87-136
1,1,2-Trichloroethane	50	NA	48	97	78-117
Dibromochloromethane	50	NA	49	98	80-120
1,3-Dichloropropane	50	NA	50	100	80-114
1,2-Dibromoethane	50	NA	43	86	81-119
2-Hexanone	50	NA	59	118	72-149
Chlorobenzene	50	NA	50	100	85-111
Ethylbenzene	50	NA	50	99	81-112
1,1,1,2-Tetrachloroethane	50	NA	50	100	83-114
Xylenes (total)	150	NA	146	97	81-114
m+p-Xylenes	100	NA	97	97	80-115
o-Xylene	50	NA	49	99	82-115
Styrene	50	NA	49	97	84-112
Bromoform	50	NA	50	100	76-126
Isopropylbenzene	50	NA	57	113	89-136
cis-1,4-Dichloro-2-Butene	50	NA	46	93	73-139
trans-1,4-Dichloro-2-Butene	50	NA	44	88	65-137
Bromobenzene	50	NA	49	97	78-118
N-Propylbenzene	50	NA	50	100	77-121
1,1,2,2-Tetrachloroethane	50	NA	53	105	78-122
1,3,5-Trimethylbenzene	50	NA	46	91	79-116
2-Chlorotoluene	50	NA	47	93	78-118
1,2,3-Trichloropropane	50	NA	50	101	81-118
4-Chlorotoluene	50	NA	49	97	77-121
tert-Butylbenzene	50	NA	48	96	79-118
Pentachloroethane	50	NA	48	95	78-127
1,2,4-Trimethylbenzene	50	NA	48	95	76-115
P-Isopropyltoluene	50	NA	51	102	80-124
1,3-Dichlorobenzene	50	NA	50	99	79-119
1,4-Dichlorobenzene	50	NA	50	99	80-117
N-Butylbenzene	50	NA	50	99	70-124
sec-Butylbenzene	50	NA	49	98	75-122
1,2-Dichlorobenzene	50	NA	49	98	76-118
1,2-Dibromo-3-Chloropropane	50	NA	48	95	66-132
1,3,5-Trichlorobenzene	50	NA	43	86	64-133
Hexachlorobutadiene	50	NA	46	91	27-154

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01/31/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104210-1
Client ID: WG104210-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104210
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	53	105	61-135
1,2,3-Trimethylbenzene	50	NA	43	87	82-116
Naphthalene	50	NA	54	109	51-131
1,2,3-Trichlorobenzene	50	NA	50	99	55-134
Methyl Acetate	50	NA	48	95	72-133
Methylcyclohexane	50	NA	51	102	71-127
1-Chlorohexane	50	NA	50	100	70-122
Total Alkylbenzenes	350	NA	341	97	79-118

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 31-JAN-2012 12:12
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104210-2
Client ID: WG104210-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104210
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	5	1.0	5	5
Chloromethane	U	5	1.0	5	5
Vinyl chloride	U	5	1.0	5	5
Bromomethane	U	5	1.0	5	5
Chloroethane	U	5	1.0	5	5
Trichlorofluoromethane	U	5	1.0	5	5
1,1-Dichloroethene	U	5	1.0	5	5
Methylene Chloride	U	25	1.0	25	25
trans-1,2-Dichloroethene	U	5	1.0	5	5
1,1-Dichloroethane	U	5	1.0	5	5
cis-1,2-Dichloroethene	U	5	1.0	5	5
1,2-Dichloroethylene (total)	U	10	1.0	10	10
2,2-Dichloropropane	U	5	1.0	5	5
Chloroform	U	5	1.0	5	5
Bromochloromethane	U	5	1.0	5	5
1,1,1-Trichloroethane	U	5	1.0	5	5
1,2-Dichloroethane	U	5	1.0	5	5
1,1-Dichloropropene	U	5	1.0	5	5
Carbon Tetrachloride	U	5	1.0	5	5
Benzene	U	5	1.0	5	5
1,2-Dichloropropane	U	5	1.0	5	5
Trichloroethene	U	5	1.0	5	5
Dibromomethane	U	5	1.0	5	5
Bromodichloromethane	U	5	1.0	5	5
cis-1,3-dichloropropene	U	5	1.0	5	5
Toluene	U	5	1.0	5	5
trans-1,3-Dichloropropene	U	5	1.0	5	5
1,1,2-Trichloroethane	U	5	1.0	5	5
1,3-Dichloropropane	U	5	1.0	5	5
Dibromochloromethane	U	5	1.0	5	5
Tetrachloroethene	U	5	1.0	5	5
1,2-Dibromoethane	U	5	1.0	5	5
Chlorobenzene	U	5	1.0	5	5
1,1,1,2-Tetrachloroethane	U	5	1.0	5	5
Ethylbenzene	U	5	1.0	5	5
Bromoform	U	5	1.0	5	5
Styrene	U	5	1.0	5	5
1,1,2,2-Tetrachloroethane	U	5	1.0	5	5
1,2,3-Trichloropropane	U	5	1.0	5	5
Isopropylbenzene	U	5	1.0	5	5
Bromobenzene	U	5	1.0	5	5
2-Chlorotoluene	U	5	1.0	5	5
N-Propylbenzene	U	5	1.0	5	5

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 31-JAN-2012 12:12
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104210-2
Client ID: WG104210-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104210
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	5	1.0	5	5
1,3,5-Trimethylbenzene	U	5	1.0	5	5
tert-Butylbenzene	U	5	1.0	5	5
1,2,4-Trichlorobenzene	U	5	1.0	5	5
sec-Butylbenzene	U	5	1.0	5	5
1,3-Dichlorobenzene	U	5	1.0	5	5
P-Isopropyltoluene	U	5	1.0	5	5
1,4-Dichlorobenzene	U	5	1.0	5	5
1,2-Dichlorobenzene	U	5	1.0	5	5
N-Butylbenzene	U	5	1.0	5	5
1,2-Dibromo-3-Chloropropane	U	5	1.0	5	5
1,2,4-Trimethylbenzene	U	5	1.0	5	5
Naphthalene	U	5	1.0	5	5
Hexachlorobutadiene	U	5	1.0	5	5
1,2,3-Trichlorobenzene	U	5	1.0	5	5
Methyl tert-butyl ether	U	5	1.0	5	5
Acetone	U	25	1.0	25	25
2-Butanone	U	25	1.0	25	25
4-methyl-2-pentanone	U	25	1.0	25	25
2-Hexanone	U	25	1.0	25	25
m+p-Xylenes	U	10	1.0	10	10
o-Xylene	U	5	1.0	5	5
Xylenes (total)	U	15	1.0	15	15
1,3,5-Trichlorobenzene	U	5	1.0	5	5
Vinyl Acetate	U	5	1.0	5	5
Carbon Disulfide	U	5	1.0	5	5
Diethyl Ether	U	5	1.0	5	5
Tetrahydrofuran	U	25	1.0	25	25
Dibromofluoromethane		90%			
1,2-Dichloroethane-D4		84%			
Toluene-D8		95%			
P-Bromofluorobenzene		90%			

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104251-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: T5157 Lab Sample ID: WG104251-2

Date Analyzed: 02/01/12 Time Analyzed: 1147

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS-T

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104251-LCS	WG104251-1	T5154	02/01/12	0958
02	WG104251-MEOHBLANK	WG104251-4	T5159	02/01/12	1253
03	MS-1	SF0504-1DL	T5170	02/01/12	1855
04	MS-3	SF0504-3DL	T5171	02/01/12	1929
05	MS-5	SF0504-5DL	T5172	02/01/12	2003
06					
07					
08					
09					
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11					
12					
13					
14					
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16					
17					
18					
19					
20					
21					
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23					
24					
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26					
27					
28					
29					
30					

COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104251-1
Client ID: WG104251-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	45	90	29-164
Chloromethane	50	NA	48	96	59-123
Vinyl chloride	50	NA	46	92	64-131
Bromomethane	50	NA	46	92	57-135
Chloroethane	50	NA	46	92	53-157
Trichlorofluoromethane	50	NA	42	85	70-149
Diethyl Ether	50	NA	50	100	78-124
Tertiary-butyl alcohol	250	NA	213	85	11-151
1,1-Dichloroethene	50	NA	50	101	88-127
Carbon Disulfide	50	NA	44	87	71-129
Freon-113	50	NA	50	101	73-126
Iodomethane	50	NA	50	100	54-155
Acrolein	250	NA	248	99	62-135
Methylene Chloride	50	NA	49	97	72-129
Acetone	50	NA	56	112	62-172
Isobutyl Alcohol	1000	NA	797	80	16-147
trans-1,2-Dichloroethene	50	NA	49	97	78-125
Allyl Chloride	50	NA	50	100	78-121
Methyl tert-butyl ether	100	NA	108	108	81-125
Acetonitrile	500	NA	456	91	61-125
Di-isopropyl ether	50	NA	52	103	81-123
Chloroprene	50	NA	50	100	75-128
Methacrylonitrile	500	NA	404	81	78-123
Propionitrile	500	NA	478	96	75-118
1,1-Dichloroethane	50	NA	47	94	76-130
Acrylonitrile	250	NA	230	92	76-120
Ethyl tertiary-butyl ether	50	NA	52	104	85-119
Vinyl Acetate	50	NA	44	87	56-129
cis-1,2-Dichloroethene	50	NA	50	99	85-123
1,2-Dichloroethylene (total)	100	NA	98	98	84-121
Methyl Methacrylate	50	NA	45	90	79-121
2,2-Dichloropropane	50	NA	51	102	70-132
Bromochloromethane	50	NA	58	115	85-117
Chloroform	50	NA	48	96	78-128
Carbon Tetrachloride	50	NA	49	98	87-126
Tetrahydrofuran	50	NA	48	96	74-123
1,1,1-Trichloroethane	50	NA	48	95	77-129
1,1-Dichloropropene	50	NA	48	97	87-118
2-Butanone	50	NA	52	105	71-132
Benzene	50	NA	48	96	86-116
Cyclohexane	50	NA	49	97	71-133
Ethyl Methacrylate	50	NA	46	93	80-125
Tertiary-amyl methyl ether	50	NA	52	104	80-121
1,2-Dichloroethane	50	NA	46	91	81-125
Trichloroethene	50	NA	47	95	79-121

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104251-1
Client ID: WG104251-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dibromomethane	50	NA	51	101	85-117
1,2-Dichloropropane	50	NA	48	96	84-118
Bromodichloromethane	50	NA	49	99	85-122
cis-1,3-dichloropropene	50	NA	52	103	83-119
1,4-Dioxane	1000	NA	909	91	10-149
2-Chloroethylvinylether	50	NA	42	85	39-135
Toluene	50	NA	49	99	84-118
4-methyl-2-pentanone	50	NA	42	84	83-122
Tetrachloroethene	50	NA	48	96	47-155
trans-1,3-Dichloropropene	50	NA	50	100	85-135
1,1,2-Trichloroethane	50	NA	45	89	84-115
Dibromochloromethane	50	NA	52	103	85-119
1,3-Dichloropropane	50	NA	48	95	80-119
1,2-Dibromoethane	50	NA	50	100	84-116
2-Hexanone	50	NA	45	90	80-124
Chlorobenzene	50	NA	48	95	89-113
Ethylbenzene	50	NA	47	94	88-113
1,1,1,2-Tetrachloroethane	50	NA	50	99	88-118
Xylenes (total)	150	NA	149	99	89-116
m+p-Xylenes	100	NA	99	99	88-116
o-Xylene	50	NA	50	101	90-116
Styrene	50	NA	49	97	88-117
Bromoform	50	NA	51	102	86-117
Isopropylbenzene	50	NA	56	113	96-136
cis-1,4-Dichloro-2-Butene	50	NA	44	88	59-136
trans-1,4-Dichloro-2-Butene	50	NA	47	93	63-132
Bromobenzene	50	NA	50	100	84-113
N-Propylbenzene	50	NA	50	100	83-121
1,1,2,2-Tetrachloroethane	50	NA	43	85	79-121
1,3,5-Trimethylbenzene	50	NA	48	96	80-123
2-Chlorotoluene	50	NA	48	97	81-120
1,2,3-Trichloropropane	50	NA	45	89	77-120
4-Chlorotoluene	50	NA	49	97	81-122
tert-Butylbenzene	50	NA	55	109	84-121
Pentachloroethane	50	NA	51	101	19-186
1,2,4-Trimethylbenzene	50	NA	50	99	83-118
P-Isopropyltoluene	50	NA	45	89	88-121
1,3-Dichlorobenzene	50	NA	48	97	86-110
1,4-Dichlorobenzene	50	NA	46	92	86-111
N-Butylbenzene	50	NA	41	81	78-121
sec-Butylbenzene	50	NA	48	97	82-122
1,2-Dichlorobenzene	50	NA	48	95	86-112
1,2-Dibromo-3-Chloropropane	50	NA	34	69	67-124
1,3,5-Trichlorobenzene	50	NA	44	88	77-120
Hexachlorobutadiene	50	NA	38	75	73-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104251-1
Client ID: WG104251-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	33	*	65	76-126
1,2,3-Trimethylbenzene	50	NA	49		98	85-119
Naphthalene	50	NA	30	*	60	62-126
1,2,3-Trichlorobenzene	50	NA	23	*	46	70-122
Methyl Acetate	50	NA	51		103	70-132
Methylcyclohexane	50	NA	47		95	73-125
1-Chlorohexane	50	NA	44		89	73-119
Total Alkylbenzenes	350	NA	336		96	85-119

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 11:47
Report Date: 02/06/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104251-2
Client ID: WG104251-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	1	1.0	1	1
Chloromethane	U	1	1.0	1	1
Vinyl chloride	U	1	1.0	1	1
Bromomethane	U	1	1.0	1	1
Chloroethane	U	1	1.0	1	1
Trichlorofluoromethane	U	1	1.0	1	1
1,1-Dichloroethene	U	1	1.0	1	1
Methylene Chloride	U	5	1.0	5	5
trans-1,2-Dichloroethene	U	1	1.0	1	1
1,1-Dichloroethane	U	1	1.0	1	1
cis-1,2-Dichloroethene	U	1	1.0	1	1
1,2-Dichloroethylene (total)	U	2	1.0	2	2
2,2-Dichloropropane	U	1	1.0	1	1
Chloroform	U	1	1.0	1	1
Bromochloromethane	U	1	1.0	1	1
1,1,1-Trichloroethane	U	1	1.0	1	1
1,2-Dichloroethane	U	1	1.0	1	1
1,1-Dichloropropene	U	1	1.0	1	1
Carbon Tetrachloride	U	1	1.0	1	1
Benzene	U	1	1.0	1	1
1,2-Dichloropropane	U	1	1.0	1	1
Trichloroethene	U	1	1.0	1	1
Dibromomethane	U	1	1.0	1	1
Bromodichloromethane	U	1	1.0	1	1
cis-1,3-dichloropropene	U	1	1.0	1	1
Toluene	U	1	1.0	1	1
trans-1,3-Dichloropropene	U	1	1.0	1	1
1,1,2-Trichloroethane	U	1	1.0	1	1
1,3-Dichloropropane	U	1	1.0	1	1
Dibromochloromethane	U	1	1.0	1	1
Tetrachloroethene	U	1	1.0	1	1
1,2-Dibromoethane	U	1	1.0	1	1
Chlorobenzene	U	1	1.0	1	1
1,1,1,2-Tetrachloroethane	U	1	1.0	1	1
Ethylbenzene	U	1	1.0	1	1
Bromoform	U	1	1.0	1	1
Styrene	U	1	1.0	1	1
1,1,2,2-Tetrachloroethane	U	1	1.0	1	1
1,2,3-Trichloropropane	U	1	1.0	1	1
Isopropylbenzene	U	1	1.0	1	1
Bromobenzene	U	1	1.0	1	1
2-Chlorotoluene	U	1	1.0	1	1
N-Propylbenzene	U	1	1.0	1	1

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 11:47
Report Date: 02/06/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104251-2
Client ID: WG104251-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	1	1.0	1	1
1,3,5-Trimethylbenzene	U	1	1.0	1	1
tert-Butylbenzene	U	1	1.0	1	1
1,2,4-Trichlorobenzene	U	1	1.0	1	1
sec-Butylbenzene	U	1	1.0	1	1
1,3-Dichlorobenzene	U	1	1.0	1	1
P-Isopropyltoluene	U	1	1.0	1	1
1,4-Dichlorobenzene	U	1	1.0	1	1
1,2-Dichlorobenzene	U	1	1.0	1	1
N-Butylbenzene	U	1	1.0	1	1
1,2-Dibromo-3-Chloropropane	U	1	1.0	1	1
1,2,4-Trimethylbenzene	U	1	1.0	1	1
Naphthalene		1	1.0	1	1
Hexachlorobutadiene	U	1	1.0	1	1
1,2,3-Trichlorobenzene	U	1	1.0	1	1
Methyl tert-butyl ether	U	1	1.0	1	1
Acetone	U	5	1.0	5	5
2-Butanone	U	5	1.0	5	5
4-methyl-2-pentanone	U	5	1.0	5	5
2-Hexanone	U	5	1.0	5	5
m+p-Xylenes	U	2	1.0	2	2
o-Xylene	U	1	1.0	1	1
Xylenes (total)	U	3	1.0	3	3
1,3,5-Trichlorobenzene	U	1	1.0	1	1
Vinyl Acetate	U	1	1.0	1	1
Carbon Disulfide	U	1	1.0	1	1
Diethyl Ether	U	1	1.0	1	1
Tetrahydrofuran	U	5	1.0	5	5
Dibromofluoromethane		105%			
1,2-Dichloroethane-D4		98%			
Toluene-D8		105%			
P-Bromofluorobenzene		96%			

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 12:53
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104251-4
Client ID: WG104251-MeOHBlank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	500	1.0	10	500
Chloromethane	U	500	1.0	10	500
Vinyl chloride	U	500	1.0	10	500
Bromomethane	U	500	1.0	10	500
Chloroethane	U	500	1.0	10	500
Trichlorofluoromethane	U	500	1.0	10	500
1,1-Dichloroethene	U	250	1.0	5	250
Methylene Chloride	U	1200	1.0	25	1200
trans-1,2-Dichloroethene	U	250	1.0	5	250
1,1-Dichloroethane	U	250	1.0	5	250
cis-1,2-Dichloroethene	U	250	1.0	5	250
1,2-Dichloroethylene (total)	U	500	1.0	10	500
2,2-Dichloropropane	U	250	1.0	5	250
Chloroform	U	250	1.0	5	250
Bromochloromethane	U	250	1.0	5	250
1,1,1-Trichloroethane	U	250	1.0	5	250
1,2-Dichloroethane	U	250	1.0	5	250
1,1-Dichloropropene	U	250	1.0	5	250
Carbon Tetrachloride	U	250	1.0	5	250
Benzene	U	250	1.0	5	250
1,2-Dichloropropane	U	250	1.0	5	250
Trichloroethene	U	250	1.0	5	250
Dibromomethane	U	250	1.0	5	250
Bromodichloromethane	U	250	1.0	5	250
cis-1,3-dichloropropene	U	250	1.0	5	250
Toluene	U	250	1.0	5	250
trans-1,3-Dichloropropene	U	250	1.0	5	250
1,1,2-Trichloroethane	U	250	1.0	5	250
1,3-Dichloropropane	U	250	1.0	5	250
Dibromochloromethane	U	250	1.0	5	250
Tetrachloroethene		520	1.0	5	250
1,2-Dibromoethane	U	250	1.0	5	250
Chlorobenzene	U	250	1.0	5	250
1,1,1,2-Tetrachloroethane	U	250	1.0	5	250
Ethylbenzene	U	250	1.0	5	250
Bromoform	U	250	1.0	5	250
Styrene	U	250	1.0	5	250
1,1,2,2-Tetrachloroethane	U	250	1.0	5	250
1,2,3-Trichloropropane	U	250	1.0	5	250
Isopropylbenzene	U	250	1.0	5	250
Bromobenzene	U	250	1.0	5	250
2-Chlorotoluene	U	250	1.0	5	250
N-Propylbenzene	U	250	1.0	5	250

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 12:53
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104251-4
Client ID: WG104251-MeOHBlank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104251
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	250	1.0	5	250
1,3,5-Trimethylbenzene	U	250	1.0	5	250
tert-Butylbenzene	U	250	1.0	5	250
1,2,4-Trichlorobenzene	U	250	1.0	5	250
sec-Butylbenzene	U	250	1.0	5	250
1,3-Dichlorobenzene	U	250	1.0	5	250
P-Isopropyltoluene	U	250	1.0	5	250
1,4-Dichlorobenzene	U	250	1.0	5	250
1,2-Dichlorobenzene	U	250	1.0	5	250
N-Butylbenzene	U	250	1.0	5	250
1,2-Dibromo-3-Chloropropane	U	250	1.0	5	250
1,2,4-Trimethylbenzene	U	250	1.0	5	250
Naphthalene	U	250	1.0	5	250
Hexachlorobutadiene	U	250	1.0	5	250
1,2,3-Trichlorobenzene	U	250	1.0	5	250
Methyl tert-butyl ether	U	250	1.0	5	250
Acetone	U	1200	1.0	25	1200
2-Butanone	U	1200	1.0	25	1200
4-methyl-2-pentanone	U	1200	1.0	25	1200
2-Hexanone	U	1200	1.0	25	1200
m+p-Xylenes	U	500	1.0	10	500
o-Xylene	U	250	1.0	5	250
Xylenes (total)	U	750	1.0	15	750
1,3,5-Trichlorobenzene	U	250	1.0	5	250
Vinyl Acetate	U	250	1.0	5	250
Carbon Disulfide	U	250	1.0	5	250
Diethyl Ether	U	250	1.0	5	250
Tetrahydrofuran	U	2500	1.0	50	2500
Dibromofluoromethane		107%			
1,2-Dichloroethane-D4		101%			
Toluene-D8		108%			
P-Bromofluorobenzene		99%			

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104253-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: M6465 Lab Sample ID: WG104253-2

Date Analyzed: 02/01/12 Time Analyzed: 1158

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) Y

Instrument ID: GCMS-M

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104253-LCS	WG104253-1	M6462	02/01/12	0954
02	MS-2	SF0504-2RA	M6467	02/01/12	1315
03					
04					
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COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104253-1
Client ID: WG104253-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	35		70	45-167
Chloromethane	50	NA	46		93	69-127
Vinyl chloride	50	NA	44		88	73-134
Bromomethane	50	NA	44		87	64-136
Chloroethane	50	NA	37		74	71-127
Trichlorofluoromethane	50	NA	36	*	71	73-145
Diethyl Ether	50	NA	44		87	76-135
Tertiary-butyl alcohol	250	NA	252		101	62-148
1,1-Dichloroethene	50	NA	45		91	71-137
Carbon Disulfide	50	NA	38		75	69-138
Freon-113	50	NA	43		87	67-135
Iodomethane	50	NA	44		88	51-150
Acrolein	250	NA	202		81	48-175
Methylene Chloride	50	NA	43		85	56-152
Acetone	50	NA	69		137	76-213
Isobutyl Alcohol	1000	NA	1090		109	72-142
trans-1,2-Dichloroethene	50	NA	44		87	67-133
Allyl Chloride	50	NA	42		83	69-135
Methyl tert-butyl ether	100	NA	95		95	81-125
Acetonitrile	500	NA	396		79	63-143
Di-isopropyl ether	50	NA	50		100	68-131
Chloroprene	50	NA	47		95	67-130
Methacrylonitrile	500	NA	468		94	79-129
Propionitrile	500	NA	477		95	73-133
1,1-Dichloroethane	50	NA	45		90	75-126
Acrylonitrile	250	NA	250		100	69-139
Ethyl tertiary-butyl ether	50	NA	49		98	83-122
Vinyl Acetate	50	NA	46		92	77-119
cis-1,2-Dichloroethene	50	NA	46		91	82-123
1,2-Dichloroethylene (total)	100	NA	89		89	82-120
Methyl Methacrylate	50	NA	46		91	82-130
2,2-Dichloropropane	50	NA	41		82	78-124
Bromochloromethane	50	NA	45		91	84-115
Chloroform	50	NA	42		85	83-118
Carbon Tetrachloride	50	NA	42		83	78-124
Tetrahydrofuran	50	NA	52		103	78-137
1,1,1-Trichloroethane	50	NA	41		83	80-120
1,1-Dichloropropene	50	NA	46		93	81-119
2-Butanone	50	NA	55		110	78-148
Benzene	50	NA	47		95	82-113
Cyclohexane	50	NA	53		107	75-128
Ethyl Methacrylate	50	NA	47		94	78-128
Tertiary-amyl methyl ether	50	NA	51		103	80-123
1,2-Dichloroethane	50	NA	40	*	79	83-121
Trichloroethene	50	NA	44		88	83-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104253-1
Client ID: WG104253-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dibromomethane	50	NA	44	87	85-118
1,2-Dichloropropane	50	NA	48	97	84-115
Bromodichloromethane	50	NA	43	86	82-118
cis-1,3-dichloropropene	50	NA	48	96	80-115
1,4-Dioxane	1000	NA	933	93	69-137
2-Chloroethylvinylether	50	NA	62	124	16-150
Toluene	50	NA	45	90	80-113
4-methyl-2-pentanone	50	NA	51	103	75-137
Tetrachloroethene	50	NA	46	91	73-122
trans-1,3-Dichloropropene	50	NA	52	105	87-136
1,1,2-Trichloroethane	50	NA	47	94	78-117
Dibromochloromethane	50	NA	46	92	80-120
1,3-Dichloropropane	50	NA	48	96	80-114
1,2-Dibromoethane	50	NA	43	85	81-119
2-Hexanone	50	NA	56	112	72-149
Chlorobenzene	50	NA	46	92	85-111
Ethylbenzene	50	NA	46	91	81-112
1,1,1,2-Tetrachloroethane	50	NA	46	92	83-114
Xylenes (total)	150	NA	134	89	81-114
m+p-Xylenes	100	NA	90	90	80-115
o-Xylene	50	NA	45	90	82-115
Styrene	50	NA	45	90	84-112
Bromoform	50	NA	47	94	76-126
Isopropylbenzene	50	NA	52	105	89-136
cis-1,4-Dichloro-2-Butene	50	NA	44	87	73-139
trans-1,4-Dichloro-2-Butene	50	NA	39	78	65-137
Bromobenzene	50	NA	45	90	78-118
N-Propylbenzene	50	NA	45	90	77-121
1,1,2,2-Tetrachloroethane	50	NA	50	99	78-122
1,3,5-Trimethylbenzene	50	NA	42	84	79-116
2-Chlorotoluene	50	NA	44	87	78-118
1,2,3-Trichloropropane	50	NA	48	96	81-118
4-Chlorotoluene	50	NA	45	90	77-121
tert-Butylbenzene	50	NA	44	89	79-118
Pentachloroethane	50	NA	45	90	78-127
1,2,4-Trimethylbenzene	50	NA	44	87	76-115
P-Isopropyltoluene	50	NA	47	94	80-124
1,3-Dichlorobenzene	50	NA	45	91	79-119
1,4-Dichlorobenzene	50	NA	46	92	80-117
N-Butylbenzene	50	NA	45	90	70-124
sec-Butylbenzene	50	NA	45	91	75-122
1,2-Dichlorobenzene	50	NA	45	91	76-118
1,2-Dibromo-3-Chloropropane	50	NA	36	72	66-132
1,3,5-Trichlorobenzene	50	NA	39	78	64-133
Hexachlorobutadiene	50	NA	41	83	27-154

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/01/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104253-1
Client ID: WG104253-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	47		95	61-135
1,2,3-Trimethylbenzene	50	NA	40	*	81	82-116
Naphthalene	50	NA	46		91	51-131
1,2,3-Trichlorobenzene	50	NA	45		90	55-134
Methyl Acetate	50	NA	45		89	72-133
Methylcyclohexane	50	NA	48		96	71-127
1-Chlorohexane	50	NA	48		95	70-122
Total Alkylbenzenes	350	NA	313		89	79-118

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 11:58
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104253-2
Client ID: WG104253-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	5	1.0	5	5
Chloromethane	U	5	1.0	5	5
Vinyl chloride	U	5	1.0	5	5
Bromomethane	U	5	1.0	5	5
Chloroethane	U	5	1.0	5	5
Trichlorofluoromethane	U	5	1.0	5	5
1,1-Dichloroethene	U	5	1.0	5	5
Methylene Chloride	U	25	1.0	25	25
trans-1,2-Dichloroethene	U	5	1.0	5	5
1,1-Dichloroethane	U	5	1.0	5	5
cis-1,2-Dichloroethene	U	5	1.0	5	5
1,2-Dichloroethylene (total)	U	10	1.0	10	10
2,2-Dichloropropane	U	5	1.0	5	5
Chloroform	U	5	1.0	5	5
Bromochloromethane	U	5	1.0	5	5
1,1,1-Trichloroethane	U	5	1.0	5	5
1,2-Dichloroethane	U	5	1.0	5	5
1,1-Dichloropropene	U	5	1.0	5	5
Carbon Tetrachloride	U	5	1.0	5	5
Benzene	U	5	1.0	5	5
1,2-Dichloropropane	U	5	1.0	5	5
Trichloroethene	U	5	1.0	5	5
Dibromomethane	U	5	1.0	5	5
Bromodichloromethane	U	5	1.0	5	5
cis-1,3-dichloropropene	U	5	1.0	5	5
Toluene	U	5	1.0	5	5
trans-1,3-Dichloropropene	U	5	1.0	5	5
1,1,2-Trichloroethane	U	5	1.0	5	5
1,3-Dichloropropane	U	5	1.0	5	5
Dibromochloromethane	U	5	1.0	5	5
Tetrachloroethene	U	5	1.0	5	5
1,2-Dibromoethane	U	5	1.0	5	5
Chlorobenzene	U	5	1.0	5	5
1,1,1,2-Tetrachloroethane	U	5	1.0	5	5
Ethylbenzene	U	5	1.0	5	5
Bromoform	U	5	1.0	5	5
Styrene	U	5	1.0	5	5
1,1,2,2-Tetrachloroethane	U	5	1.0	5	5
1,2,3-Trichloropropane	U	5	1.0	5	5
Isopropylbenzene	U	5	1.0	5	5
Bromobenzene	U	5	1.0	5	5
2-Chlorotoluene	U	5	1.0	5	5
N-Propylbenzene	U	5	1.0	5	5

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 01-FEB-2012 11:58
Report Date: 02/09/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104253-2
Client ID: WG104253-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104253
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	5	1.0	5	5
1,3,5-Trimethylbenzene	U	5	1.0	5	5
tert-Butylbenzene	U	5	1.0	5	5
1,2,4-Trichlorobenzene	U	5	1.0	5	5
sec-Butylbenzene	U	5	1.0	5	5
1,3-Dichlorobenzene	U	5	1.0	5	5
P-Isopropyltoluene	U	5	1.0	5	5
1,4-Dichlorobenzene	U	5	1.0	5	5
1,2-Dichlorobenzene	U	5	1.0	5	5
N-Butylbenzene	U	5	1.0	5	5
1,2-Dibromo-3-Chloropropane	U	5	1.0	5	5
1,2,4-Trimethylbenzene	U	5	1.0	5	5
Naphthalene	U	5	1.0	5	5
Hexachlorobutadiene	U	5	1.0	5	5
1,2,3-Trichlorobenzene	U	5	1.0	5	5
Methyl tert-butyl ether	U	5	1.0	5	5
Acetone	U	25	1.0	25	25
2-Butanone	U	25	1.0	25	25
4-methyl-2-pentanone	U	25	1.0	25	25
2-Hexanone	U	25	1.0	25	25
m+p-Xylenes	U	10	1.0	10	10
o-Xylene	U	5	1.0	5	5
Xylenes (total)	U	15	1.0	15	15
1,3,5-Trichlorobenzene	U	5	1.0	5	5
Vinyl Acetate	U	5	1.0	5	5
Carbon Disulfide	U	5	1.0	5	5
Diethyl Ether	U	5	1.0	5	5
Tetrahydrofuran	U	25	1.0	25	25
Dibromofluoromethane		91%			
1,2-Dichloroethane-D4		87%			
Toluene-D8		98%			
P-Bromofluorobenzene		92%			

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104315-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: T5181 Lab Sample ID: WG104315-2

Date Analyzed: 02/02/12 Time Analyzed: 1133

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS-T

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104315-LCS	WG104315-1	T5178	02/02/12	0942
02	WG104315-MEOHBLANK	WG104315-3	T5182	02/02/12	1205
03	MS-4	SF0504-4DL	T5188	02/02/12	1535
04	MS-6	SF0504-6DL	T5189	02/02/12	1607
05	RD-6	SF0504-11DL	T5190	02/02/12	1640
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COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/02/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104315-1
Client ID: WG104315-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	45		90	29-164
Chloromethane	50	NA	49		97	59-123
Vinyl chloride	50	NA	46		93	64-131
Bromomethane	50	NA	47		94	57-135
Chloroethane	50	NA	47		94	53-157
Trichlorofluoromethane	50	NA	43		87	70-149
Diethyl Ether	50	NA	48		96	78-124
Tertiary-butyl alcohol	250	NA	182		73	11-151
1,1-Dichloroethene	50	NA	51		102	88-127
Carbon Disulfide	50	NA	44		89	71-129
Freon-113	50	NA	52		104	73-126
Iodomethane	50	NA	52		104	54-155
Acrolein	250	NA	196		78	62-135
Methylene Chloride	50	NA	50		99	72-129
Acetone	50	NA	44		88	62-172
Isobutyl Alcohol	1000	NA	646		65	16-147
trans-1,2-Dichloroethene	50	NA	49		98	78-125
Allyl Chloride	50	NA	51		102	78-121
Methyl tert-butyl ether	100	NA	104		104	81-125
Acetonitrile	500	NA	404		81	61-125
Di-isopropyl ether	50	NA	51		102	81-123
Chloroprene	50	NA	51		102	75-128
Methacrylonitrile	500	NA	374	*	75	78-123
Propionitrile	500	NA	426		85	75-118
1,1-Dichloroethane	50	NA	48		95	76-130
Acrylonitrile	250	NA	213		85	76-120
Ethyl tertiary-butyl ether	50	NA	52		103	85-119
Vinyl Acetate	50	NA	43		86	56-129
cis-1,2-Dichloroethene	50	NA	50		101	85-123
1,2-Dichloroethylene (total)	100	NA	100		100	84-121
Methyl Methacrylate	50	NA	44		88	79-121
2,2-Dichloropropane	50	NA	52		105	70-132
Bromochloromethane	50	NA	56		113	85-117
Chloroform	50	NA	48		96	78-128
Carbon Tetrachloride	50	NA	51		102	87-126
Tetrahydrofuran	50	NA	45		90	74-123
1,1,1-Trichloroethane	50	NA	48		96	77-129
1,1-Dichloropropene	50	NA	50		101	87-118
2-Butanone	50	NA	45		90	71-132
Benzene	50	NA	50		99	86-116
Cyclohexane	50	NA	48		95	71-133
Ethyl Methacrylate	50	NA	46		92	80-125
Tertiary-amyl methyl ether	50	NA	52		103	80-121
1,2-Dichloroethane	50	NA	46		92	81-125
Trichloroethene	50	NA	50		101	79-121

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/02/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104315-1
Client ID: WG104315-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dibromomethane	50	NA	50		100	85-117
1,2-Dichloropropane	50	NA	50		99	84-118
Bromodichloromethane	50	NA	51		101	85-122
cis-1,3-dichloropropene	50	NA	53		106	83-119
1,4-Dioxane	1000	NA	710		71	10-149
2-Chloroethylvinylether	50	NA	42		84	39-135
Toluene	50	NA	52		103	84-118
4-methyl-2-pentanone	50	NA	41	*	81	83-122
Tetrachloroethene	50	NA	49		98	47-155
trans-1,3-Dichloropropene	50	NA	50		101	85-135
1,1,2-Trichloroethane	50	NA	44		88	84-115
Dibromochloromethane	50	NA	52		104	85-119
1,3-Dichloropropane	50	NA	48		95	80-119
1,2-Dibromoethane	50	NA	49		99	84-116
2-Hexanone	50	NA	41		83	80-124
Chlorobenzene	50	NA	49		98	89-113
Ethylbenzene	50	NA	48		96	88-113
1,1,1,2-Tetrachloroethane	50	NA	51		103	88-118
Xylenes (total)	150	NA	153		102	89-116
m+p-Xylenes	100	NA	102		102	88-116
o-Xylene	50	NA	51		103	90-116
Styrene	50	NA	50		99	88-117
Bromoform	50	NA	50		99	86-117
Isopropylbenzene	50	NA	59		119	96-136
cis-1,4-Dichloro-2-Butene	50	NA	45		90	59-136
trans-1,4-Dichloro-2-Butene	50	NA	47		93	63-132
Bromobenzene	50	NA	53		107	84-113
N-Propylbenzene	50	NA	52		104	83-121
1,1,2,2-Tetrachloroethane	50	NA	44		88	79-121
1,3,5-Trimethylbenzene	50	NA	50		100	80-123
2-Chlorotoluene	50	NA	51		102	81-120
1,2,3-Trichloropropane	50	NA	43		86	77-120
4-Chlorotoluene	50	NA	51		102	81-122
tert-Butylbenzene	50	NA	49		98	84-121
Pentachloroethane	50	NA	54		109	19-186
1,2,4-Trimethylbenzene	50	NA	52		103	83-118
P-Isopropyltoluene	50	NA	47		93	88-121
1,3-Dichlorobenzene	50	NA	50		100	86-110
1,4-Dichlorobenzene	50	NA	47		94	86-111
N-Butylbenzene	50	NA	42		84	78-121
sec-Butylbenzene	50	NA	50		100	82-122
1,2-Dichlorobenzene	50	NA	49		98	86-112
1,2-Dibromo-3-Chloropropane	50	NA	32	*	64	67-124
1,3,5-Trichlorobenzene	50	NA	44		89	77-120
Hexachlorobutadiene	50	NA	38		77	73-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/02/12
Report Date: 02/09/2012
Matrix: WATER

Lab ID: WG104315-1
Client ID: WG104315-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	28	*	55	76-126
1,2,3-Trimethylbenzene	50	NA	52		103	85-119
Naphthalene	50	NA	25	*	50	62-126
1,2,3-Trichlorobenzene	50	NA	19	*	38	70-122
Methyl Acetate	50	NA	48		95	70-132
Methylcyclohexane	50	NA	46		93	73-125
1-Chlorohexane	50	NA	44		88	73-119
Total Alkylbenzenes	350	NA	342		98	85-119

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 11:33
Report Date: 02/06/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104315-2
Client ID: WG104315-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	1	1.0	1	1
Chloromethane	U	1	1.0	1	1
Vinyl chloride	U	1	1.0	1	1
Bromomethane	U	1	1.0	1	1
Chloroethane	U	1	1.0	1	1
Trichlorofluoromethane	U	1	1.0	1	1
1,1-Dichloroethene	U	1	1.0	1	1
Methylene Chloride	U	5	1.0	5	5
trans-1,2-Dichloroethene	U	1	1.0	1	1
1,1-Dichloroethane	U	1	1.0	1	1
cis-1,2-Dichloroethene	U	1	1.0	1	1
1,2-Dichloroethylene (total)	U	2	1.0	2	2
2,2-Dichloropropane	U	1	1.0	1	1
Chloroform	U	1	1.0	1	1
Bromochloromethane	U	1	1.0	1	1
1,1,1-Trichloroethane	U	1	1.0	1	1
1,2-Dichloroethane	U	1	1.0	1	1
1,1-Dichloropropene	U	1	1.0	1	1
Carbon Tetrachloride	U	1	1.0	1	1
Benzene	U	1	1.0	1	1
1,2-Dichloropropane	U	1	1.0	1	1
Trichloroethene	U	1	1.0	1	1
Dibromomethane	U	1	1.0	1	1
Bromodichloromethane	U	1	1.0	1	1
cis-1,3-dichloropropene	U	1	1.0	1	1
Toluene	U	1	1.0	1	1
trans-1,3-Dichloropropene	U	1	1.0	1	1
1,1,2-Trichloroethane	U	1	1.0	1	1
1,3-Dichloropropane	U	1	1.0	1	1
Dibromochloromethane	U	1	1.0	1	1
Tetrachloroethene	U	1	1.0	1	1
1,2-Dibromoethane	U	1	1.0	1	1
Chlorobenzene	U	1	1.0	1	1
1,1,1,2-Tetrachloroethane	U	1	1.0	1	1
Ethylbenzene	U	1	1.0	1	1
Bromoform	U	1	1.0	1	1
Styrene	U	1	1.0	1	1
1,1,2,2-Tetrachloroethane	U	1	1.0	1	1
1,2,3-Trichloropropane	U	1	1.0	1	1
Isopropylbenzene	U	1	1.0	1	1
Bromobenzene	U	1	1.0	1	1
2-Chlorotoluene	U	1	1.0	1	1
N-Propylbenzene	U	1	1.0	1	1

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 11:33
Report Date: 02/06/2012
Matrix: WATER
% Solids: NA

Lab ID: WG104315-2
Client ID: WG104315-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/l

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	1	1.0	1	1
1,3,5-Trimethylbenzene	U	1	1.0	1	1
tert-Butylbenzene	U	1	1.0	1	1
1,2,4-Trichlorobenzene	U	1	1.0	1	1
sec-Butylbenzene	U	1	1.0	1	1
1,3-Dichlorobenzene	U	1	1.0	1	1
P-Isopropyltoluene	U	1	1.0	1	1
1,4-Dichlorobenzene	U	1	1.0	1	1
1,2-Dichlorobenzene	U	1	1.0	1	1
N-Butylbenzene	U	1	1.0	1	1
1,2-Dibromo-3-Chloropropane	U	1	1.0	1	1
1,2,4-Trimethylbenzene	U	1	1.0	1	1
Naphthalene		1	1.0	1	1
Hexachlorobutadiene	U	1	1.0	1	1
1,2,3-Trichlorobenzene		1	1.0	1	1
Methyl tert-butyl ether	U	1	1.0	1	1
Acetone	U	5	1.0	5	5
2-Butanone	U	5	1.0	5	5
4-methyl-2-pentanone	U	5	1.0	5	5
2-Hexanone	U	5	1.0	5	5
m+p-Xylenes	U	2	1.0	2	2
o-Xylene	U	1	1.0	1	1
Xylenes (total)	U	3	1.0	3	3
1,3,5-Trichlorobenzene	U	1	1.0	1	1
Vinyl Acetate	U	1	1.0	1	1
Carbon Disulfide	U	1	1.0	1	1
Diethyl Ether	U	1	1.0	1	1
Tetrahydrofuran	U	5	1.0	5	5
Dibromofluoromethane		102%			
1,2-Dichloroethane-D4		94%			
Toluene-D8		103%			
P-Bromofluorobenzene		93%			

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 12:05
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104315-3
Client ID: WG104315-MeOHBlank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	500	1.0	10	500
Chloromethane	U	500	1.0	10	500
Vinyl chloride	U	500	1.0	10	500
Bromomethane	U	500	1.0	10	500
Chloroethane	U	500	1.0	10	500
Trichlorofluoromethane	U	500	1.0	10	500
1,1-Dichloroethene	U	250	1.0	5	250
Methylene Chloride	U	1200	1.0	25	1200
trans-1,2-Dichloroethene	U	250	1.0	5	250
1,1-Dichloroethane	U	250	1.0	5	250
cis-1,2-Dichloroethene	U	250	1.0	5	250
1,2-Dichloroethylene (total)	U	500	1.0	10	500
2,2-Dichloropropane	U	250	1.0	5	250
Chloroform	U	250	1.0	5	250
Bromochloromethane	U	250	1.0	5	250
1,1,1-Trichloroethane	U	250	1.0	5	250
1,2-Dichloroethane	U	250	1.0	5	250
1,1-Dichloropropene	U	250	1.0	5	250
Carbon Tetrachloride	U	250	1.0	5	250
Benzene	U	250	1.0	5	250
1,2-Dichloropropane	U	250	1.0	5	250
Trichloroethene	U	250	1.0	5	250
Dibromomethane	U	250	1.0	5	250
Bromodichloromethane	U	250	1.0	5	250
cis-1,3-dichloropropene	U	250	1.0	5	250
Toluene	U	250	1.0	5	250
trans-1,3-Dichloropropene	U	250	1.0	5	250
1,1,2-Trichloroethane	U	250	1.0	5	250
1,3-Dichloropropane	U	250	1.0	5	250
Dibromochloromethane	U	250	1.0	5	250
Tetrachloroethene	U	250	1.0	5	250
1,2-Dibromoethane	U	250	1.0	5	250
Chlorobenzene	U	250	1.0	5	250
1,1,1,2-Tetrachloroethane	U	250	1.0	5	250
Ethylbenzene	U	250	1.0	5	250
Bromoform	U	250	1.0	5	250
Styrene	U	250	1.0	5	250
1,1,2,2-Tetrachloroethane	U	250	1.0	5	250
1,2,3-Trichloropropane	U	250	1.0	5	250
Isopropylbenzene	U	250	1.0	5	250
Bromobenzene	U	250	1.0	5	250
2-Chlorotoluene	U	250	1.0	5	250
N-Propylbenzene	U	250	1.0	5	250

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02-FEB-2012 12:05
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104315-3
Client ID: WG104315-MeOHBlank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5030
Analyst: DCA
Analysis Method: SW846 8260B
Lab Prep Batch: WG104315
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	250	1.0	5	250
1,3,5-Trimethylbenzene	U	250	1.0	5	250
tert-Butylbenzene	U	250	1.0	5	250
1,2,4-Trichlorobenzene	U	250	1.0	5	250
sec-Butylbenzene	U	250	1.0	5	250
1,3-Dichlorobenzene	U	250	1.0	5	250
P-Isopropyltoluene	U	250	1.0	5	250
1,4-Dichlorobenzene	U	250	1.0	5	250
1,2-Dichlorobenzene	U	250	1.0	5	250
N-Butylbenzene	U	250	1.0	5	250
1,2-Dibromo-3-Chloropropane	U	250	1.0	5	250
1,2,4-Trimethylbenzene	U	250	1.0	5	250
Naphthalene	U	250	1.0	5	250
Hexachlorobutadiene	U	250	1.0	5	250
1,2,3-Trichlorobenzene	U	250	1.0	5	250
Methyl tert-butyl ether	U	250	1.0	5	250
Acetone	U	1200	1.0	25	1200
2-Butanone	U	1200	1.0	25	1200
4-methyl-2-pentanone	U	1200	1.0	25	1200
2-Hexanone	U	1200	1.0	25	1200
m+p-Xylenes	U	500	1.0	10	500
o-Xylene	U	250	1.0	5	250
Xylenes (total)	U	750	1.0	15	750
1,3,5-Trichlorobenzene	U	250	1.0	5	250
Vinyl Acetate	U	250	1.0	5	250
Carbon Disulfide	U	250	1.0	5	250
Diethyl Ether	U	250	1.0	5	250
Tetrahydrofuran	U	2500	1.0	50	2500
Dibromofluoromethane		106%			
1,2-Dichloroethane-D4		100%			
Toluene-D8		108%			
P-Bromofluorobenzene		100%			

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104344-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: M6483 Lab Sample ID: WG104344-2

Date Analyzed: 02/03/12 Time Analyzed: 1125

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) Y

Instrument ID: GCMS-M

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104344-LCS	WG104344-1	M6481	02/03/12	1000
02	RD-2	SF0504-8	M6485	02/03/12	1252
03					
04					
05					
06					
07					
08					
09					
10					
11					
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29					
30					

COMMENTS:

FORM IVVOA

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/03/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104344-1
Client ID: WG104344-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DJP
Analysis Method: SW846 8260B
Lab Prep Batch: WG104344
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	45		90	45-167
Chloromethane	50	NA	57		115	69-127
Vinyl chloride	50	NA	52		103	73-134
Bromomethane	50	NA	52		105	64-136
Chloroethane	50	NA	43		87	71-127
Trichlorofluoromethane	50	NA	42		84	73-145
Diethyl Ether	50	NA	48		97	76-135
Tertiary-butyl alcohol	250	NA	293		117	62-148
1,1-Dichloroethene	50	NA	51		102	71-137
Carbon Disulfide	50	NA	46		92	69-138
Freon-113	50	NA	50		100	67-135
Iodomethane	50	NA	53		105	51-150
Acrolein	250	NA	219		88	48-175
Methylene Chloride	50	NA	52		104	56-152
Acetone	50	NA	82		163	76-213
Isobutyl Alcohol	1000	NA	1260		126	72-142
trans-1,2-Dichloroethene	50	NA	50		100	67-133
Allyl Chloride	50	NA	50		100	69-135
Methyl tert-butyl ether	100	NA	112		112	81-125
Acetonitrile	500	NA	461		92	63-143
Di-isopropyl ether	50	NA	58		116	68-131
Chloroprene	50	NA	57		114	67-130
Methacrylonitrile	500	NA	529		106	79-129
Propionitrile	500	NA	538		108	73-133
1,1-Dichloroethane	50	NA	51		102	75-126
Acrylonitrile	250	NA	282		113	69-139
Ethyl tertiary-butyl ether	50	NA	62	*	124	83-122
Vinyl Acetate	50	NA	47		95	77-119
cis-1,2-Dichloroethene	50	NA	51		103	82-123
1,2-Dichloroethylene (total)	100	NA	101		101	82-120
Methyl Methacrylate	50	NA	50		101	82-130
2,2-Dichloropropane	50	NA	47		94	78-124
Bromochloromethane	50	NA	48		96	84-115
Chloroform	50	NA	46		93	83-118
Carbon Tetrachloride	50	NA	44		89	78-124
Tetrahydrofuran	50	NA	54		108	78-137
1,1,1-Trichloroethane	50	NA	47		93	80-120
1,1-Dichloropropene	50	NA	50		99	81-119
2-Butanone	50	NA	62		125	78-148
Benzene	50	NA	51		103	82-113
Cyclohexane	50	NA	55		110	75-128
Ethyl Methacrylate	50	NA	51		102	78-128
Tertiary-amyl methyl ether	50	NA	62	*	124	80-123
1,2-Dichloroethane	50	NA	41	*	81	83-121
Trichloroethene	50	NA	48		95	83-113

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/03/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104344-1
Client ID: WG104344-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DJP
Analysis Method: SW846 8260B
Lab Prep Batch: WG104344
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dibromomethane	50	NA	44	89	85-118
1,2-Dichloropropane	50	NA	52	103	84-115
Bromodichloromethane	50	NA	45	90	82-118
cis-1,3-dichloropropene	50	NA	51	102	80-115
1,4-Dioxane	1000	NA	1060	106	69-137
2-Chloroethylvinylether	50	NA	81	* 162	16-150
Toluene	50	NA	48	96	80-113
4-methyl-2-pentanone	50	NA	53	107	75-137
Tetrachloroethene	50	NA	51	102	73-122
trans-1,3-Dichloropropene	50	NA	54	108	87-136
1,1,2-Trichloroethane	50	NA	48	96	78-117
Dibromochloromethane	50	NA	48	96	80-120
1,3-Dichloropropane	50	NA	48	96	80-114
1,2-Dibromoethane	50	NA	44	88	81-119
2-Hexanone	50	NA	64	128	72-149
Chlorobenzene	50	NA	51	102	85-111
Ethylbenzene	50	NA	50	100	81-112
1,1,1,2-Tetrachloroethane	50	NA	49	97	83-114
Xylenes (total)	150	NA	148	99	81-114
m+p-Xylenes	100	NA	98	98	80-115
o-Xylene	50	NA	50	100	82-115
Styrene	50	NA	49	98	84-112
Bromoform	50	NA	47	95	76-126
Isopropylbenzene	50	NA	57	114	89-136
cis-1,4-Dichloro-2-Butene	50	NA	49	98	73-139
trans-1,4-Dichloro-2-Butene	50	NA	43	85	65-137
Bromobenzene	50	NA	48	96	78-118
N-Propylbenzene	50	NA	51	101	77-121
1,1,2,2-Tetrachloroethane	50	NA	50	101	78-122
1,3,5-Trimethylbenzene	50	NA	47	94	79-116
2-Chlorotoluene	50	NA	48	96	78-118
1,2,3-Trichloropropane	50	NA	48	96	81-118
4-Chlorotoluene	50	NA	49	98	77-121
tert-Butylbenzene	50	NA	48	96	79-118
Pentachloroethane	50	NA	50	100	78-127
1,2,4-Trimethylbenzene	50	NA	48	95	76-115
P-Isopropyltoluene	50	NA	51	102	80-124
1,3-Dichlorobenzene	50	NA	50	99	79-119
1,4-Dichlorobenzene	50	NA	49	98	80-117
N-Butylbenzene	50	NA	51	101	70-124
sec-Butylbenzene	50	NA	50	100	75-122
1,2-Dichlorobenzene	50	NA	48	96	76-118
1,2-Dibromo-3-Chloropropane	50	NA	44	89	66-132
1,3,5-Trichlorobenzene	50	NA	48	96	64-133
Hexachlorobutadiene	50	NA	42	85	27-154

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 02/03/12
Report Date: 02/09/2012
Matrix: SOIL

Lab ID: WG104344-1
Client ID: WG104344-LCS
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DJP
Analysis Method: SW846 8260B
Lab Prep Batch: WG104344
Units: ug/Kgdrywt

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
1,2,4-Trichlorobenzene	50	NA	50	101	61-135
1,2,3-Trimethylbenzene	50	NA	48	96	82-116
Naphthalene	50	NA	48	96	51-131
1,2,3-Trichlorobenzene	50	NA	45	90	55-134
Methyl Acetate	50	NA	51	102	72-133
Methylcyclohexane	50	NA	55	109	71-127
1-Chlorohexane	50	NA	59	117	70-122
Total Alkylbenzenes	350	NA	345	98	79-118

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 03-FEB-2012 11:25
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104344-2
Client ID: WG104344-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DJP
Analysis Method: SW846 8260B
Lab Prep Batch: WG104344
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
Dichlorodifluoromethane	U	5	1.0	5	5
Chloromethane	U	5	1.0	5	5
Vinyl chloride	U	5	1.0	5	5
Bromomethane	U	5	1.0	5	5
Chloroethane	U	5	1.0	5	5
Trichlorofluoromethane	U	5	1.0	5	5
1,1-Dichloroethene	U	5	1.0	5	5
Methylene Chloride	U	25	1.0	25	25
trans-1,2-Dichloroethene	U	5	1.0	5	5
1,1-Dichloroethane	U	5	1.0	5	5
cis-1,2-Dichloroethene	U	5	1.0	5	5
1,2-Dichloroethylene (total)	U	10	1.0	10	10
2,2-Dichloropropane	U	5	1.0	5	5
Chloroform	U	5	1.0	5	5
Bromochloromethane	U	5	1.0	5	5
1,1,1-Trichloroethane	U	5	1.0	5	5
1,2-Dichloroethane	U	5	1.0	5	5
1,1-Dichloropropene	U	5	1.0	5	5
Carbon Tetrachloride	U	5	1.0	5	5
Benzene	U	5	1.0	5	5
1,2-Dichloropropane	U	5	1.0	5	5
Trichloroethene	U	5	1.0	5	5
Dibromomethane	U	5	1.0	5	5
Bromodichloromethane	U	5	1.0	5	5
cis-1,3-dichloropropene	U	5	1.0	5	5
Toluene	U	5	1.0	5	5
trans-1,3-Dichloropropene	U	5	1.0	5	5
1,1,2-Trichloroethane	U	5	1.0	5	5
1,3-Dichloropropane	U	5	1.0	5	5
Dibromochloromethane	U	5	1.0	5	5
Tetrachloroethene	U	5	1.0	5	5
1,2-Dibromoethane	U	5	1.0	5	5
Chlorobenzene	U	5	1.0	5	5
1,1,1,2-Tetrachloroethane	U	5	1.0	5	5
Ethylbenzene	U	5	1.0	5	5
Bromoform	U	5	1.0	5	5
Styrene	U	5	1.0	5	5
1,1,2,2-Tetrachloroethane	U	5	1.0	5	5
1,2,3-Trichloropropane	U	5	1.0	5	5
Isopropylbenzene	U	5	1.0	5	5
Bromobenzene	U	5	1.0	5	5
2-Chlorotoluene	U	5	1.0	5	5
N-Propylbenzene	U	5	1.0	5	5

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: Auburn-Riverside Drive
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 03-FEB-2012 11:25
Report Date: 02/06/2012
Matrix: SOIL
% Solids: 100

Lab ID: WG104344-2
Client ID: WG104344-Blank
SDG: SF0504
Extracted by:
Extraction Method: SW846 5035
Analyst: DJP
Analysis Method: SW846 8260B
Lab Prep Batch: WG104344
Units: ug/Kgdrywt

Compound	Flags	Results	DF	PQL	Adj.PQL
4-Chlorotoluene	U	5	1.0	5	5
1,3,5-Trimethylbenzene	U	5	1.0	5	5
tert-Butylbenzene	U	5	1.0	5	5
1,2,4-Trichlorobenzene	U	5	1.0	5	5
sec-Butylbenzene	U	5	1.0	5	5
1,3-Dichlorobenzene	U	5	1.0	5	5
P-Isopropyltoluene	U	5	1.0	5	5
1,4-Dichlorobenzene	U	5	1.0	5	5
1,2-Dichlorobenzene	U	5	1.0	5	5
N-Butylbenzene	U	5	1.0	5	5
1,2-Dibromo-3-Chloropropane	U	5	1.0	5	5
1,2,4-Trimethylbenzene	U	5	1.0	5	5
Naphthalene	U	5	1.0	5	5
Hexachlorobutadiene	U	5	1.0	5	5
1,2,3-Trichlorobenzene	U	5	1.0	5	5
Methyl tert-butyl ether	U	5	1.0	5	5
Acetone	U	25	1.0	25	25
2-Butanone	U	25	1.0	25	25
4-methyl-2-pentanone	U	25	1.0	25	25
2-Hexanone	U	25	1.0	25	25
m+p-Xylenes	U	10	1.0	10	10
o-Xylene	U	5	1.0	5	5
Xylenes (total)	U	15	1.0	15	15
1,3,5-Trichlorobenzene	U	5	1.0	5	5
Vinyl Acetate	U	5	1.0	5	5
Carbon Disulfide	U	5	1.0	5	5
Diethyl Ether	U	5	1.0	5	5
Tetrahydrofuran	U	25	1.0	25	25
Dibromofluoromethane		88%			
1,2-Dichloroethane-D4		82%			
Toluene-D8		93%			
P-Bromofluorobenzene		93%			

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104159-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: CFB1004 Lab Sample ID: WG104159-1

Instrument ID: GC12 Date Extracted: 01/30/12

Matrix: (soil/water) SOIL Date Analyzed: 02/02/12

Level:(low/med) LOW Time Analyzed: 1556

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104159-LCS	WG104159-2	CFB1005	02/02/12	1659
02	WG104159-LCSD	WG104159-3	CFB1006	02/02/12	1802
03	RD-2	SF0504-8	CFB1008	02/02/12	2008
04	MS-4	SF0504-4	CFB1013	02/03/12	0123
05	MS-1	SF0504-1DL	CFB1082	02/09/12	0157
06	MS-2	SF0504-2DL	CFB1083	02/09/12	0300
07	MS-3	SF0504-3DL	CFB1084	02/09/12	0402
08	MS-5	SF0504-5DL	CFB1085	02/09/12	0505
09	MS-6	SF0504-6DL	CFB1086	02/09/12	0608
10	RD-6	SF0504-11DL	CFB1087	02/09/12	0710
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COMMENTS:

FORM IVDRO

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104159-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: CFB1004A Lab Sample ID: WG104159-1

Instrument ID: GC12 Date Extracted: 01/30/12

Matrix: (soil/water) SOIL Date Analyzed: 02/02/12

Level:(low/med) LOW Time Analyzed: 1556

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104159-LCS	WG104159-2	CFB1005A	02/02/12	1659
02	WG104159-LCSD	WG104159-3	CFB1006A	02/02/12	1802
03	RD-2	SF0504-8	CFB1008A	02/02/12	2008
04	MS-1	SF0504-1	CFB1010A	02/02/12	2214
05	MS-2	SF0504-2	CFB1011A	02/02/12	2317
06	MS-3	SF0504-3	CFB1012A	02/03/12	0020
07	MS-4	SF0504-4	CFB1013A	02/03/12	0123
08	MS-5	SF0504-5	CFB1014A	02/03/12	0226
09	MS-6	SF0504-6	CFB1015A	02/03/12	0328
10	RD-6	SF0504-11	CFB1016A	02/03/12	0431
11	MS-1	SF0504-1DL	CFB1082A	02/09/12	0157
12	MS-2	SF0504-2DL	CFB1083A	02/09/12	0300
13	MS-5	SF0504-5DL	CFB1085A	02/09/12	0505
14	MS-6	SF0504-6DL	CFB1086A	02/09/12	0608
15	RD-6	SF0504-11DL	CFB1087A	02/09/12	0710
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COMMENTS:

FORM IVDRO

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104159-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: CFB2004 Lab Sample ID: WG104159-1

Instrument ID: GC12 Date Extracted: 01/30/12

Matrix: (soil/water) SOIL Date Analyzed: 02/02/12

Level:(low/med) LOW Time Analyzed: 1556

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104159-LCS	WG104159-2	CFB2005	02/02/12	1659
02	WG104159-LCSD	WG104159-3	CFB2006	02/02/12	1802
03	RD-2	SF0504-8	CFB2008	02/02/12	2008
04	MS-1	SF0504-1	CFB2010	02/02/12	2214
05	MS-2	SF0504-2	CFB2011	02/02/12	2317
06	MS-3	SF0504-3	CFB2012	02/03/12	0020
07	MS-4	SF0504-4	CFB2013	02/03/12	0123
08	MS-5	SF0504-5	CFB2014	02/03/12	0226
09	MS-6	SF0504-6	CFB2015	02/03/12	0328
10	RD-6	SF0504-11	CFB2016	02/03/12	0431
11					
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COMMENTS:

FORM IVDRO

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SF0504
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG104159-1	**Date Received:**	
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	30-JAN-12
Prep Method:	SW846 3540	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	NA

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C11-C22 Aromatics	20	20	mg/Kgdrywt	1	02-FEB-12 15:56	U
C9-C18 Aliphatics	20	20	mg/Kgdrywt	1	02-FEB-12 15:56	U
C19-C36 Aliphatics	20	20	mg/Kgdrywt	1	02-FEB-12 15:56	U
C11-C22 Aromatics	20.	20	mg/Kgdrywt	1	02-FEB-12 15:56	U

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
2-Methylnaphthalene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Phenanthrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Acenaphthylene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Acenaphthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Anthracene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Benzo(a)anthracene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Benzo(a)pyrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Benzo(b)fluoranthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Benzo(g,h,i)perylene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Benzo(k)fluoranthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Chrysene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Dibenzo(a,h)anthracene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Fluoranthene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Fluorene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Indeno(1,2,3-cd)pyrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U
Pyrene	0.20	.2	mg/Kgdrywt	1	02-FEB-12 15:56	U

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	66	40-140	02-FEB-12 15:56	
o-Terphenyl	70	40-140	02-FEB-12 15:56	
2-Fluorobiphenyl	81	40-140	02-FEB-12 15:56	
2-Bromonaphthalene	88	40-140	02-FEB-12 15:56	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG104159-2,WG104159-3
Preparative Method: SW846 3540
Analytical Method: MA DEP EPH 04-1.1
Analytical Batch: WG104159

Matrix: SL
Preparative Date: 30-JAN-12
Analytical Date: 02-FEB-12

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
2-Methylnaphthalene	mg/Kgdrywt	9.0	4.3	4.2	48	47	40-140	2	25
Acenaphthene	mg/Kgdrywt	9.0	4.9	4.6	54	51	40-140	6	25
Acenaphthylene	mg/Kgdrywt	9.0	4.8	4.6	53	50	40-140	4	25
Anthracene	mg/Kgdrywt	9.0	5.7	5.4	63	60	40-140	5	25
Benzo(a)anthracene	mg/Kgdrywt	9.0	8.1	7.5	90	84	40-140	8	25
Benzo(a)pyrene	mg/Kgdrywt	9.0	6.6	6.2	73	69	40-140	6	25
Benzo(b)fluoranthene	mg/Kgdrywt	9.0	7.7	6.8	85	76	40-140	12	25
Benzo(g,h,i)perylene	mg/Kgdrywt	9.0	7	6.4	77	71	40-140	9	25
Benzo(k)fluoranthene	mg/Kgdrywt	9.0	6.7	6.6	75	73	40-140	2	25
C19-C36 Aliphatics	mg/Kgdrywt	72	54	52	74	73	40-140	4	25
C9-C18 Aliphatics	mg/Kgdrywt	54	29	29	54	54	40-140	0.0	25
Chrysene	mg/Kgdrywt	9.0	6.7	6.3	75	70	40-140	6	25
Dibenzo(a,h)anthracene	mg/Kgdrywt	9.0	7.2	6.6	80	74	40-140	9	25
Fluoranthene	mg/Kgdrywt	9.0	6.5	6.1	72	67	40-140	6	25
Fluorene	mg/Kgdrywt	9.0	5.5	5.2	61	57	40-140	6	25
Indeno(1,2,3-cd)pyrene	mg/Kgdrywt	9.0	7.4	6.8	82	76	40-140	8	25
Naphthalene	mg/Kgdrywt	9.0	3.9	3.9	43	43	40-140	0	25
Phenanthrene	mg/Kgdrywt	9.0	6.2	5.8	69	65	40-140	7	25
Pyrene	mg/Kgdrywt	9.0	6.4	6	71	67	40-140	6	25
Unadjusted C11-C22 Aromatics	mg/Kgdrywt	153	107	101	70	66	40-140	6	25

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104436-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: CFB1097 Lab Sample ID: WG104436-1

Instrument ID: GC12 Date Extracted: 02/07/12

Matrix: (soil/water) SOIL Date Analyzed: 02/09/12

Level:(low/med) LOW Time Analyzed: 1749

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104436-LCS	WG104436-2	CFB1098	02/09/12	1852
02	WG104436-LCSD	WG104436-3	CFB1099	02/09/12	1955
03	MS-3	SF0504-3RE	CFB1110	02/10/12	0727
04					
05					
06					
07					
08					
09					
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COMMENTS:

FORM IVDRO

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104436-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: CFB1097A Lab Sample ID: WG104436-1

Instrument ID: GC12 Date Extracted: 02/07/12

Matrix: (soil/water) SOIL Date Analyzed: 02/09/12

Level:(low/med) LOW Time Analyzed: 1749

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104436-LCS	WG104436-2	CFB1098A	02/09/12	1852
02	WG104436-LCSD	WG104436-3	CFB1099A	02/09/12	1955
03	MS-3	SF0504-3RE	CFB1110A	02/10/12	0727
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COMMENTS:

FORM IVDRO

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104436-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: CFB2097 Lab Sample ID: WG104436-1

Instrument ID: GC12 Date Extracted: 02/07/12

Matrix: (soil/water) SOIL Date Analyzed: 02/09/12

Level:(low/med) LOW Time Analyzed: 1749

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104436-LCS	WG104436-2	CFB2098	02/09/12	1852
02	WG104436-LCSD	WG104436-3	CFB2099	02/09/12	1955
03	MS-3	SF0504-3RE	CFB2109	02/10/12	0624
04					
05					
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COMMENTS:

FORM IVDRO

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SF0504
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG104436-1	**Date Received:**	
Analytical Method:	MA DEP EPH 04-1.1	**Date Extracted:**	07-FEB-12
Prep Method:	SW846 3546	**Date Reported:**	10-FEB-12
Matrix:	SL	**Percent Solids:**	NA

EPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C11-C22 Aromatics	20	20	mg/Kgdrywt	1	09-FEB-12 17:49	U
C9-C18 Aliphatics	20	20	mg/Kgdrywt	1	09-FEB-12 17:49	U
C19-C36 Aliphatics	20	20	mg/Kgdrywt	1	09-FEB-12 17:49	U
C11-C22 Aromatics	20.	20	mg/Kgdrywt	1	09-FEB-12 17:49	U

Targeted PAH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Naphthalene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
2-Methylnaphthalene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Phenanthrene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Acenaphthylene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Acenaphthene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Anthracene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Benzo(a)anthracene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Benzo(a)pyrene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Benzo(b)fluoranthene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Benzo(g,h,i)perylene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Benzo(k)fluoranthene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Chrysene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Dibenzo(a,h)anthracene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Fluoranthene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Fluorene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Indeno(1,2,3-cd)pyrene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U
Pyrene	0.20	.2	mg/Kgdrywt	1	09-FEB-12 17:49	U

EPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
5-alpha androstane	66	40-140	09-FEB-12 17:49	
o-Terphenyl	58	40-140	09-FEB-12 17:49	
2-Fluorobiphenyl	69	40-140	09-FEB-12 17:49	
2-Bromonaphthalene	74	40-140	09-FEB-12 17:49	

* Fractionation Surrogates.

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

2 C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes.

3 Diesel PAH Analytes.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG104436-2,WG104436-3
Preparative Method: SW846 3546
Analytical Method: MA DEP EPH 04-1.1
Analytical Batch: WG104436

Matrix: SL
Preparative Date: 07-FEB-12
Analytical Date: 09-FEB-12

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
2-Methylnaphthalene	mg/Kgdrywt	9.0	3.7	4.8	41	53	40-140	*26	25
Acenaphthene	mg/Kgdrywt	9.0	3.9	5.1	44	57	40-140	*27	25
Acenaphthylene	mg/Kgdrywt	9.0	3.9	5.2	44	57	40-140	*28	25
Anthracene	mg/Kgdrywt	9.0	4.7	5.6	52	62	40-140	17	25
Benzo(a)anthracene	mg/Kgdrywt	9.0	5.9	7.2	66	80	40-140	20	25
Benzo(a)pyrene	mg/Kgdrywt	9.0	4.8	6	53	66	40-140	22	25
Benzo(b)fluoranthene	mg/Kgdrywt	9.0	5.4	6.8	60	75	40-140	23	25
Benzo(g,h,i)perylene	mg/Kgdrywt	9.0	4.7	5.8	52	65	40-140	21	25
Benzo(k)fluoranthene	mg/Kgdrywt	9.0	4.8	5.8	54	65	40-140	19	25
C19-C36 Aliphatics	mg/Kgdrywt	72	51	61	71	85	40-140	18	25
C9-C18 Aliphatics	mg/Kgdrywt	54	29	32	53	60	40-140	10	25
Chrysene	mg/Kgdrywt	9.0	4.9	6.1	54	68	40-140	22	25
Dibenzo(a,h)anthracene	mg/Kgdrywt	9.0	5	6.2	55	69	40-140	21	25
Fluoranthene	mg/Kgdrywt	9.0	5	6.1	56	67	40-140	20	25
Fluorene	mg/Kgdrywt	9.0	4.4	5.5	49	61	40-140	22	25
Indeno(1,2,3-cd)pyrene	mg/Kgdrywt	9.0	5.1	6.2	57	69	40-140	19	25
Naphthalene	mg/Kgdrywt	9.0	3.4	4.4	*38	49	40-140	*26	25
Phenanthrene	mg/Kgdrywt	9.0	5.1	6.1	57	68	40-140	18	25
Pyrene	mg/Kgdrywt	9.0	5	6	56	67	40-140	18	25
Unadjusted C11-C22 Aromatics	mg/Kgdrywt	153	81	100	53	65	40-140	21	25

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FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG104470-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: AUBURN-RIVERSIDE DRIVE SDG No.: SF0504

Lab File ID: 2FB10091 Lab Sample ID: WG104470-1

Date Analyzed: 02/08/12 Time Analyzed: 1216

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GC02

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG104470-LCS	WG104470-2	2FB10092	02/08/12	1309
02	WG104470-LCSD	WG104470-3	2FB10093	02/08/12	1403
03	MS-2	SF0504-2	2FB10099	02/08/12	1928
04	MS-6	SF0504-6	2FB10100	02/08/12	2023
05	RD-2	SF0504-8	2FB10101	02/08/12	2118
06	MS-1	SF0504-1	2FB10102	02/08/12	2213
07	MS-3	SF0504-3	2FB10104	02/09/12	0003
08	MS-4	SF0504-4	2FB10105	02/09/12	0058
09	MS-5	SF0504-5	2FB10106	02/09/12	0153
10	RD-6	SF0504-11	2FB10107	02/09/12	0248
11					
12					
13					
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24					
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26					
27					
28					
29					
30					

COMMENTS:

FORM IVVPH

Blank Analysis

Client:	Katahdin Analytical Services	**SDG:**	SF0504
Client Sample ID:	Method Blank Sample	**Date Collected:**	
KAS Sample ID:	WG104470-1	**Date Received:**	
Analytical Method:	MA DEP VPH 04-1.1	**Date Extracted:**	08-FEB-12
Prep Method:	MA DEP VPH 04-1.1	**Date Reported:**	09-FEB-12
Matrix:	SL	**Percent Solids:**	NA

VPH Range Results	Results	PQL	Units	DF	Date Analyzed	Qual
Unadjusted C5-C8 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
Unadjusted C9-C12 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C5-C8 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C9-C12 Aliphatics	25	25	mg/Kgdrywt	1	08-FEB-12	U
C9-C10 Aromatics	25	25	mg/Kgdrywt	1	08-FEB-12	U

Targeted VPH Analytes	Results	PQL	Units	DF	Data Analyzed	Qual
Benzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Ethylbenzene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Methyl tert-butylether	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Naphthalene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
Toluene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U
m+p-Xylenes	2.5	2.5	mg/Kgdrywt	1	08-FEB-12	U
o-Xylene	1.2	1.2	mg/Kgdrywt	1	08-FEB-12	U

VPH Surrogate Recoveries	Recovery	Acceptance Range	Date Analyzed	Qual
2,5-Dibromotoluene (FID)	99	70-130	08-FEB-12	
2,5-Dibromotoluene (PID)	96	70-130	08-FEB-12	

1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range AND concentration of C9-C10 Aromatics Hydrocarbons.

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Cert No E87604

Laboratory Control Spike/Laboratory Control Spike Duplicate Results

Lab ID: WG104470-2,WG104470-3
Preparative Method: MA DEP VPH 04-1.1
Analytical Method: MA DEP VPH 04-1.1
Analytical Batch: WG104470

Matrix: SL
Preparative Date: 08-FEB-12
Analytical Date: 08-FEB-12

Compound Name	Units	Spike Amount	LCS Results	LCSD Results	LCS % Recovery	LCSD % Recovery	Acceptance Limits (%)	RPD (%)	RPD Limit (%)
C5-C8 Aliphatics	mg/Kgdrywt	70	66	64	94	92	70-130	3	25
C9-C12 Aliphatics	mg/Kgdrywt	47	51	45	108	96	70-130	12	25
C9-C10 Aromatics	mg/Kgdrywt	23	24	22	105	96	70-130	9	25
Benzene	mg/Kgdrywt	23	20	20	88	88	70-130	0	25
Ethylbenzene	mg/Kgdrywt	23	20	20	88	87	70-130	0	25
Methyl tert-butylether	mg/Kgdrywt	23	20	21	86	89	70-130	5	25
Naphthalene	mg/Kgdrywt	23	23	26	100	110	70-130	12	25
Toluene	mg/Kgdrywt	23	20	20	86	86	70-130	0	25
m+p-Xylenes	mg/Kgdrywt	47	41	41	89	89	70-130	0	25
o-Xylene	mg/Kgdrywt	23	21	21	89	90	70-130	0	25
2,5-Dibromotoluene (FID)		93	0	24	104	102	70-130		
2,5-Dibromotoluene (PID)		93	1.3	23	99	98	70-130		

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ANALYTICAL SERVICES

PREPARATION BLANK REPORT

Sample ID: PBSFB02ICS1 **Batch ID:** FB02ICS1

Element Name	Result	Units	Flag	PQL	File
ALUMINUM	1.	mg/kgdrywt	U	30.0	IFB06A
ANTIMONY	0.2	mg/kgdrywt	U	0.800	IFB06A
ARSENIC	0.2	mg/kgdrywt	U	0.800	IFB06A
BARIUM	0.08	mg/kgdrywt	J	0.500	IFB06A
BERYLLIUM	0.003	mg/kgdrywt	U	0.500	IFB06A
BORON	0.1	mg/kgdrywt	U	10.0	IFB06A
CADMIUM	0.09	mg/kgdrywt	U	1.00	IFB06A
CALCIUM	14.	mg/kgdrywt	H	10.0	IFB06A
CHROMIUM	0.23	mg/kgdrywt	J	1.50	IFB06A
COBALT	0.03	mg/kgdrywt	U	3.00	IFB06A
COPPER	0.18	mg/kgdrywt	J	2.50	IFB06A
IRON	12.7	mg/kgdrywt	H	10.0	IFB06A
LEAD	0.1	mg/kgdrywt	U	0.500	IFB06A
LITHIUM	0.3	mg/kgdrywt	J	10.0	IFB06A
MAGNESIUM	3.7	mg/kgdrywt	J	10.0	IFB06A
MANGANESE	0.43	mg/kgdrywt	J	0.500	IFB06A
MOLYBDENUM	0.2	mg/kgdrywt	U	1.00	IFB06A
NICKEL	0.13	mg/kgdrywt	J	4.00	IFB06A
POTASSIUM	30.	mg/kgdrywt	J	100.	IFB06A
SELENIUM	0.2	mg/kgdrywt	U	1.00	IFB06A
SILICON	4.	mg/kgdrywt	J	20.0	IFB06A
SILVER	0.05	mg/kgdrywt	U	1.50	IFB06A
SODIUM	40.	mg/kgdrywt	J	100.	IFB06A
STRONTIUM	0.05	mg/kgdrywt	J	10.0	IFB06A
THALLIUM	0.2	mg/kgdrywt	U	1.50	IFB06A
TIN	1.5	mg/kgdrywt	J	10.0	IFB06A
TITANIUM	0.04	mg/kgdrywt	U	1.50	IFB06A
VANADIUM	0.04	mg/kgdrywt	U	2.50	IFB06A
ZINC	0.68	mg/kgdrywt	J	2.50	IFB06A

U The analyte was not detected in the sample at a level greater than the instrument detection limit.

J The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

H The analyte was detected in the sample at a concentration greater than the laboratory's acceptance limit.

Katahdin ANALYTICAL SERVICES

LABORATORY CONTROL SAMPLE REPORT

Sample ID: LCSOFB02ICS1 **Batch ID:** FB02ICS1

Element Name	True Value	Result	Units	Recovery(%)	Flag	Limits (mg/kgdrywt)		File
ALUMINUM	200.	211.	mg/kgdrywt	105.5%		159	241	IFB06A
ANTIMONY	10.0	10.1	mg/kgdrywt	101.0%		7.95	12.0	IFB06A
ARSENIC	10.0	10.3	mg/kgdrywt	103.0%		7.95	12.0	IFB06A
BARIUM	200.	214.	mg/kgdrywt	107.0%		159	241	IFB06A
BERYLLIUM	5.00	5.46	mg/kgdrywt	109.2%		3.98	6.02	IFB06A
BORON	50.0	44.9	mg/kgdrywt	89.8%		39.8	60.2	IFB06A
CADMIUM	25.0	26.7	mg/kgdrywt	106.8%		19.9	30.1	IFB06A
CALCIUM	250.	284.	mg/kgdrywt	113.6%		199	301	IFB06A
CHROMIUM	20.0	21.8	mg/kgdrywt	109.0%		15.9	24.1	IFB06A
COBALT	50.0	54.2	mg/kgdrywt	108.4%		39.8	60.2	IFB06A
COPPER	25.0	26.8	mg/kgdrywt	107.2%		19.9	30.1	IFB06A
IRON	100.	110.	mg/kgdrywt	110.0%		79.5	120	IFB06A
LEAD	10.0	10.6	mg/kgdrywt	106.0%		7.95	12.0	IFB06A
LITHIUM	50.0	46.5	mg/kgdrywt	93.0%		39.8	60.2	IFB06A
MAGNESIUM	500.	533.	mg/kgdrywt	106.6%		398	602	IFB06A
MANGANESE	50.0	53.4	mg/kgdrywt	106.8%		39.8	60.2	IFB06A
MOLYBDENUM	30.0	32.9	mg/kgdrywt	109.7%		23.8	36.1	IFB06A
NICKEL	50.0	54.0	mg/kgdrywt	108.0%		39.8	60.2	IFB06A
POTASSIUM	1000.	1060.	mg/kgdrywt	106.0%		795	1200	IFB06A
SELENIUM	10.0	10.2	mg/kgdrywt	102.0%		7.95	12.0	IFB06A
SILICON	500.	440.	mg/kgdrywt	88.0%		398	602	IFB06A
SILVER	5.00	5.34	mg/kgdrywt	106.8%		3.98	6.02	IFB06A
SODIUM	750.	780.	mg/kgdrywt	104.0%		596	904	IFB06A
STRONTIUM	50.0	48.3	mg/kgdrywt	96.6%		39.8	60.2	IFB06A
THALLIUM	10.0	10.6	mg/kgdrywt	106.0%		7.95	12.0	IFB06A
TIN	50.0	50.2	mg/kgdrywt	100.4%		39.8	60.2	IFB06A
TITANIUM	50.0	49.8	mg/kgdrywt	99.6%		39.8	60	IFB06A
VANADIUM	50.0	54.1	mg/kgdrywt	108.2%		39.8	60.2	IFB06A
ZINC	50.0	54.9	mg/kgdrywt	109.8%		39.8	60.2	IFB06A

H Laboratory control sample recovery is greater than the laboratory's acceptance limit.

L Laboratory control sample recovery is less than the laboratory's acceptance limit.

Quality Control Report

Blank Sample Summary Report

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL
MBLANK	WG104307	ASTM D2216	03-FEB-12	02-FEB-12	U 1 %	1 %

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Katahdin Analytical Services, Inc.

Sample Receipt Condition Report

Client: Woodard + Curran	KAS PM: JO	Sampled By: Client
Project:	KIMS Entry By: DM	Delivered By: Client
KAS Work Order#: SF0504	KIMS Review By: JO	Received By: DM
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 1-27-12 10:00

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?					
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.0
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea				✓	
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?	✓				
Methanol covering soil?	✓				
7. Trip Blank present in cooler?	✓				
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: Woodard & Curran
Contact: Karen Lambek
Phone #: (207) 774-2112
Fax #: (207) 774-6635
Address: 41 Hutchins Dr.
City: Portland
State: ME
Zip Code: 04102
Purchase Order #: 203970.19
Proj. Name / No.: Auburn - Riverside Drive
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Karen Lambek
Copies To: Karen Lambek

LAB USE ONLY
WORK ORDER #: SF0504
KATAHDIN PROJECT NUMBER:

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	VOC (Filt. ☐Y ☐N)	EPH (Filt. ☐Y ☐N)	VPH (Filt. ☐Y ☐N)	Total Lead (Filt. ☐Y ☐N)	(Filt. ☐Y ☐N)	(Filt. ☐Y ☐N)	(Filt. ☐Y ☐N)	(Filt. ☐Y ☐N)	(Filt. ☐Y ☐N)	(Filt. ☐Y ☐N)
	MS-1	1/26/12/0955	SO	7	X	X	X	X						
	MS-2	/0940			X	X	X	X						
	MS-3	/1025			X	X	X	X						
	MS-4	/1100			X	X	X	X						
	MS-5	/1125			X	X	X	X						
	MS-6	/1335			X	X	X	X						
	RD-1	/1435												
	RD-2	/1405			X	X	X	X						
	RD-4	/1450												
	RD-5	/1520												
	RD-6	/1555			X	X	X	X						
	TB-1	/	W	4										
		/												
		/												
		/												
		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Karen Lambek	1/27/12 1000	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

AS-COC1

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jan. 27, 2012
02:21 PM

Login Number: SF0504

Account: WOODAR001 Web
Woodard & Curran

Project:

Primary Report Address:
Karen Lambek
Woodard & Curran
41 Hutchins Drive

Portland,ME 04102
klambek@woodardcurran.com

Primary Invoice Address:
Accounts Payable
Woodard & Curran
41 Hutchins Drive

Portland,ME 04102

Report CC Addresses:
Invoice CC Addresses:

Login Information:

ANALYSIS INSTRUCTIONS	:	
CHECK NO.	:	
CLIENT PO#	:	203970.19
CLIENT PROJECT MANAGE	:	
CONTRACT	:	
COOLER TEMPERATURE	:	4.0
DELIVERY SERVICES	:	Client
EDD FORMAT	:	KAS027-XLS & KAS064-XLS
LOGIN INITIALS	:	DM
PM	:	JO
PROJECT NAME	:	Auburn-Riverside Drive
QC LEVEL	:	II
REGULATORY LIST	:	
REPORT INSTRUCTIONS	:	Email PDF & EDDs to Karen, no HC.
SDG ID	:	
SDG STATUS	:	

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SF0504-1	MS-1	26-JAN-12 09:55	27-JAN-12			09-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

SF0504-2	MS-2	26-JAN-12 09:40	27-JAN-12			09-FEB-12

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

SF0504-3	MS-3	26-JAN-12 10:25	27-JAN-12			09-FEB-12

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

SF0504-4	MS-4	26-JAN-12 11:00	27-JAN-12			09-FEB-12

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

01.27.12

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jan. 27, 2012
02:21 PM

Login Number: SF0504

Quote/Incoming:

Account: WOODAR001 Web
Woodard & Curran

Project:

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SF0504-5	MS-5	26-JAN-12 11:25	27-JAN-12			09-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

SF0504-6	MS-6	26-JAN-12 13:35	27-JAN-12			09-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

SF0504-7	RD-1	26-JAN-12 14:35	27-JAN-12			09-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

SF0504-8	RD-2	26-JAN-12 14:05	27-JAN-12			09-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

SF0504-9	RD-4	26-JAN-12 14:50	27-JAN-12			09-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

SF0504-10	RD-5	26-JAN-12 15:20	27-JAN-12			09-FEB-12	

Matrix	Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
					Sample on hold.

SF0504-11	RD-6	26-JAN-12 15:55	27-JAN-12			09-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	MA-EPH	09-FEB-12	4oz Glass		
Solid	S	MA-VPH	23-FEB-12	40 mL Vial+MEOH		
Solid	S	SW3050-PREP	24-JUL-12	4oz Glass		
Solid	S	SW6010-LEAD	24-JUL-12	4oz Glass		
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		
Solid	S	TS	25-FEB-12	4oz Glass		

SF0504-12	TB-1	26-JAN-12 00:00	27-JAN-12			09-FEB-12	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW8260FULL5ML	09-FEB-12	40 mL Vial+DI+MEOH		Trip Blank, No TS jar.
Solid	S	TS	25-FEB-12			

gp 01.27.12

Total Samples: *9* ***Total Analyses:*** *50*