



# Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

January 10, 2014

SUBJECT: FAP Route 307 (IL 641/North Ave.)  
Project ACNHPP-0307(040)  
Section 131B-BR  
DuPage County  
Contract No. 60V24  
Item No. 089, January 17, 2014 Letting  
Addendum A

## NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Replaced the Schedule of Prices
2. Revised page ii of the table of Contents to the Special Provisions
3. Revised pages 2, 3, 6-8, 10-13, 15-31, 180-183, and 188-190 of the Special Provisions
4. Added pages 202-229 to the Special Provisions
5. Revised sheets 2, 7, 10-12, 13A, 20, 26, 28, 30, 50-55, & 57-68 of the Plans

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

John D. Baranzelli, P.E.  
Acting Engineer of Design and Environment

A handwritten signature in black ink, appearing to read 'Ted B. Walschleger' with a small 'P.E.' to the right.

By: Ted B. Walschleger, P. E.  
Engineer of Project Management

cc: John Fortmann, Region 1, District 1; Tim Kell; D. Carl Puzey; Estimates

MS/kf

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SCHEDULE OF PRICES  
 CONTRACT  
 NUMBER -

60V24

State Job # - C-91-531-12

County Name - DUPAGE - -

Code - 43 - -

District - 1 - -

Section Number - 131B-BR

Project Number  
 ACNHPP-0307/040/

Route  
 FAP 307

\*REVISED: JANUARY 9, 2014

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X0323491	SLOPE WALL CRACK SEAL	FOOT	14.000				
X0324085	EM VEH P S LSC 20 3C	FOOT	523.000				
*REV X0327638	STREAM GAUGE	EACH	1.000				
X5030305	CONC WEARING SURF 5	SQ YD	1,702.000				
X5537800	SS CLEANED 12	FOOT	136.000				
X5538200	SS CLEANED 24	FOOT	61.000				
X5538600	SS CLEANED 36	FOOT	90.000				
X6330705	RUB RAIL	FOOT	20.000				
X7010216	TRAF CONT & PROT SPL	L SUM	1.000				
X7030025	WET REF TEM TP T3 L&S	SQ FT	172.000				
X7030030	WET REF TEM TAPE T3 4	FOOT	13,296.000				
X7030040	WET REF TEM TAPE T3 6	FOOT	396.000				
X7030055	WET REF TEM TPE T3 24	FOOT	48.000				
X8140115	HANDHOLE TO BE ADJUST	EACH	9.000				
X8210015	TEMP LUM HPSV 400	EACH	2.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X8710024	FOCC62.5/125 MM12SM24	FOOT	777.000				
X8772115	TEMP MA A 15	EACH	2.000				
Z0001900	ASB BEARING PAD REMOV	EACH	52.000				
Z0004538	HMA DRIVEWAY PAVT 10	SQ YD	59.000				
Z0012754	STR REP CON DP = < 5	SQ FT	2.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0030850	TEMP INFO SIGNING	SQ FT	228.000				
Z0033028	MAINTAIN LIGHTING SYS	CAL MO	6.000				
Z0033044	RE-OPTIMIZE SIG SYS 1	EACH	1.000				
Z0062456	TEMP PAVEMENT	SQ YD	212.000				
Z0073510	TEMP TR SIGNAL TIMING	EACH	2.000				
Z0076600	TRAINEES	HOOR	500.000		0.800		400.000
Z0076604	TRAINEES TPG	HOOR	500.000		10.000		5,000.000
20200100	EARTH EXCAVATION	CU YD	185.000				
20201200	REM & DISP UNS MATL	CU YD	25.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
20800150	TRENCH BACKFILL	CU YD	16.000				
21101615	TOPSOIL F & P 4	SQ YD	235.000				
25000210	SEEDING CL 2A	ACRE	0.250				
25000400	NITROGEN FERT NUTR	POUND	23.000				
25000600	POTASSIUM FERT NUTR	POUND	23.000				
25100115	MULCH METHOD 2	ACRE	0.250				
28000250	TEMP EROS CONTR SEED	POUND	32.000				
28000305	TEMP DITCH CHECKS	FOOT	10.000				
28000400	PERIMETER EROS BAR	FOOT	800.000				
28000510	INLET FILTERS	EACH	28.000				
30300112	AGG SUBGRADE IMPR 12	SQ YD	250.000				
31101200	SUB GRAN MAT B 4	SQ YD	460.000				
31200502	STAB SUBBASE HMA 4.5	SQ YD	250.000				
42000521	PCC PVT 11 JOINTED	SQ YD	250.000				
42001300	PROTECTIVE COAT	SQ YD	885.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
42300400	PCC DRIVEWAY PAVT 8	SQ YD	175.000				
42400200	PC CONC SIDEWALK 5	SQ FT	4,140.000				
44000100	PAVEMENT REM	SQ YD	1,031.000				
44000200	DRIVE PAVEMENT REM	SQ YD	196.000				
44000500	COMB CURB GUTTER REM	FOOT	848.000				
44000600	SIDEWALK REM	SQ FT	510.000				
44003100	MEDIAN REMOVAL	SQ FT	1,993.000				
44200982	CL B PATCH T2 11	SQ YD	13.000				
44201299	DOWEL BARS 1 1/2	EACH	13.000				
44213200	SAW CUTS	FOOT	63.000				
50101500	REM EXIST SUP-STR	EACH	1.000				
50102400	CONC REM	CU YD	23.000				
50300225	CONC STRUCT	CU YD	63.300				
50300255	CONC SUP-STR	CU YD	420.000				
50300260	BR DECK GROOVING	SQ YD	1,944.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
50300300	PROTECTIVE COAT	SQ YD	2,609.000				
50400405	P P CONC DK BM 21 DP	SQ FT	15,050.000				
50800205	REINF BARS, EPOXY CTD	POUND	128,550.000				
50800515	BAR SPLICERS	EACH	758.000				
50900105	ALUM RAILING TY L	FOOT	156.000				
50901720	BICYCLE RAILING	FOOT	190.000				
50901750	PARAPET RAILING	FOOT	175.000				
51500100	NAME PLATES	EACH	1.000				
52000110	PREF JT STRIP SEAL	FOOT	207.500				
550A0640	STORM SEW CL A 3 12	FOOT	43.000				
55100500	STORM SEWER REM 12	FOOT	22.000				
56400100	FIRE HYDNITS TO BE MVD	EACH	1.000				
59000200	EPOXY CRACK INJECTION	FOOT	16.000				
60201340	CB TA 4 DIA T24F&G	EACH	7.000				
60251740	CB ADJ NEW T24F&G	EACH	14.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
60255500	MAN ADJUST	EACH	6.000				
60255800	MAN ADJ NEW T1F CL	EACH	7.000				
60500050	REMOV CATCH BAS	EACH	5.000				
60605000	COMB CC&G TB6.24	FOOT	837.000				
60609200	COMB CC&G TM6.12	FOOT	243.000				
60618300	CONC MEDIAN SURF 4	SQ FT	1,039.000				
60619600	CONC MED TSB6.12	SQ FT	597.000				
60622800	CONC MED TSM6.12	SQ FT	597.000				
63100085	TRAF BAR TERM T6	EACH	2.000				
63100167	TR BAR TRM T1 SPL TAN	EACH	2.000				
63200310	GUARDRAIL REMOV	FOOT	159.000				
*ADD 66900200	NON SPL WASTE DISPOSL	CU YD	260.000				
*ADD 66900450	SPL WASTE PLNS/REPORT	L SUM	1.000				
*ADD 66900530	SOIL DISPOSAL ANALY	EACH	3.000				
67000400	ENGR FIELD OFFICE A	CAL MO	7.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
67100100	MOBILIZATION	L SUM	1.000				
70301000	WORK ZONE PAVT MK REM	SQ FT	4,758.000				
70400100	TEMP CONC BARRIER	FOOT	888.000				
70400200	REL TEMP CONC BARRIER	FOOT	576.000				
*ADD 70600235	IMP ATTN TEMP FRD TL2	EACH	4.000				
*DELETE 70600240	IMP ATTN TEMP NRD TL2	EACH	4.000				
*ADD 70600320	IMP ATTN REL FRD TL2	EACH	4.000				
*DELETE 70600340	IMP ATTN REL NRD TL2	EACH	4.000				
72000100	SIGN PANEL T1	SQ FT	15.000				
72400500	RELOC SIN PAN ASSY TA	EACH	12.000				
78001130	PAINT PVT MK LINE 6	FOOT	253.000				
78008200	POLYUREA PM T1 LTR-SY	SQ FT	128.000				
78008210	POLYUREA PM T1 LN 4	FOOT	1,260.000				
78008230	POLYUREA PM T1 LN 6	FOOT	952.000				
78008240	POLYUREA PM T1 LN 8	FOOT	199.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
78008250	POLYUREA PM T1 LN 12	FOOT	405.000				
78008270	POLYUREA PM T1 LN 24	FOOT	254.000				
78100100	RAISED REFL PAVT MKR	EACH	60.000				
78100105	RAISED REF PVT MKR BR	EACH	38.000				
78100200	TEMP RAIS REF PVT MKR	EACH	685.000				
78100300	REPLACEMENT REFLECTOR	EACH	24.000				
78200410	GUARDRAIL MKR TYPE A	EACH	8.000				
78200530	BAR WALL MKR TYPE C	EACH	71.000				
78201000	TERMINAL MARKER - DA	EACH	2.000				
78300100	PAVT MARKING REMOVAL	SQ FT	2,070.000				
78300200	RAISED REF PVT MK REM	EACH	98.000				
81028200	UNDRGRD C GALVS 2	FOOT	248.000				
81028210	UNDRGRD C GALVS 2 1/2	FOOT	23.000				
81028220	UNDRGRD C GALVS 3	FOOT	159.000				
81028240	UNDRGRD C GALVS 4	FOOT	331.000				

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81200230	CON EMB STR 2 PVC	FOOT	146.000				
81304600	JUN BOX EM S 18X12X6	EACH	2.000				
81400100	HANDHOLE	EACH	2.000				
81400300	DBL HANDHOLE	EACH	1.000				
81603090	UD 3#4#6GXLPUSE 1 1/4	FOOT	870.000				
81800300	A CBL 3-1C2 MESS WIRE	FOOT	360.000				
83600200	LIGHT POLE FDN 24D	FOOT	38.000				
83800505	BKWY DEV COU AL SKIRT	EACH	8.000				
84100110	REM TEMP LIGHT UNIT	EACH	2.000				
84200804	REM POLE FDN	EACH	4.000				
84400105	RELOC EX LT UNIT	EACH	4.000				
85000200	MAIN EX TR SIG INSTAL	EACH	1.000				
87300925	ELCBL C TRACER 14 1C	FOOT	751.000				
87301215	ELCBL C SIGNAL 14 2C	FOOT	1,029.000				
87301225	ELCBL C SIGNAL 14 3C	FOOT	1,594.000				

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*REV 87301245	ELCBL C SIGNAL 14 5C	FOOT	3,344.000				
87301255	ELCBL C SIGNAL 14 7C	FOOT	2,487.000				
*REV 87301305	ELCBL C LEAD 14 1PR	FOOT	1,544.000				
87301900	ELCBL C EGRDC 6 1C	FOOT	438.000				
87500600	TS POST 10	EACH	1.000				
87700260	S MAA & P 44	EACH	1.000				
87700280	S MAA & P 48	EACH	1.000				
87700300	S MAA & P 52	EACH	1.000				
87700310	S MAA & P 54	EACH	1.000				
87800100	CONC FDN TY A	FOOT	4.000				
87800415	CONC FDN TY E 36D	FOOT	56.000				
87900200	DRILL EX HANDHOLE	EACH	7.000				
87900205	DRILL EX HD HANDHOLE	EACH	1.000				
*REV 88030020	SH LED 1F 3S MAM	EACH	12.000				
88030050	SH LED 1F 3S BM	EACH	2.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
88030100	SH LED 1F 5S BM	EACH	1.000				
88030110	SH LED 1F 5S MAM	EACH	3.000				
88030220	SH LED 2F 5S BM	EACH	1.000				
88102717	PED SH LED 1F BM CDT	EACH	2.000				
88102747	PED SH LED 2F BM CDT	EACH	2.000				
*REV 88200210	TS BACKPLATE LOU ALUM	EACH	15.000				
*REV 88600100	DET LOOP T1	FOOT	1,088.000				
*ADD 88600700	PREFORM DETECT LOOP	FOOT	135.000				
88800100	PED PUSH-BUTTON	EACH	6.000				
89000100	TEMP TR SIG INSTALL	EACH	2.000				
*ADD 89500100	RELOC EX SIG HEAD	EACH	1.000				
89501400	REL EM VEH PR SYS D U	EACH	2.000				
89502210	MOD EX CONTR CAB	EACH	2.000				
89502300	REM ELCBL FR CON	FOOT	4,394.000				
89502375	REMOV EX TS EQUIP	EACH	2.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
89502380	REMOV EX HANDHOLE	EACH	2.000				
89502385	REMOV EX CONC FDN	EACH	4.000				

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Revised 1/10/14

**MAINTENANCE OF ROADWAYS**

Effective: September 30, 1985  
 Revised: November 1, 1996

Beginning on the date that work begins on this project, the Contractor shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the Engineer, but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the Contractor as required by the Engineer.

If items of work have not been provided in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the Engineer, will be paid for in accordance with Article 109.04 of the Standard Specifications.

**STATUS OF UTILITIES TO BE ADJUSTED**

Effective: January 30, 1987  
 Revised: January 24, 2013

Utilities companies involved in this project have provided the following estimated durations:

Name of Utility	Type	Location	Estimated Duration of Time for the Completion of Relocation or Adjustments
Comcast	Aerial Cable	North ROW Crossing Salt Creek	No Impacts Anticipated
ComEd	Poles and Aerial Cable	Poles on North and South Side of IL 64. Cable spanning IL 64	No Impacts Anticipated
Nicor	2" Gas Line	South side of IL 64 extending Under east bridge approach and abutment wall	No Impacts Anticipated

The above represents the best information available to the Department and is included for the convenience of the bidder. The applicable portions of Articles 105.07 and 107.31 of the Standard Specifications shall apply.

In accordance with 605 ILCS 5/9-113 of the Illinois Compiled Statutes, utility companies have 90 days to complete the relocation of their facilities after receipt of written notice from the Department. The 90-day written notice will be sent to the utility companies after the following occurs:

Revised 1/10/14

Proposed right of way is clear for contract award.

Final plans have been sent to and received by the utility company.

Utility permit is received by the Department and the Department is ready to issue said permit.

If a permit has not been submitted, a 15 day letter is sent to the utility company notifying them they have 15 days to provide their permit application. After allowing 15 days for submission of the permit the 90 day notice is sent to the utility company.

Any time within the 90 day relocation period the utility company may request a waiver for additional time to complete their relocation. The Department has 10 days to review and respond to a waiver request.

#### **START DATE**

The Contractor will not be allowed to detour traffic as part of this project until after May 5, 2014, unless written authorization from the Engineer is received.

#### **COMPLETION DATE PLUS WORKING DAYS**

Effective: September 30, 1985

Revised: January 1, 2007

Revise Article 108.05 (b) of the Standard Specifications as follows:

"When a completion date plus working days is specified, the Contractor shall complete all contract items and safely open all roadways to traffic by 11:59 PM on August 29, 2014 except as specified herein.

The Contractor will be allowed to complete all clean-up work and punch list items within 5 working days after the completion date for opening the roadway to traffic. Under extenuating circumstances the Engineer may direct that certain items of work, not affecting the safe opening of the roadway to traffic, may be completed within the working days allowed for clean up work and punch list items. Temporary lane closures for this work may be allowed at the discretion of the Engineer.

Article 108.09 or the Special Provision for "Failure to Complete the Work on Time", if included in this contract, shall apply to both the completion date and the number of working days.

Revised 1/10/14

Revise Article 603.05 to read:

**“603.05 Replacement of Existing Flexible Pavement.** After the castings have been adjusted, the surrounding space shall be filled with Class PP-1 concrete, unless otherwise noted in the plans, to the elevation of the surface of the base course or binder course. HMA surface or binder course material shall not be allowed. The pavement may be opened to traffic according to Article 701.17(e)(3)b.”

Revise Article 603.06 to read:

**“603.06 Replacement of Existing Rigid Pavement.** After the castings have been adjusted, the pavement and HMA that was removed, shall be replaced with Class PP-1 concrete, unless otherwise noted in the plans, not less than 9 in. (225 mm) thick. The pavement may be opened to traffic according to Article 701.17(e)(3)b.

The surface of the Class PP concrete shall be constructed flush with the adjacent surface.”

Revise the first sentence of Article 603.07 to read:

**“603.07 Protection Under Traffic.** After the casting has been adjusted and the Class PP concrete has been placed, the work shall be protected by a barricade and two lights according to Article 701.17(e)(3)b.”

**AGGREGATE SUBGRADE IMPROVEMENT (D-1)**

Effective: February 22, 2012

Revised: November 1, 2013

Add the following Section to the Standard Specifications:

**“SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT**

**303.01 Description.** This work shall consist of constructing an aggregate subgrade improvement.

**303.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate .....	1004
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2 and 3) .....	1031

Note 1. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01 or CS 02 but shall not exceed 40 percent of the total product. The top size of the Coarse RAP shall be less than 4 in. (100 mm) and well graded.

Revised 1/10/14

Note 2. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01 or CS 02 are used in lower lifts. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

Note 3. The RAP used for aggregate subgrade improvement shall be according to the current Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Pavement (RAP) for Aggregate Applications".

**303.03 Equipment.** The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

**303.04 Soil Preparation.** The stability of the soil shall be according to the Department's Subgrade Stability Manual for the aggregate thickness specified.

**303.05 Placing Aggregate.** The maximum nominal lift thickness of aggregate gradations CS 01 or CS 02 shall be 24 in. (600 mm).

**303.06 Capping Aggregate.** The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When Reclaimed Asphalt Pavement (RAP) is used, it shall be crushed and screened where 100 percent is passing the 1 1/2 in. (37.5 mm) sieve and being well graded. RAP that has been fractionated to size will not be permitted for use in capping. Capping aggregate will not be required when the aggregate subgrade improvement is used as a cubic yard pay item for undercut applications. When RAP is blended with any of the coarse aggregates, the blending shall be done with mechanically calibrated feeders.

**303.07 Compaction.** All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

**303.08 Finishing and Maintenance of Aggregate Subgrade Improvement.** The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

**303.09 Method of Measurement.** This work will be measured for payment according to Article 311.08.

**303.10 Basis of Payment.** This work will be paid for at the contract unit price per cubic yard (cubic meter) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.

Add the following to Section 1004 of the Standard Specifications:

Revised 1/10/14

**“1004.06 Coarse Aggregate for Aggregate Subgrade Improvement.** The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.

The coarse aggregate gradation for total subgrade thicknesses of 12 in. (300 mm) or greater shall be CS 01 or CS 02.

COARSE AGGREGATE SUBGRADE GRADATIONS					
Grad No.	Sieve Size and Percent Passing				
	8"	6"	4"	2"	#4
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)					
Grad No.	Sieve Size and Percent Passing				
	200 mm	150 mm	100 mm	50 mm	4.75 mm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20
CS 02		100	80 ± 10	25 ± 15	

- (1) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.
- (2) Gradation deleterious count shall not exceed 10% of total RAP and 5% of other by total weight.

**COARSE AGGREGATE FOR BACKFILL, TRENCH BACKFILL AND BEDDING (D-1)**

Effective: November 1, 2011

This work shall be according to Section 1004.05 of the Standard Specifications except for the following:

Reclaimed Asphalt Pavement (RAP) maybe blended with gravel, crushed gravel, crushed stone crushed concrete, crushed slag, chats, crushed sand stone or wet bottom boiler slag. The RAP materials shall be crushed and screened. Unprocessed RAP grindings will not be permitted. The RAP shall be uniformly graded and shall pass the 1.0 in. (25 mm) screen. When RAP is blended with any of the coarse aggregate listed above, the blending shall be done mechanically with calibrated feeders. The feeders shall have an accuracy of + 2.0 percent of the actual quantity of material delivered. The final blended product shall not contain more than 40 percent by weight RAP.

The coarse aggregate listed above shall meet CA 6 and CA 10 gradations prior to being blended with the processed and uniformly graded RAP.

Revised 1/10/14

Dimension	Requirement
Inside Opening	Outside dimensions of casting + 1 in. (25 mm)
Thickness at inside edge	Height of casting $\pm$ 1/4 in. (6 mm)
Thickness at outside edge	1/4 in. (6 mm) max.
Width, measured from inside opening to outside edge	8 1/2 in. (215 mm) min

Placement shall be according to the manufacturer's specifications.

Temporary ramps for castings shall remain in place until surfacing operations are undertaken within the immediate area of the structure. Prior to placing the surface course, the temporary ramp shall be removed. Excess material shall be disposed of according to Article 202.03."

**FINE AGGREGATE FOR HOT- MIX ASPHALT (HMA) (D-1)**

Effective: May 1, 2007

Revised: January 1, 2012

Revise Article 1003.03 (c) of the Standard Specifications to read:

" (c) Gradation. The fine aggregate gradation for all HMA shall be FA1, FA 2, FA 20, FA 21 or FA 22. When Reclaimed Asphalt Pavement (RAP) is incorporated in the HMA design, the use of FA 21 Gradation will not be permitted.

**FRICTION SURFACE AGGREGATE (D1)**

Effective: January 1, 2011

Revised: November 1, 2013

Revise Article 1004.01(a)(4) of the Standard Specifications to read:

" (4) Crushed Stone. Crushed stone shall be the angular fragments resulting from crushing undisturbed, consolidated deposits of rock by mechanical means. Crushed stone shall be divided into the following, when specified.

a. Carbonate Crushed Stone. Carbonate crushed stone shall be either dolomite or limestone. Dolomite shall contain 11.0 percent or more magnesium oxide (MgO). Limestone shall contain less than 11.0 percent magnesium oxide (MgO).

b. Crystalline Crushed Stone. Crystalline crushed stone shall be either metamorphic or igneous stone, including but is not limited to, quartzite, granite, rhyolite and diabase."

Revised 1/10/14

Revise Article 1004.03(a) of the Standard Specifications to read:

**“1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA).** The aggregate shall be according to Article 1004.01 and the following revisions.

(a) Description. The coarse aggregate for HMA shall be according to the following table.

Use	Mixture	Aggregates Allowed
Class A	Seal or Cover	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag Crushed Concrete
HMA All Other	Shoulders	<u>Allowed Alone or in Combination:</u> Gravel Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>1/</sup> Crushed Steel Slag <sup>1/</sup> Crushed Concrete
HMA High ESAL Low ESAL	C Surface IL-12.5,IL-9.5, or IL-9.5L	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>1/</sup> Crushed Steel Slag <sup>1/</sup> Crushed Concrete
HMA High ESAL	D Surface IL-12.5 or IL-9.5	<u>Allowed Alone or in Combination:</u> Crushed Gravel Carbonate Crushed Stone (other than Limestone) Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>1/</sup> Crushed Steel Slag <sup>1/</sup> Crushed Concrete

Use	Mixture	Aggregates Allowed								
		<u>Other Combinations Allowed:</u> <table border="1"> <tr> <td><i>Up to...</i></td> <td><i>With...</i></td> </tr> <tr> <td>25% Limestone</td> <td>Dolomite</td> </tr> <tr> <td>50% Limestone</td> <td>Any Mixture D aggregate other than Dolomite</td> </tr> <tr> <td>75% Limestone</td> <td>Crushed Slag (ACBF)<sup>1/</sup> or Crushed Sandstone</td> </tr> </table>	<i>Up to...</i>	<i>With...</i>	25% Limestone	Dolomite	50% Limestone	Any Mixture D aggregate other than Dolomite	75% Limestone	Crushed Slag (ACBF) <sup>1/</sup> or Crushed Sandstone
<i>Up to...</i>	<i>With...</i>									
25% Limestone	Dolomite									
50% Limestone	Any Mixture D aggregate other than Dolomite									
75% Limestone	Crushed Slag (ACBF) <sup>1/</sup> or Crushed Sandstone									
HMA High ESAL	F Surface IL-12.5 or IL-9.5	<u>Allowed Alone or in Combination:</u> Crystalline Crushed Stone Crushed Sandstone Crushed Slag (ACBF) <sup>1/</sup> Crushed Steel Slag <sup>1/</sup> No Limestone or no Crushed Gravel alone.  <u>Other Combinations Allowed:</u> <table border="1"> <tr> <td><i>Up to...</i></td> <td><i>With...</i></td> </tr> <tr> <td>50% Crushed Gravel, or Dolomite</td> <td>Crushed Sandstone, Crushed Slag (ACBF)<sup>1/</sup>, Crushed Steel Slag<sup>1/</sup>, or Crystalline Crushed Stone</td> </tr> </table>	<i>Up to...</i>	<i>With...</i>	50% Crushed Gravel, or Dolomite	Crushed Sandstone, Crushed Slag (ACBF) <sup>1/</sup> , Crushed Steel Slag <sup>1/</sup> , or Crystalline Crushed Stone				
<i>Up to...</i>	<i>With...</i>									
50% Crushed Gravel, or Dolomite	Crushed Sandstone, Crushed Slag (ACBF) <sup>1/</sup> , Crushed Steel Slag <sup>1/</sup> , or Crystalline Crushed Stone									
HMA High ESAL	SMA Ndesign 80 Surface	Crystalline Crushed Stone Crushed Sandstone Crushed Steel Slag								

1/ When either slag is used, the blend percentages listed shall be by volume.

Add the following to Article 1004.03 (b):

“ When using Crushed Concrete, the quality shall be determined as follows. The Contractor shall obtain a representative sample from the stockpile, witnessed by the Engineer, at a frequency of 2500 tons (2300 metric tons). The sample shall be a minimum of 50 lb (25 kg). The Contractor shall submit the sample to the District Office. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent by weight will be applied for acceptance. The stockpile shall be sealed until test results are complete and found to meet the specifications above.”

**GROUND TIRE RUBBER (GTR) MODIFIED ASPHALT BINDER (D-1)**

Effective: June 26, 2006

Revised: January 1, 2013

Add the following to the end of article 1032.05 of the Standard Specifications:

“(c) Ground Tire Rubber (GTR) Modified Asphalt Binder. A quantity of 10.0 to 14.0 percent GTR (Note 1) shall be blended by dry unit weight with a PG 64-28 to make a GTR 70-28 or a PG 58-28 to make a GTR 64-28. The base PG 64-28 and PG 58-28 asphalt binders shall meet the requirements of Article 1032.05(a). Compatible polymers may be added during production. The GTR modified asphalt binder shall meet the requirements of the following table.

Test	Asphalt Grade GTR 70-28	Asphalt Grade GTR 64-28
Flash Point (C.O.C.), AASHTO T 48, °F (°C), min.	450 (232)	450 (232)
Rotational Viscosity, AASHTO T 316 @ 275 °F (135 °C), Poises, Pa·s, max.	30 (3)	30 (3)
Softening Point, AASHTO T 53, °F (°C), min.	135 (57)	130 (54)
Elastic Recovery, ASTM D 6084, Procedure A (sieve waived) @ 77 °F, (25 °C), aged, ss, 100 mm elongation, 5 cm/min., cut immediately, %, min.	65	65

Acceptable Limits

Parameter	Acceptable Range
Field VMA	-1.0 – +3.0% <sup>1/</sup>
Voids	2.0 – 6.0% <sup>2/</sup>
Density: IL-19.0, IL-25.0, IL-9.5, IL-12.5 IL- 4.75, SMA	90.0 – 98.0% 92.0 – 98.0%
Dust / AC Ratio	0.4 – 1.6 <sup>3/</sup>

- 1/ Based on minimum required VMA from mix design
- 2/ The acceptable range for SMA mixtures shall be 2.0% - 5.0%
- 3/ Does not apply to SMA

Payment will be based on the calculation of the Composite Pay Factor for each mix according to the “PFP Quality Level Analysis” document. Payment for full depth pavement will be based on the calculation of the Full Depth Pay Factor according to the “PFP Quality Level Analysis” document.

Dust / AC Ratio. In addition to the PWL on VMA, voids, and density, a monetary deduction will be made using the pay adjustment table below for dust/AC ratios that deviate from the 0.6 to 1.2 range.

Dust / AC Pay Adjustment Table<sup>1/</sup>

Range	Deduct / subplot
$0.6 \leq X \leq 1.2$	\$0
$0.5 \leq X < 0.6$ or $1.2 < X \leq 1.4$	\$1000
$0.4 \leq X < 0.5$ or $1.4 < X \leq 1.6$	\$3000
$X < 0.4$ or $X > 1.6$	Shall be removed and replaced

- 1/ Does not apply to SMA

**HMA MIXTURE DESIGN REQUIREMENTS (D-1)**

Effective: January 1, 2013  
 Revised: November 1, 2013

Revise Article 406.14(b) of the Standard Specifications to read.

“(b) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was not produced within 2.0 to 6.0 percent air voids or within the individual control limits of the JMF, the mixture and test strip will not be paid for and the mixture shall be removed at the Contractor’s expense. An additional test strip and mixture will be paid for in full, if produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF.”

Revised 1/10/14

Revise Article 406.14(c) of the Standard Specifications to read.

“(c) If the HMA placed during the initial test strip (1) is determined to be unacceptable to remain in place by the Engineer, and (2) was produced within 2.0 to 6.0 percent air voids and within the individual control limits of the JMF, the mixture shall be removed. Removal will be paid in accordance to Article 109.04 of the Standard Specifications. This initial mixture and test strip will be paid for at the contract unit prices. The additional mixture will be paid for at the contract unit price, and any additional test strips will be paid for at one half the unit price of each test strip.”

**1) Design Composition and Volumetric Requirements**

Revise the following table in Article 1030.01 of the Standard Specifications to read.

High ESAL	IL-25.0 binder; IL-19.0 binder; IL-12.5 surface; IL-9.5 surface; IL-4.75, SMA
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Revise the following table in Article 1030.04(a)(1):

“(1) High ESAL Mixtures. The Job Mix Formula (JMF) shall fall within the following limits.

High ESAL, MIXTURE COMPOSITION (% PASSING) <sup>1/</sup>														
Sieve Size	IL-25.0 mm		IL-19.0 mm		IL-12.5 mm		IL-9.5 mm		IL-4.75 mm		SMA <sup>4/</sup> IL-12.5 mm		SMA <sup>4/</sup> IL-9.5 mm	
	Min	max	min	max	min	max	min	max	min	max	min	max	min	max
1 1/2 in. (37.5 mm)		100												
1 in. (25 mm)	90	100		100										
3/4 in. (19 mm)		90	82	100		100						100		
1/2 in. (12.5 mm)	45	75	50	85	90	100		100		100	80	100		100
3/8 in. (9.5 mm)						89	90	100		100		65	90	100
#4 (4.75 mm)	24	42 <sup>2/</sup>	24	50 <sup>2/</sup>	28	65	2832	6569	90	100	20	30	36	50
#8 (2.36 mm)	16	31	20	36	28	48 <sup>3/</sup>	32	52 <sup>3/</sup>	70	90	16	24 <sup>5/</sup>	16	32
#16 (1.18 mm)	10	22	10	25	10	32	10	32	50	65				
#30 (600 μm)											12	16	12	18
#50 (300 μm)	4	12	4	12	4	15	4	15	15	30				
#100 (150 μm)	3	9	3	9	3	10	3	10	10	18				
#200 (75 μm)	3	6	3	6	4	6	4	6	7	9 <sup>6/</sup>	7.0	9.0 <sup>6/</sup>	7.5	9.5 <sup>6/</sup>
Ratio Dust/Asphalt Binder		1.0		1.0		1.0		1.0		1.0		1.5		1.5

1/ Based on percent of total aggregate weight.

- 2/ The mixture composition shall not exceed 40 percent passing the #4 (4.75 mm) sieve for binder courses with Ndesign ≥ 90.
- 3/ The mixture composition shall not exceed 44 percent passing the #8 (2.36 mm) sieve for surface courses with Ndesign ≥ 90.
- 4/ The maximum percent passing the 20 μm sieve shall be ≤ 3 percent.
- 5/ When establishing the Adjusted Job Mix Formula (AJMF) the #8 (2.36mm) sieve shall not be adjusted above 24 percent.
- 6/ Additional minus No. 200 (0.075 mm) material required by the mix design shall be mineral filler, unless otherwise approved by the Engineer.”

Delete Article 1030.04(a)(4) of the Standard Specifications.

Revise Article 1030.04(b)(1) of the Standard Specifications to read.

“(1) High ESAL Mixtures. The target value for the air voids of the HMA shall be 4.0 percent and for IL-4.75 it shall be 3.5 percent at the design number of gyrations. The VMA and VFA of the HMA design shall be based on the nominal maximum size of the aggregate in the mix, and shall conform to the following requirements.

VOLUMETRIC REQUIREMENTS High ESAL						
Ndesign	Voids in the Mineral Aggregate (VMA), % minimum					Voids Filled with Asphalt Binder (VFA), %
	IL-25.0	IL-19.0	IL-12.5	IL-9.5	IL-4.75 <sup>1/</sup>	
50	12.0	13.0	14.0	15.0	18.5	65 – 78 <sup>2/</sup>
70					65 - 75	
90						
105						

1/ Maximum Draindown for IL-4.75 shall be 0.3%

2/ VFA for IL-4.75 shall be 72-85%”

Delete Article 1030.04(b) (4) of the Standard Specifications.

Revise table in Article 1030.04(b)(5) as follows:

“(5) SMA Mixtures.

Volumetric Requirements SMA <sup>1/</sup>			
Ndesign	Design Air Voids Target %	Voids in the Mineral Aggregate (VMA), % min.	Voids Filled with Asphalt (VFA), %
80 <sup>4/</sup>	3.5	17 <sup>2/</sup>	75 - 83
		16 <sup>3/</sup>	

Revised 1/10/14

- 1/ Maximum Draindown shall be 0.3%.
- 2/ Applies when specific gravity of coarse aggregate is  $\geq 2.760$ .
- 3/ Applies when specific gravity of coarse aggregate is  $< 2.760$ .
- 4/ For surface course, coarse aggregate shall be Class B Quality; the coarse aggregate can be crushed steel slag, crystalline crushed stone or crushed sandstone.\*  
 For binder course, coarse aggregate shall be crushed stone (dolomite), crushed gravel, crystalline crushed stone, or crushed sandstone.\*

\*Blending of different types of aggregate will not be permitted.

## 2) Design Verification and Production

Description. The following states the requirements for Hamburg Wheel and Tensile Strength testing for High ESAL, IL-4.75, and Stone Matrix Asphalt (SMA) hot-mix asphalt (HMA) mixes during mix design verification and production.

When the options of Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement are used by the Contractor, the Hamburg Wheel and tensile strength requirements in this special provision will be superseded by the special provisions for Warm Mix Asphalt and/or by the District special provision for Reclaimed Asphalt Pavement and Reclaimed Asphalt Shingles as applicable.

Mix Design Testing. Add the following to Article 1030.04 of the Standard Specifications:

“(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department’s verification test, the Contractor shall make the necessary changes to the mix and resubmit compacted specimens to the Department for verification. If the mix fails again, the mix design will be rejected.

All new and renewal mix designs will be required to be tested, prior to submittal for Department verification meeting the following requirements:

(1)Hamburg Wheel Test criteria.

Asphalt Binder Grade	# Repetitions	Max Rut Depth (mm)
PG 70 -XX (or higher)	20,000	12.5
PG 64 -XX (or lower)	10,000	12.5

Note: For SMA Designs (N-80) the maximum rut depth is 6.0 mm at 20,000 repetitions.  
 For IL 4.75mm Designs (N-50) the maximum rut depth is 9.0mm at 15,000 repetitions.

Revised 1/10/14

- (2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 415 kPa (60 psi) for non-polymer modified performance graded (PG) asphalt binder and 550 kPa (80 psi) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 1380 kPa (200 psi).”

Production Testing.

Revise first paragraph of Article 1030.06(a) to read:

- “(a) High ESAL and IL-4.75 Mixtures. For each contract, a 300 ton (275 metric tons) test strip, except for IL -4.75 it will be 400 ton (363 metric ton), will be required at the beginning of HMA production for each mixture with a quantity of 3000 tons (2750 metric tons) or more according to the Manual of Test Procedures for Materials “Hot Mix Asphalt Test Strip Procedures”.”

Delete second paragraph of Article 1030.06 (a).

Revise first sentence in fourth paragraph of Article 1030.06 (a) to read:

“Before constructing the test strip, target values shall be determined by applying gradation correction factors to the JMF when applicable.”

Mixture sampled to represent the test strip shall include additional material sufficient for the Department to conduct Hamburg Wheel testing according to Illinois Modified AASHTO T324 (approximately 60 lb (27 kg) total).

Add the following to Article 1030.06 of the Standard Specifications:

- “(c) Hamburg Wheel Test. All HMA mixtures shall be sampled within the first 500 tons (450 metric tons) on the first day of production or during start up with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T 324 and shall meet the requirements specified herein. Mix production shall not exceed 1500 tons (1350 metric tons) or one day’s production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced mixture demonstrates conformance prior to start of mix production for a contract.

The Department may conduct additional Hamburg Wheel Tests on production material as determined by the Engineer. If the mixture fails to meet the Hamburg Wheel criteria, no further mixture will be accepted until the Contractor takes such action as is necessary to furnish a mixture meeting the criteria”

The Contractor shall immediately cease production upon notification by the Engineer of failing Hamburg Wheel test. All prior produced material may be paved out provided all other mixture criteria are being met. No additional mixture shall be produced until the Engineer receives passing Hamburg Wheel tests.

Basis of Payment. Revise the seventh paragraph of Article 406.14 of the Standard Specifications to read:

“For all mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive.”

Revised 1/10/14

**PUBLIC CONVENIENCE AND SAFETY (DIST 1)**

Effective: May 1, 2012

Revised: July 15, 2012

Add the following to the end of the fourth paragraph of Article 107.09:

“If the holiday is on a Saturday or Sunday, and is legally observed on a Friday or Monday, the length of Holiday Period for Monday or Friday shall apply.”

Add the following sentence after the Holiday Period table in the fourth paragraph of Article 107.09:

“The length of Holiday Period for Thanksgiving shall be from 5:00 AM the Wednesday prior to 11:59 PM the Sunday after”

Delete the fifth paragraph of Article 107.09 of the Standard Specifications:

“On weekends, excluding holidays, roadways with Average Daily Traffic of 25,000 or greater, all lanes shall be open to traffic from 3:00 P.M. Friday to midnight Sunday except where structure construction or major rehabilitation makes it impractical.”

**RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES (D-1)**

Effective: November 1, 2012

Revise: November 1, 2013

Revise Section 1031 of the Standard Specifications to read:

**“SECTION 1031. RECLAIMED ASPHALT PAVEMENT AND RECLAIMED ASPHALT SHINGLES**

**1031.01 Description.** Reclaimed asphalt pavement and reclaimed asphalt shingles shall be according to the following.

- (a) Reclaimed Asphalt Pavement (RAP). RAP is the material resulting from cold milling or crushing an existing hot-mix asphalt (HMA) pavement. RAP will be considered processed FRAP after completion of both crushing and screening to size. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

Revised 1/10/14

- (b) Reclaimed Asphalt Shingles (RAS). Reclaimed asphalt shingles (RAS). RAS is from the processing and grinding of preconsumer or post-consumer shingles. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable material, as defined in Bureau of Materials and Physical Research Policy Memorandum "Reclaimed Asphalt Shingle (RAS) Sources", by weight of RAS. All RAS used shall come from a Bureau of Materials and Physical Research approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. (9.5 mm) sieve and 90 percent passing the #4 (4.75 mm) sieve . RAS shall meet the testing requirements specified herein. In addition, RAS shall meet the following Type 1 or Type 2 requirements.
- (1) Type 1. Type 1 RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.
  - (2) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

**1031.02 Stockpiles.** RAP and RAS stockpiles shall be according to the following.

- (a) RAP Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. Additional processed RAP (FRAP) shall be stockpiled in a separate working pile, as designated in the QC Plan, and only added to the sealed stockpile when test results for the working pile are complete and are found to meet tolerances specified herein for the original sealed FRAP stockpile. Stockpiles shall be sufficiently separated to prevent intermingling at the base. All stockpiles (including unprocessed RAP and FRAP) shall be identified by signs indicating the type as listed below (i.e. "Non- Quality, FRAP -#4 or Type 2 RAS", etc...).
- (1) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be processed prior to testing and sized into fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP in the coarse fraction shall pass the maximum sieve size specified for the mix the FRAP will be used in.
  - (2) Restricted FRAP (B quality) stockpiles shall consist of RAP from Class I, Superpave (High ESAL), or HMA (High ESAL). If approved by the Engineer, the aggregate from a maximum 3.0 inch single combined pass of surface/binder milling will be classified as B quality. All millings from this application will be processed into FRAP as described previously.

Revised 1/10/14

- (3) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave HMA (High and Low ESAL) or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed (FRAP) prior to testing. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (4) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from HMA shoulders, bituminous stabilized subbases or Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (5) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP or FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, plant cleanout etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

- (b) RAS Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall be sufficiently separated to prevent intermingling at the base. Each stockpile shall be signed indicating what type of RAS is present. However, a RAS source may submit a written request to the Department for approval to blend mechanically a specified ratio of type 1 RAS with type 2 RAS. The source will not be permitted to change the ratio of the blend without the Department prior written approval. The Engineer's written approval will be required, to mechanically blend RAS with any fine aggregate produced under the AGCS, up to an equal weight of RAS, to improve workability. The fine aggregate shall be "B Quality" or better from an approved Aggregate Gradation Control System source. The fine aggregate shall be one that is approved for use in the HMA mixture and accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be maintained by project contract number and kept for a minimum of three years.

**1031.03 Testing.** FRAP and RAS testing shall be according to the following.

- (a) RAP/FRAP Testing. When used in HMA, the FRAP shall be sampled and tested either during processing or after stockpiling. It shall also be sampled during HMA production.

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- (1) During Stockpiling. For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).
- (2) Incoming Material. For testing as incoming material, washed extraction samples shall be run at a minimum frequency of one sample per 2000 tons (1800 metric tons) or once per week, whichever comes first.
- (3) After Stockpiling. For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample of FRAP, shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

- (b) RAS Testing. RAS shall be sampled and tested during stockpiling according to Bureau of Materials and Physical Research Policy Memorandum, "Reclaimed Asphalt Shingle (RAS) Sources". The Contractor shall also sample as incoming material at the HMA plant.

- (1) During Stockpiling. Washed extraction and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 1000 tons (900 metric tons) thereafter. A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). Once a  $\leq 1000$  ton (900 metric ton), five-sample/test stockpile has been established it shall be sealed. Additional incoming RAS shall be in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.
- (2) Incoming Material. For testing as incoming material at the HMA plant, washed extraction shall be run at the minimum frequency of one sample per 250 tons (227 metric tons). A minimum of five samples are required for stockpiles less than 1000 tons (900 metric tons). The incoming material test results shall meet the tolerances specified herein.

The Contractor shall obtain and make available all test results from start of the initial stockpile sampled and tested at the shingle processing facility in accordance with the facility's QC Plan.

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Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedures. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

**1031.04 Evaluation of Tests.** Evaluation of tests results shall be according to the following.

- (a) Evaluation of FRAP Test Results. All test results shall be compiled to include asphalt binder content, gradation and, when applicable (for slag),  $G_{mm}$ . A five test average of results from the original pile will be used in the mix designs. Individual extraction test results run thereafter, shall be compared to the average used for the mix design, and will be accepted if within the tolerances listed below.

Parameter	RAP or FRAP
No. 4 (4.75 mm)	$\pm 6 \%$
No. 8 (2.36 mm)	$\pm 5 \%$
No. 30 (600 $\mu\text{m}$ )	$\pm 5 \%$
No. 200 (75 $\mu\text{m}$ )	$\pm 2.0 \%$
Asphalt Binder	$\pm 0.3 \%$
$G_{mm}$	$\pm 0.03$ <sup>1/</sup>

- 1/ For stockpile with slag or steel slag present as determined in the current Manual of Test Procedures Appendix B 21, "Determination of Reclaimed Asphalt Pavement Aggregate Bulk Specific Gravity".

If any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the FRAP stockpile shall not be used in Hot-Mix Asphalt unless the FRAP representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

The Contractor shall maintain a representative moving average of five tests to be used for Hot-Mix Asphalt production.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)" or Illinois Modified AASHTO T-164-11, Test Method A.

- (b) Evaluation of RAS Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content and gradation. A five test average of results from the original pile will be used in the mix designs. Individual test results run thereafter, when compared to the average used for the mix design, will be accepted if within the tolerances listed below.

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Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 µm)	± 4 %
No. 200 (75 µm)	± 2.5 %
Asphalt Binder Content	± 2.0 %

any individual sieve and/or asphalt binder content tests are out of the above tolerances when compared to the average used for the mix design, the RAS shall not be used in Hot-Mix Asphalt unless the RAS representing those tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

- (c) Quality Assurance by the Engineer. The Engineer may witness the sampling and splitting conduct assurance tests on split samples taken by the Contractor for quality control testing a minimum of once a month.

The overall testing frequency will be performed over the entire range of Contractor samples for asphalt binder content and gradation. The Engineer may select any or all split samples for assurance testing. The test results will be made available to the Contractor as soon as they become available.

The Engineer will notify the Contractor of observed deficiencies.

Differences between the Contractor's and the Engineer's split sample test results will be considered acceptable if within the following limits.

Test Parameter	Acceptable Limits of Precision	
	FRAP	RAS
% Passing: <sup>1/</sup>		
1 / 2 in.	5.0%	
No. 4	5.0%	
No. 8	3.0%	4.0%
No. 30	2.0%	3.0%
No. 200	2.2%	2.5%
Asphalt Binder Content	0.3%	1.0%
G <sub>mm</sub>	0.030	

1/ Based on washed extraction.

In the event comparisons are outside the above acceptable limits of precision, the Engineer will immediately investigate.

- (d) Acceptance by the Engineer. Acceptable of the material will be based on the validation of the Contractor's quality control by the assurance process.

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**1031.05 Quality Designation of Aggregate in RAP and FRAP.**

- (a) RAP. The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.
- (1) RAP from Class I, Superpave/HMA (High ESAL), or (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
  - (2) RAP from Superpave/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
  - (3) RAP from Class I, Superpave/HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
  - (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.
- (b) FRAP. If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer.

If the quality is not known, the quality shall be determined as follows. Fractionated RAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5,000 tons (4,500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications. The fine aggregate portion of the fractionated RAP shall not be used in any HMA mixtures that require a minimum of "B" quality aggregate or better, until the coarse aggregate fraction has been determined to be acceptable thru a MicroDeval Testing.

**1031.06 Use of FRAP and/or RAS in HMA.** The use of FRAP and/or RAS shall be a Contractor's option when constructing HMA in all contracts.

- (a) FRAP. The use of FRAP in HMA shall be as follows.
- (1) Coarse Aggregate Size (after extraction). The coarse aggregate in all FRAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.

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- (2) Steel Slag Stockpiles. FRAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) mixtures regardless of lift or mix type.
  - (3) Use in HMA Surface Mixtures (High and Low ESAL). FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall have coarse aggregate that is Class B quality or better. FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 inch.
  - (4) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP in which the coarse aggregate is Class C quality or better.
  - (5) Use in Shoulders and Subbase. FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, Restricted FRAP, conglomerate, or conglomerate DQ.
- (b) RAS. RAS meeting Type 1 or Type 2 requirements will be permitted in all HMA applications as specified herein.
- (c) RAP/FRAP and/or RAS Usage Limits. Type 1 or Type 2 RAS may be used alone or in conjunction with FRAP in HMA mixtures up to a maximum of 5.0% by weight of the total mix.

When FRAP, RAS or FRAP in conjunction with RAS is used, the percent of virgin asphalt binder replacement (ABR) shall not exceed the amounts indicated in the table below for a given N Design.

Asphalt Binder Replacement for FRAP with RAS Combination  
 Table 3

HMA Mixtures <sup>1/ 2/ 4/</sup>	Maximum % ABR		
	Binder/Leveling Binder	Surface	Polymer Modified <sup>3/</sup>
30L	50	40	30
50	40	35	30
70	40	30	30
90	40	30	30
4.75 mm N-50			40
SMA N-80			30

1/ For HMA "All Other" (shoulder and stabilized subbase) N-30, the percent asphalt binder replacement shall not exceed 50% of the total asphalt binder in the mixture.

- 2/ When the binder replacement exceeds 15 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent binder replacement using a virgin asphalt binder grade of PG64-22 will be reduced to a PG58-28). When constructing full depth HMA and the ABR is less than 15 percent, the required virgin asphalt binder grade shall be PG64-28.
- 3/ When the ABR for SMA or IL-4.75 is 15 percent or less, the required virgin asphalt binder shall be SBS PG76-22 and the elastic recovery shall be a minimum of 80. When the ABR for SMA or IL-4.75 exceeds 15%, the virgin asphalt binder grade shall be SBS PG70-28 and the elastic recovery shall be a minimum of 80.
- 4/ When FRAP or RAS is used alone, the maximum percent asphalt binder replacement designated on the table shall be reduced by 10%.

**1031.07 HMA Mix Designs.** At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP and/or RAS material meeting the detailed requirements specified herein.

- (a) FRAP and/or RAS. FRAP and /or RAS mix designs shall be submitted for verification. If additional FRAP or RAS stockpiles are tested and found to be within tolerance, as defined under "Evaluation of Tests" herein, and meet all requirements herein, the additional FRAP or RAS stockpiles may be used in the original design at the percent previously verified.
- (b) RAS. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.500 shall be used for mix design purposes.

**8 HMA Production.** HMA production utilizing FRAP and/or RAS shall be as follows.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAS and FRAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

FRAP, RAS or QC/QA test results within control tolerances or the requirements listed herein the Contractor shall cease production of the mixture containing FRAP or RAS and conduct an investigation that may require a new mix design.

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(a) RAS. RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within  $\pm 0.5$  percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that the mixture production is halted when RAS flow is interrupted.

(b) HMA Plant Requirements. HMA plants utilizing FRAP and/or RAS shall be capable of automatically recording and printing the following information.

(1) Dryer Drum Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.
- c. Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- d. Accumulated dry weight of RAS and FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- e. Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- f. Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- g. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.
- h. Aggregate RAS and FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS and FRAP are printed in wet condition.)
- i. When producing mixtures with FRAP and/or RAS, a positive dust control system shall be utilized.
- j. Accumulated mixture tonnage.
- k. Dust Removed (accumulated to the nearest 0.1 ton)

(2) Batch Plants.

- a. Date, month, year, and time to the nearest minute for each print.
- b. HMA mix number assigned by the Department.

- c. Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- d. Mineral filler weight to the nearest pound (kilogram).
- f. RAS and FRAP weight to the nearest pound (kilogram).
- g. Virgin asphalt binder weight to the nearest pound (kilogram).
- h. Residual asphalt binder in the RAS and FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

**1031.09 RAP in Aggregate Surface Course and Aggregate Shoulders.** The use of RAP or FRAP in aggregate surface course and aggregate shoulders shall be as follows.

and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except “Non-Quality” and “FRAP”. The testing requirements of Article 1031.03 shall not apply. RAP used to construct aggregate surface course and aggregate shoulders shall be according to the current Bureau of Materials and Physical Research’s Policy Memorandum, “Reclaimed Asphalt Pavement (RAP) for Aggregate Applications”

- (b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded, FRAP, or single sized will not be accepted for use as Aggregate Surface Course and Aggregate Shoulders.”

Revised 1/10/14

**TEMPORARY PAVEMENT**

Effective: March 1, 2003

Revised: April 10, 2008

Description. This work shall consist of constructing a temporary pavement at the locations shown on the plans or as directed by the engineer.

The contractor shall use either Portland cement concrete according to Sections 353 and 354 of the Standard Specifications or HMA according to Sections 355, 356, 406 of the Standard Specifications, and other applicable HMA special provisions as contained herein. The HMA mixtures to be used shall be specified in the plans. The thickness of the Temporary Pavement shall be as described in the plans. The contractor shall have the option of constructing either material type if both Portland cement concrete and HMA are shown in the plans.

Articles 355.08 and 406.11 of the Standard Specifications shall not apply.

The removal of the Temporary Pavement, if required, shall conform to Section 440 of the Standard Specification.

Method of Measurement. Temporary pavement will be measured in place and the area computed in square yards (square meters).

Revised 1/10/14

## REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

Revise Article 669.01 of the Standard Specifications to read:

**“669.01 Description.** This work shall consist of the transportation and proper disposal of contaminated soil and water. This work shall also consist of the removal, transportation, and proper disposal of underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities.”

Revise Article 669.08 of the Standard Specifications to read:

**“669.08 Contaminated Soil and/or Groundwater Monitoring.** The Contractor shall hire a qualified environmental firm to monitor the area containing the regulated substances. The affected area shall be monitored with a photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID). Any field screen reading on the PID or FID in excess of background levels indicates the potential presence of contaminated material requiring handling as a non-special waste, special waste, or hazardous waste. No excavated soils can be taken to a clean construction and demolition debris (CCDD) facility or an uncontaminated soil fill operation with detectable PID or FID meter readings that are above background. The PID or FID meter shall be calibrated on-site and background level readings taken and recorded daily. All testing shall be done by a qualified engineer/technician. Such testing and monitoring shall be included in the work. The Contractor shall identify the exact limits of removal of non-special waste, special waste, or hazardous waste. All limits shall be approved by the Engineer prior to excavation. The Contractor shall take all necessary precautions.

Based upon the land use history of the subject property and/or PID or FID readings indicating contamination, a soil or groundwater sample shall be taken from the same location and submitted to an approved laboratory. Soil or groundwater samples shall be analyzed for the contaminants of concern, including pH, based on the property's land use history or the parameters listed in the maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605. The analytical results shall serve to document the level of soil contamination. Soil and groundwater samples may be required at the discretion of the Engineer to verify the level of soil and groundwater contamination.

Samples shall be grab samples (not combined with other locations). The samples shall be taken with decontaminated or disposable instruments. The samples shall be placed in sealed containers and transported in an insulated container to the laboratory. The container shall maintain a temperature of 39 °F (4 °C). All samples shall be clearly labeled. The labels shall indicate the sample number, date sampled, location and elevation, and any other observations.

The laboratory shall use analytical methods which are able to meet the lowest appropriate practical quantitation limits (PQL) or estimated quantitation limit (EQL) specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA Publication No. SW-846 and "Methods for the Determination of Organic Compounds in Drinking Water", EPA, EMSL, EPA-600/4-88/039. For parameters where the specified cleanup objective is below the acceptable detection limit (ADL), the ADL shall serve as the cleanup objective. For other parameters the ADL shall be equal to or below the specified cleanup objective.”

Replace the first two paragraphs of Article 669.09 of the Standard Specifications with the following:

**“669.09 Contaminated Soil and/or Groundwater Management and Disposal.** The management and disposal of contaminated soil and/or groundwater shall be according to the following:

- (a) Soil Analytical Results Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels exceed the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Illinois Administrative Code 1100.605, the soil shall be managed as follows:

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- (1) When analytical results indicate inorganic chemical constituents exceed the most stringent MAC but they are still considered within area background levels by the Engineer, the excavated soil can be utilized within the construction limits as fill, when suitable. Such soil excavated for storm sewers can be placed back into the excavated trench as backfill, when suitable, unless trench backfill is specified. If the soils cannot be utilized within the construction limits, they shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
  - (2) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for a Metropolitan Statistical Area (MSA) County, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
  - (3) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, or the MAC within the Chicago corporate limits, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago or within the Chicago corporate limits provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
  - (4) When analytical results indicate chemical constituents exceed the most stringent MAC but do not exceed the MAC for an MSA County excluding Chicago, the excavated soil can be utilized within the construction limits as fill, when suitable, or managed and disposed of off-site as "uncontaminated soil" at a CCDD facility or an uncontaminated soil fill operation within an MSA County excluding Chicago provided the pH of the soil is within the range of 6.25 - 9.0, inclusive.
  - (5) When the Engineer determines soil cannot be managed according to Articles 669.09(a)(1) through (a)(4) above, the soil shall be managed and disposed of off-site as a non-special waste, special waste, or hazardous waste as applicable.
- (b) Soil Analytical Results Do Not Exceed Most Stringent MAC. When the soil analytical results indicate that detected levels do not exceed the most stringent MAC, the excavated soil can be utilized within the construction limits or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation for the following reason.
- (1) The pH of the soil is less than 6.25 or greater than 9.0.
  - (2) The soil exhibited elevated photoionization detector (PID) utilizing a lamp of 10.6eV or greater or a flame ionization detector (FID) readings.
- (c) Soil Analytical Results Exceed Most Stringent MAC but Do Not Exceed TACO Residential. When the soil analytical results indicate that detected levels exceed the most stringent MAC but do not exceed TACO Tier 1 Soil Remediation Objectives for Residential Properties pursuant to 35 IAC 742 Appendix B Table A, the excavated soil can be utilized within the right-of-way or managed and disposed of off-site as "uncontaminated soil" according to Article 202.03. However the excavated soil cannot be taken to a CCDD facility or an uncontaminated soil fill operation.
- (d) Groundwater. When groundwater analytical results indicate the detected levels are above Appendix B, Table E of 35 Illinois Administrative Code 742, the most stringent Tier 1 Groundwater Remediation Objectives for Groundwater Component of the Groundwater Ingestion Route for Class 1 groundwater, the groundwater shall be managed off-site as a special waste.

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All groundwater encountered within lateral trenches may be managed within the trench and allowed to infiltrate back into the ground. If the groundwater cannot be managed within the trench it must be removed as a special or hazardous waste. The Contractor is prohibited from managing groundwater within the trench by discharging it through any existing or new storm sewer. The Contractor shall install backfill plugs within the area of groundwater contamination.

One backfill plug shall be placed down gradient to the area of groundwater contamination. Backfill plugs shall be installed at intervals not to exceed 50 ft (15 m). Backfill plugs are to be 4 ft (1.2 m) long, measured parallel to the trench, full trench width and depth. Backfill plugs shall not have any fine aggregate bedding or backfill, but shall be entirely cohesive soil or any class of concrete. The Contractor shall provide test data that the material has a permeability of less than  $10^{-7}$  cm/sec according to ASTM D 5084, Method A or per another test method approved by the Engineer."

Revise Article 669.14 of the Standard Specifications to read:

**“669.14 Final Environmental Construction Report.** At the end of the project, the Contractor will prepare and submit three copies of the Environmental Construction Report on the activities conducted during the life of the project, one copy shall be submitted to the Resident Engineer, one copy shall be submitted to the District's Environmental Studies Unit, and one copy shall be submitted with an electronic copy in Adode.pdf format to the Geologic and Waste Assessment Unit, Bureau of Design and Environment, IDOT, 2300 South Dirksen Parkway, Springfield, Illinois 62764. The technical report shall include all pertinent information regarding the project including, but not limited to:

- (a) Measures taken to identify, monitor, handle, and dispose of soil or groundwater containing regulated substances, to prevent further migration of regulated substances, and to protect workers,
- (b) Cost of identifying, monitoring, handling, and disposing of soil or groundwater containing regulated substances, the cost of preventing further migration of regulated substances, and the cost for worker protection from the regulated substances. All cost should be in the format of the contract pay items listed in the contract plans (identified by the preliminary environmental site assessment (PESA) site number),
- (c) Plan sheets showing the areas containing the regulated substances,
- (d) Field sampling and testing results used to identify the nature and extent of the regulated substances,
- (e) Waste manifests (identified by the preliminary environmental site assessment (PESA) site number) for special or hazardous waste disposal, and
- (f) Landfill tickets (identified by the preliminary environmental site assessment (PESA) site number) for non-special waste disposal.”

Revise the second paragraph of Article 669.16 of the Standard Specifications to read:

“The transportation and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL.”

Qualifications. The term environmental firm shall mean an environmental firm with at least five (5) documented leaking underground storage tank (LUST) cleanups or that is pre-qualified in hazardous waste by the Department. Documentation includes but not limited to verifying remediation and special waste operations for sites contaminated with gasoline, diesel, or waste oil in accordance with all Federal, State, or local regulatory requirements and shall be provided to the Engineer for approval. The environmental firm selected shall not be a former or current consultant or have any ties with any of the properties contained within and/or adjacent to this construction project.

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General. This Special Provision will likely require the Contractor to subcontract for the execution of certain activities.

All contaminated materials shall be managed as either “uncontaminated soil” or non-special waste. This work shall include monitoring and potential sampling, analytical testing, and management of a material contaminated by regulated substances. The Environmental Firm shall continuously monitor all soil excavation for worker protection and soil contamination. **Phase I Preliminary Engineering information is available through the District’s Environmental Studies Unit.** Soil samples or analysis without the approval of the Engineer will be at no additional cost to the Department. The lateral distance is measured from centerline and the farthest distance is the offset distance or construction limit whichever is less. .

The Contractor shall manage any excavated soils and sediment within the following areas:

- Station 96+50 to Station 97+80 0 to 160 feet LT (Amoco Oil Company, PESA Site 1849-A, 350 East North Avenue). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)Anthracene, Benzo(a)Pyrene, Benzo(b)Fluoranthene, Dibenzo(a,h)Anthracene, Indeno(1,2,3-cd)Pyrene, Lead, and Manganese.
- Station 100+30 to Station 102+40 0 to 90 feet RT (Commercial Plaza #3, PESA Site 1849-5, 680-700 West North Avenue). This material meets the criteria of Article 669.09(a)(5) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)Anthracene, Benzo(a)Pyrene, Benzo(b)Fluoranthene, Dibenzo(a,h)Anthracene, Indeno(1,2,3-cd)Pyrene, and Manganese.
- Station 98+30 to Station 98+30 0 to 100 feet LT (Vacant Business, PESA Site 1849-1, 17W400 North Avenue). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)Pyrene, Dibenzo(a,h)Anthracene, and Manganese.
- Station 100+10 to Station 102+80 0 to 100 feet LT (Commercial Plaza #2, PESA Site 1849-4, 665-693 West North Avenue). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)Pyrene, Benzo(b)Fluoranthene, Dibenzo(a,h)Anthracene, Arsenic, Lead, and Manganese.
- Station 98+00 to Station 99+60 0 to 140 feet RT (Commercial Plaza #1, PESA Site 1849-2, 401 East North Avenue). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)Pyrene, Arsenic, Lead, and Manganese.
- Station 102+40 to Station 102+85 0 to 90 feet RT (Commercial Plaza #3, PESA Site 1849-5, 680-700 West North Avenue). This material meets the criteria of Article 669.09(a)(1) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Lead and Manganese.
- Station 97+80 to Station 98+30 0 to 100 feet LT (Vacant Business, PESA Site 1849-1, 17W400 North Avenue). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)Pyrene.
- Station 102+85 to Station 102+50 0 to 90 feet RT (Commercial Plaza #3, PESA Site 1849-5, 680-700 West North Avenue). This material meets the criteria of Article 669.09(a)(3) and shall be managed in accordance to Article 669.09. Contaminants of concern sampling parameters: Benzo(a)Pyrene and Dibenzo(a,h)Anthracene.

Revised 1/10/14

**IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING SPECIAL PROVISION  
(TPG)**

Revised: January 1, 2014

In addition to the Contractor's equal employment opportunity affirmative action efforts undertaken as elsewhere required by this Contract, the Contractor is encouraged to participate in the incentive program to provide additional on-the-job training to certified graduates of IDOT funded pre-apprenticeship training programs outlined by this Special Provision.

It is the policy of IDOT to fund IDOT pre-apprenticeship training programs throughout Illinois to provide training and skill-improvement opportunities to assure the increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The intent of this IDOT Training Program Graduate (TPG) Special Provision is to place certified graduates of these IDOT funded pre-apprentice training programs on IDOT project sites when feasible, and provide the graduates with meaningful on-the-job training intended to lead to journey-level employment. IDOT and its sub-recipients, in carrying out the responsibilities of a state contract, shall determine which construction contracts shall include "Training Program Graduate Special Provisions." To benefit from the incentives to encourage the participation in the additional on-the-job training under this Training Program Graduate Special Provision, the Contractor shall make every reasonable effort to employ certified graduates of IDOT funded Pre-apprenticeship Training Programs to the extent such persons are available within a reasonable recruitment area.

TPG on this contract. As approved by the Department, reimbursement will be made for training persons as specified herein. This reimbursement will be made even though the Contractor or subcontractor may receive additional training program funds from other sources for other trainees, provided such other source does not specifically prohibit the Contractor or subcontractor from receiving other reimbursement. For purposes of this Special Provision the Contractor is not relieved of requirements under applicable federal law, the Illinois Prevailing Wage Act, and is not eligible for other training fund reimbursements in addition to the Training Program Graduate (TPG) Special Provision reimbursement.

No payment shall be made to the Contractor if the Contractor or subcontractor fails to provide the required training. It is normally expected that a TPG will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project through completion of the contract, so long as training opportunities exist in his work classification or until he has completed his training program. Should the TPG's employment end in advance of the completion of the contract, the Contractor shall promptly notify the designated IDOT staff member under this Special Provision that the TPG's involvement in the contract has ended and supply a written report of the reason for the end of the involvement, the hours completed by the TPG under the Contract and the number of hours for which the incentive payment provided under this Special Provision will be or has been claimed for the TPG.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting its performance under this Special Provision.

METHOD OF MEASUREMENT: The unit of measurement is in hours.

Revised 1/10/14

**BASIS OF PAYMENT:** This work will be paid for at the contract unit price of \$10.00 per hour for certified TRAINEES TRAINING PROGRAM GRADUATE. The estimated total number of hours, unit price and total price have been included in the schedule of prices.

The Contractor shall provide training opportunities aimed at developing full journeyworker in the type of trade or job classification involved. The initial number of TPGs for which the incentive is available under this contract is 1. During the course of performance of the Contract the Contractor may seek approval from the Department for additional incentive eligible TPGs. In the event the Contractor subcontracts a portion of the contract work, it shall determine how many, if any, of the TPGs are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this Training Program Graduate Special Provision is made applicable to such subcontract if the TPGs are to be trained by a subcontractor and that the incentive payment is passed on to each subcontractor.

For the Contractor to meet the obligations for participation in this TPG incentive program under this Special Provision, the Department has contracted with several entities to provide screening, tutoring and pre-training to individuals interested in working in the applicable construction classification and has certified those students who have successfully completed the program and are eligible to be TPGs. A designated IDOT staff member, the Director of the Office of Business and Workforce Diversity (OBWD), will be responsible for providing assistance and referrals to the Contractor for the applicable TPGs. For this contract, the Director of OBWD is designated as the responsible IDOT staff member to provide the assistance and referral services related to the placement for this Special Provision. For purposes of this Contract, contacting the Director of OBWD and interviewing each candidate he/she recommends constitutes reasonable recruitment.

Prior to commencing construction, the Contractor shall submit to the Department for approval the TPGs to be trained in each selected classification. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. No employee shall be employed as a TPG in any classification in which he/she has successfully completed a training course leading to journeyman status or in which he/she has been employed as a journeyman. Notwithstanding the on-the-job training purpose of this TPG Special Provision, some offsite training is permissible as long as the offsite training is an integral part of the work of the contract and does not comprise a significant part of the overall training.

Training and upgrading of TPGs of IDOT pre-apprentice training programs is intended to move said TPGs toward journeyman status and is the primary objective of this Training Program Graduate Special Provision. Accordingly, the Contractor shall make every effort to enroll TPGs by recruitment through the IDOT funded TPG programs to the extent such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance and entitled to the Training Program Graduate Special Provision \$10.00 an hour incentive.

The Contractor or subcontractor shall provide each TPG with a certificate showing the type and length of training satisfactorily completed.

Revised 1/10/14

## **WARM MIX ASPHALT (BDE)**

Effective: January 1, 2012

Revised: November 1, 2013

Description. This work shall consist of designing, producing and constructing Warm Mix Asphalt (WMA) in lieu of Hot Mix Asphalt (HMA) at the Contractor's option. Work shall be according to Sections 406, 407, 408, 1030, and 1102 of the Standard Specifications, except as modified herein. In addition, any references to HMA in the Standard Specifications, or the special provisions shall be construed to include WMA.

WMA is an asphalt mixture which can be produced at temperatures lower than allowed for HMA utilizing approved WMA technologies. WMA technologies are defined as the use of additives or processes which allow a reduction in the temperatures at which HMA mixes are produced and placed. WMA is produced by the use of additives, a water foaming process, or combination of both. Additives include minerals, chemicals or organics incorporated into the asphalt binder stream in a dedicated delivery system. The process of foaming injects water into the asphalt binder stream, just prior to incorporation of the asphalt binder with the aggregate.

Approved WMA technologies may also be used in HMA provided all the requirements specified herein, with the exception of temperature, are met. However, asphalt mixtures produced at temperatures in excess of 275 °F (135 °C) will not be considered WMA when determining the grade reduction of the virgin asphalt binder grade.

Revised 1/10/14

## **BRIDGE DECK CONSTRUCTION**

Effective: October 22, 2013

### **Revise the Second Paragraph of Article 503.06(b) to read as follows.**

“When the Contractor uses cantilever forming brackets on exterior beams or girders, additional requirements shall be as follows.”

### **Revise Article 503.06(b)(1) to read as follows.**

“(1) Bracket Placement. The spacing of brackets shall be per the manufacture published design specifications for the size of the overhang and the construction loads anticipated. The resulting force of the leg brace of the cantilever bracket should bear on the web. In addition, for beams or girders where the rail supporting the finishing machine is supported outside the exterior girder by a distance of more than half the girder depth, the bracket should bear on the web within 6 inches (150 mm) from the top of the bottom flange of the girder.”

### **Revise Article 503.06(b)(2) to read as follows.**

“(2) Beam Ties. The top flange of the beams or girders supporting the cantilever forming brackets shall be tied to the bottom flange of the next interior beam. The ties shall be spaced at 4 ft (1.2 m) centers maximum. Ties shall be a minimum of 1/4 inch (6 mm) diameter threaded rod with a mechanism for drawing the tie taut. The ties shall utilize hanger brackets or clips which hook onto the flange without the assistance of welding or drilling to the any part of the beam.”

### **Revise Article 503.06(b)(3) to read as follows.**

“(3) Beam Blocks. Suitable beam blocks of 4 x 4 (100 x 100 mm) timbers or metal structural shapes of equivalent strength or better, acceptable to the Engineer, shall be wedged between the webs of the two beams tied together, within 6 inches (150 mm) of the bottom flange at each location where they are tied. When it is required but not feasible to have the resulting force from the leg brace of the cantilever brackets transmitted to the web within 6 inches (150 mm) of the bottom flange, then additional blocking shall be utilized spaced at each bracket but not less than 30 inches (750 mm) apart to transmit the resulting force to within 6 inches (150 mm) of the bottom flange of the next interior beam or girder.”

### **Delete the last paragraph of Article 503.06(b).**

Added 1/10/14

**Revise the third paragraph of Article 503.16 to read as follows.**

“Fogging equipment shall be in operation unless the evaporation rate is less than 0.1 Lb/sq ft/hour (0.5kg/sq m/hour) and the Engineer gives permission to stop. The evaporation rate shall be determined according to the following formula.

$$E = (T_c^{2.5} - rT_a^{2.5})(1 + 0.4V)x10^{-6} \text{ (English)}$$

$$E = 5[(T_c + 18)^{2.5} - r(T_a + 18)^{2.5}](V + 4)x10^{-6} \text{ (Metric)}$$

Where:

$E$  = Evaporation Rate, lb/ft<sup>2</sup>/h (kg/sq m/h)

$T_c$  = Concrete temperature, °F (°C)

$T_a$  = Air temperature, °F (°C)

$r$  = Relative humidity in percent/100

$V$  = Wind velocity, mph (km/h)

The Contractor shall provide temperature, relative humidity, and wind speed measuring equipment. Fogging equipment shall be adequate to reach or cover the entire pour from behind the finishing machine or vibrating screed to the point of curing covering application, and shall be operated in a manner which shall not accumulate water on the deck until the curing covering has been placed.”

**Revise the first sentence of the third paragraph of Article 503.16(a)(1) to read as follows.**

“At the Contractors option, a vibrating screed may be used in lieu of the finishing machine for superstructures with a pour width less than 24 ft.(7.3 m)”

**Delete the fifth paragraph of 503.16(a)(1).**

**Replace the second sentence of the first paragraph of Article 1020.13(a)(5) with the follows.**

“Cotton mats in poor condition will not be allowed. The cotton mats shall be placed in a manner which will not create indentations greater than 1/4 inch (6 mm) in the concrete surface. Minor marring of the surface is tolerable and is secondary to the importance of timely curing.”

**Revise the Article 1020.14(b) to read as follows.**

“(b) Concrete in Structures. Concrete may be placed when the air temperature is above 40 °F (4 °C) and rising, and concrete placement shall stop when the falling temperature reaches 45 °F (7 °C) or below, unless otherwise approved by the Engineer.

Added 1/10/14

- (1) Superstructure Concrete. For concrete in superstructures the Contractor shall schedule placing and finishing of the concrete during hours in which the ambient Air temperature is forecast to be lower than 85 °F (30 °C). The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 85 °F (30 °C).
- (2) Non-Superstructure Concrete. The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C). If concrete is pumped, the temperature of the concrete at point of placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

When insulated forms are used according to Article 1020.13(d)(1), the maximum temperature of the concrete mixture immediately before placement shall be 80 °F (25 °C).

When concrete is placed in contact with previously placed concrete, the temperature of the freshly mixed concrete may be increased to 80 °F (25 °C) by the Contractor to offset anticipated heat loss.”

**Revise Article 1103.13(a) to read as follows.**

- “(a) Bridge Deck. The finishing machine shall be equipped with: (1) a mechanical strike off device; (2) either a rotating cylinder(s) or a longitudinal oscillating screed which transversely finishes the surface of the concrete. The Contractor may attach other equipment to the finishing machine to enhance the final finish when approved by the Engineer. The finishing machine shall produce a floor surface of uniform texture, free from porous areas, and with the required surface smoothness.

The finishing machine shall be operated on rails or other supports that will not deflect under the applied loads. The maximum length of rails support on top of existing beams and within the pour shall be 10 ft (3 m). The supports shall be adjustable for elevation and shall be completely in place for the full length of the area to be finished. The supports shall be approved by the Engineer before placing of the concrete is started.”

**Revise Article 1103.17(k) to read as follows.**

- “(k) Fogging Equipment. Fogging equipment shall be hand held fogging equipment for humidity Control. The equipment shall be capable of atomizing water to produce a fog blanket by the use of pressure 2500 psi minimum (17.24 MPa) and an industrial fire hose fogging nozzle or equivalent. Fogging equipment attached to the finishing machine will not be permitted.”

Added 1/10/14

**HEAT OF HYDRATION CONTROL FOR CONCRETE STRUCTURES (D-1)**

Effective: November 1, 2013

Article 1020.15 shall not apply.

Added 1/10/14

IEPA FORM 663



# Illinois Environmental Protection Agency

Page 1 of 2

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62704-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as  
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.206(a)(1)(B), that soil (I) is uncontaminated soil and (II) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/624-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 307: Illinois Route 64 Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):  
17W400 North Avenue

City: Villa Park State: IL Zip Code: 60181

County: DuPage Township: Addison

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67690, -90.12345):

Latitude: 41.906061° Longitude: -87.968653°  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	<u>Illinois Department of Transportation</u>	Name:	_____
Street Address:	<u>201 West Center Court</u>	Street Address:	_____
PO Box:	_____	PO Box:	_____
City:	<u>Schaumburg</u> State: <u>IL</u>	City:	_____ State: _____
Zip Code:	<u>60196-1096</u> Phone: <u>847-705-4159</u>	Zip Code:	_____ Phone: _____
Contact:	<u>Sam Mead</u>	Contact:	_____
Email, if available:	<u>Sam.Mead@Illinois.gov</u>	Email, if available:	_____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 6/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

IL 632-2822  
LPC 663 Rev. 8/2012

Project Name: FAP 307: Illinois Route 64  
Latitude: 41.906061° Longitude: -87.968653°

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located [35 Ill. Adm. Code 1100.610(a)]:

Location A4801B03 was sampled within the construction zone adjacent to ISGS #1849-1 (Vacant Business). Refer to PSI Report, Table 4-3 and Figures 4-1A and 4-1B.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

See attached data summary table and associated laboratory package 500-66782.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Steven Gobelman (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Illinois Department of Transportation  
Street Address: 2300 South Dirksen Parkway  
City: Springfield State: IL Zip Code: 62764  
Phone: 217-785-4246

Steven Gobelman  
Printed Name:

  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

12/19/13  
Date:



**Analytical Data Summary**  
**PTB #166-14; Work Order 48 - IDOT Job # P-91-393-08**

**Key to Data Tables**

- µg/kg = Micrograms per kilogram.
- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

**Criteria Qualifiers**

- # = pH is outside of the acceptable range for a CCDD or uncontaminated soil fill operation.
- † = Concentration exceeds most stringent Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- m = Concentration exceeds the Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations for Metropolitan Statistical Areas.
- \* = Concentration exceeds the Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations for Chicago corporate limits.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the Soil Component of the Groundwater Ingestion Exposure Route (Class I groundwater) and the detected concentration is considered to exceed the MAC.
-  = Concentration exceeds the most Stringent MAC, but is below the MAC for an MSA.

PTB #166-14; Work Order 48 - IDOT Job # P-91-393-08

CONTAMINANTS OF CONCERN

SITE	ISGS #1849-1 (Vacant Business)	Comparison Criteria			
BORING	A4801B03	MACs			TACO
SAMPLE	A4801B03 (0-1.5)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (meters)	0.0-0.5				
pH	7.75				
<b>VOCs (None Detected)</b>					
<b>SVOCs (µg/kg)</b>					
Acenaphthene	7.8 J	570000	--	--	--
Anthracene	24 J	12000000	--	--	--
Benzo[a]anthracene	150	900	1800	1100	--
Benzo[a]pyrene	150 †	90	2100	1300	--
Benzo[b]fluoranthene	250	900	2100	1500	--
Benzo[g,h,i]perylene	160	--	--	--	--
Benzo[k]fluoranthene	77	9000	--	--	--
Chrysene	200	88000	--	--	--
Dibenzo[a,h]anthracene	47	90	420	200	--
Fluoranthene	340	3100000	--	--	--
Fluorene	8.4 J	560000	--	--	--
Indeno[1,2,3-cd]pyrene	110	900	1600	900	--
Phenanthrene	150	--	--	--	--
Pyrene	270	2300000	--	--	--
<b>Inorganics (mg/kg)</b>					
Arsenic	8.8	11.3	13	--	--
Barium	55	1500	--	--	--
Beryllium	0.69	22	--	--	--
Cadmium	0.64	5.2	--	--	--
Chromium	17	21	--	--	--
Cobalt	12	20	--	--	--
Copper	28	2900	--	--	--
Iron	19,000 †m	15000	15900	--	--
Lead	21	107	--	--	--
Magnesium	29,000	325000	--	--	--
Manganese	350	630	636	--	--
Mercury	0.027	0.89	--	--	--
Nickel	26	100	--	--	--
Thallium	0.29 J	2.6	--	--	--
Vanadium	22	550	--	--	--
Zinc	47	5100	--	--	--
<b>TCLP Metals (mg/L)</b>					
Barium	0.50	--	--	--	2
Copper	0.014 J	--	--	--	0.65
Manganese	0.14	--	--	--	0.15
Mercury	0.000030 J	--	--	--	0.002
Zinc	0.057 J	--	--	--	5

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-66782-1  
Client Project/Site: IDOT - North Avenue - WO 48

For:  
Ecology and Environment, Inc.  
33 West Monroe St.  
Suite 1410  
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:  
11/27/2013 1:29:52 PM

Richard Wright, Senior Project Manager  
(708)534-5200  
richard.wright@testamericainc.com



### LINKS

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results through  
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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAP and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

Client Sample Results

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

Client Sample ID: A4801B03 (0-1.5)

Lab Sample ID: 500-66782-2

Date Collected: 11/13/13 10:30

Matrix: Solid

Date Received: 11/14/13 06:30

Percent Solids: 83.4

Method: 8260B - VOC									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<5.7		5.7	1.2	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Vinyl chloride	<5.7		5.7	1.2	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Bromomethane	<5.7		5.7	1.7	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Chloroethane	<5.7		5.7	1.5	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,1-Dichloroethene	<5.7		5.7	0.92	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Carbon disulfide	<5.7		5.7	0.85	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Acetone	<5.7		5.7	2.4	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Methylene Chloride	<5.7		5.7	1.5	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
trans-1,2-Dichloroethene	<5.7		5.7	0.78	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Methyl tert-butyl ether	<5.7		5.7	0.94	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,1-Dichloroethane	<5.7		5.7	0.90	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
cis-1,2-Dichloroethene	<5.7		5.7	0.80	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Methyl Ethyl Ketone	<5.7		5.7	2.1	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Chloroform	<5.7		5.7	0.65	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,1,1-Trichloroethane	<5.7		5.7	0.85	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Carbon tetrachloride	<5.7		5.7	1.0	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Benzene	<5.7		5.7	0.78	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,2-Dichloroethane	<5.7		5.7	0.84	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Trichloroethene	<5.7		5.7	0.94	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,2-Dichloropropane	<5.7		5.7	0.86	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Bromodichloromethane	<5.7		5.7	0.98	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
cis-1,3-Dichloropropene	<5.7		5.7	0.74	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
methyl isobutyl ketone	<5.7		5.7	1.5	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Toluene	<5.7		5.7	0.79	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
trans-1,3-Dichloropropene	<5.7		5.7	1.0	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,1,2-Trichloroethane	<5.7		5.7	0.77	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Tetrachloroethene	<5.7		5.7	0.87	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
2-Hexanone	<5.7		5.7	1.6	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Dibromochloromethane	<5.7		5.7	0.99	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Chlorobenzene	<5.7		5.7	0.57	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Ethylbenzene	<5.7		5.7	1.1	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Styrene	<5.7		5.7	0.74	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Bromoform	<5.7		5.7	1.3	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,1,2,2-Tetrachloroethane	<5.7		5.7	1.1	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Xylenes, Total	<11		11	0.51	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
1,3-Dichloropropene, Total	<5.7		5.7	0.74	ug/Kg	☐	11/13/13 10:30	11/18/13 19:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 134				11/13/13 10:30	11/18/13 19:52	1
Toluene-d8 (Surr)	96		75 - 122				11/13/13 10:30	11/18/13 19:52	1
4-Bromofluorobenzene (Surr)	102		70 - 122				11/13/13 10:30	11/18/13 19:52	1
Dibromofluoromethane	107		75 - 120				11/13/13 10:30	11/18/13 19:52	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<190		190	84	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Bis(2-chloroethyl)ether	<190		190	57	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
1,3-Dichlorobenzene	<190		190	42	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
1,4-Dichlorobenzene	<190		190	48	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
1,2-Dichlorobenzene	<190		190	45	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1

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Client Sample Results

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

Client Sample ID: A4801B03 (0-1.5)

Lab Sample ID: 500-66782-2

Date Collected: 11/13/13 10:30

Matrix: Solid

Date Received: 11/14/13 06:30

Percent Solids: 83.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	<190		190	60	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,2'-oxybis[1-chloropropane]	<190		190	44	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
N-Nitrosodi-n-propylamine	<190		190	46	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Hexachloroethane	<190		190	57	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2-Chlorophenol	<190		190	64	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Nitrobenzene	<37		37	9.4	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Bis(2-chloroethoxy)methane	<190		190	38	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
1,2,4-Trichlorobenzene	<190		190	41	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Isophorone	<190		190	42	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,4-Dimethylphenol	<370		370	140	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Hexachlorobutadiene	<190		190	59	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Naphthalene	<37		37	5.8	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,4-Dichlorophenol	<370		370	90	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
4-Chloroaniline	<760		760	180	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,4,6-Trichlorophenol	<370		370	130	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,4,5-Trichlorophenol	<370		370	88	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Hexachlorocyclopentadiene	<760		760	220	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2-Methylnaphthalene	<190		190	60	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2-Nitroaniline	<190		190	51	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2-Chloronaphthalene	<190		190	42	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
4-Chloro-3-methylphenol	<370		370	130	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,6-Dinitrotoluene	<190		190	74	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2-Nitrophenol	<370		370	89	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
3-Nitroaniline	<370		370	120	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Dimethyl phthalate	<190		190	49	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,4-Dinitrophenol	<760		760	860	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Acenaphthylene	<37		37	5.0	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
2,4-Dinitrotoluene	<190		190	60	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Acenaphthene	7.8	J	37	6.8	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Dibenzofuran	<190		190	44	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
4-Nitrophenol	<760		760	360	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Fluorene	8.4	J	37	5.3	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
4-Nitroaniline	<370		370	160	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
4-Bromophenyl phenyl ether	<190		190	50	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Hexachlorobenzene	<76		76	8.7	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Diethyl phthalate	<190		190	64	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
4-Chlorophenyl phenyl ether	<190		190	44	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Pentachlorophenol	<760		760	600	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
N-Nitrosodiphenylamine	<190		190	44	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
4,6-Dinitro-2-methylphenol	<370		370	300	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Phenanthrene	150		37	5.3	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Anthracene	24	J	37	6.3	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Carbazole	<190		190	97	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Di-n-butyl phthalate	<190		190	57	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Fluoranthene	340		37	7.0	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Pyrene	270		37	7.5	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Butyl benzyl phthalate	<190		190	72	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Benzo[a]anthracene	150		37	5.1	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Chrysene	200		37	10	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

Client Sample ID: A4801B03 (0-1.5)

Lab Sample ID: 500-66782-2

Date Collected: 11/13/13 10:30

Matrix: Solid

Date Received: 11/14/13 06:30

Percent Solids: 83.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	<190		190	53	ug/Kg	☐	11/19/13 07:26	11/22/13 17:58	1
Bis(2-ethylhexyl) phthalate	<190		190	69	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Di-n-octyl phthalate	<190		190	62	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Benzo[b]fluoranthene	250		37	8.1	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Benzo[k]fluoranthene	77		37	11	ug/Kg	☐	11/19/13 07:26	11/22/13 17:58	1
Benzo[a]pyrene	150		37	7.3	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Indeno[1,2,3-cd]pyrene	110		37	9.8	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Dibenz[a,h]anthracene	47		37	7.3	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
Benzo[g,h,i]perylene	160		37	12	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1
3 & 4 Methylphenol	<190		190	63	ug/Kg	☐	11/19/13 07:25	11/22/13 17:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	74		25 - 110	11/19/13 07:25	11/22/13 17:58	1
Phenol-d5	69		31 - 110	11/19/13 07:25	11/22/13 17:58	1
Nitrobenzene-d5	69		25 - 115	11/19/13 07:25	11/22/13 17:58	1
2-Fluorobiphenyl	77		25 - 119	11/19/13 07:25	11/22/13 17:58	1
2,4,6-Tribromophenol	107		35 - 137	11/19/13 07:25	11/22/13 17:58	1
Terphenyl-d14	87		36 - 134	11/19/13 07:25	11/22/13 17:58	1

Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.46	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Arsenic	8.8		0.58	0.11	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Barium	55	B	0.58	0.062	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Beryllium	0.69		0.23	0.046	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Cadmium	0.64		0.12	0.015	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Chromium	17		0.58	0.067	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Cobalt	12		0.29	0.058	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Copper	28		0.58	0.12	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Iron	19000	B	12	4.7	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Lead	21		0.29	0.086	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Magnesium	29000		5.8	1.2	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Manganese	350		0.58	0.12	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Nickel	26		0.58	0.12	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Selenium	<0.58		0.58	0.20	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Silver	<0.29		0.29	0.021	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Thallium	0.29	J	0.58	0.24	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Vanadium	22		0.29	0.043	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1
Zinc	47	B	1.2	0.23	mg/Kg	☐	11/14/13 13:00	11/20/13 12:59	1

Method: 6010B - Metals (ICP) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1
Barium	0.50	B	0.50	0.010	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1
Beryllium	<0.0040		0.0040	0.0040	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1
Cadmium	<0.0050		0.0050	0.0020	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1
Chromium	<0.025		0.025	0.010	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1
Cobalt	<0.025		0.025	0.0050	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1
Copper	0.014	J	0.025	0.010	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1
Iron	<0.20		0.20	0.20	mg/L	☐	11/21/13 10:00	11/21/13 22:45	1

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Client Sample Results

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

Client Sample ID: A4801B03 (0-1.5)

Lab Sample ID: 500-66782-2

Date Collected: 11/13/13 10:30

Matrix: Solid

Date Received: 11/14/13 06:30

Method: 6010B - Metals (ICP) - TCLP (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.0075		0.0075	0.0075	mg/L		11/21/13 10:00	11/21/13 22:45	1
Manganese	0.14		0.025	0.010	mg/L		11/21/13 10:00	11/21/13 22:45	1
Nickel	<0.025		0.025	0.010	mg/L		11/21/13 10:00	11/21/13 22:45	1
Selenium	<0.050		0.050	0.010	mg/L		11/21/13 10:00	11/21/13 22:45	1
Silver	<0.025		0.025	0.0050	mg/L		11/21/13 10:00	11/21/13 22:45	1
Vanadium	<0.025		0.025	0.0050	mg/L		11/21/13 10:00	11/21/13 22:45	1
Zinc	0.057	J	0.10	0.020	mg/L		11/21/13 10:00	11/21/13 22:45	1

  

Method: 6020A - Metals (ICP/MS) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/21/13 10:00	11/21/13 19:50	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/21/13 10:00	11/21/13 19:50	1

  

Method: 7470A - Mercury (CVAA) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000030	J B	0.00020	0.000020	mg/L		11/21/13 15:15	11/22/13 09:50	1

  

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027		0.019	0.0088	mg/Kg		11/18/13 15:00	11/19/13 10:18	1

  

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.75		0.200	0.200	SU			11/20/13 22:32	1

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### Definitions/Glossary

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

#### Qualifiers

##### GC/MS Semi VOA

Qualifier	Qualifier Description
-	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

##### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	Duplicate RPD exceeds the control limit
F	MS/MSD Recovery and/or RPD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

#### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
a	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NG	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TestAmerica Chicago

**Certification Summary**

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

**Laboratory: TestAmerica Chicago**

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-14
California	NELAP	9	01132CA	04-30-14
Georgia	State Program	4	N/A	04-30-14
Hawaii	State Program	9	N/A	04-30-14
Illinois	NELAP	5	100201	04-30-14
Indiana	State Program	5	C-IL-02	04-30-14
Iowa	State Program	7	82	05-01-14
Kansas	NELAP	7	E-10161	10-31-14
Kentucky	State Program	4	90023	12-31-13
Kentucky (UST)	State Program	4	66	04-30-14
Louisiana	NELAP	6	30720	06-30-14
Massachusetts	State Program	1	M-IL035	06-30-14
Mississippi	State Program	4	N/A	04-30-14
North Carolina DENR	State Program	4	291	12-31-13
North Dakota	State Program	8	R-194	04-30-14
Oklahoma	State Program	6	8908	08-31-14
South Carolina	State Program	4	77001	04-30-14
Texas	NELAP	6	T104704252-09-TX	02-28-14
USDA	Federal		P330-12-00039	02-06-15
Wisconsin	State Program	5	999580010	08-31-14
Wyoming	State Program	8	8TMS-O	04-30-14

13

\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Chicago



# Chain of Custody Record

Lab Job #: 501-66782  
 Chain of Custody Number: AE5-48-03  
 Page 1 of 1  
 Temperature °C of Cooler: 2.6

Report To: Scott Cooper  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Client: Ecology Environment  
 Project Name: North Avenue (FL64)  
 Project Location/State: DuPage County, IL  
 Sampler: Scott Cooper  
 Client Project #: EE-104694-600-0170  
 Lab Project #: 50808967  
 Lab P#: Dick Wray W  
 500-96782-COC

Lab ID	M/S/MS	Sample ID	Date	Time	Preservative	Parameter	Matrix		Comments
							# of Containers	Matrix	
1		A4801B01 (2-4)	11-13-13	0945	Vol	Vol			
2		A4801B03 (0-1.5)	11-13-13	1030	X	X			
3		A4801B02 (0-2)	11-13-13	1050	X	X			
4		A4801B01 (0-1)	11-13-13	1115	X	X			
5		A4801B02 (0-1)	11-13-13	1125	X	X			
6		A4805B01 (0-1.5)	11-13-13	1215	X	X			
7		A4805B03 (0-1)	11-13-13	1230	X	X			
8		A4805B04 (2-4)	11-13-13	1340	X	X			
9		A4805B05 (0-2)	11-13-13	1410	X	X			

Preservative Key  
 1. HCL, Cool to 4°  
 2. H2SO4, Cool to 4°  
 3. HNO3, Cool to 4°  
 4. NaOH, Cool to 4°  
 5. NaOH/Zn, Cool to 4°  
 6. NaHSO4  
 7. Cool to 4°  
 8. None  
 9. Other

Turnaround Time Required (Business Days)  
 Requested Due Date: 1 Day 2 Days 5 Days 7 Days 10 Days 15 Days Other

Sample Disposal  
 Return to Client  
 Disposal by Lab

Requested By: [Signature] Date: 11/13/13 Time: 1515  
 Company: Ecology Environment

Received By: [Signature] Date: 11/13/13 Time: 1515  
 Company: Ecology Environment

Requested By: [Signature] Date: 11/13/13 Time: 1610  
 Company: Ecology Environment

Received By: [Signature] Date: 11/14/13 Time: 0630  
 Company: Ecology Environment

Lab Courier: [Signature]  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater  
 W - Water  
 S - Soil  
 SL - Sludge  
 MS - Miscellaneous  
 OL - Oil  
 A - Air

Client Comments: \_\_\_\_\_  
 Lab Comments: \_\_\_\_\_



# Illinois Environmental Protection Agency

Page 1 of 2

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62704-9276

**Uncontaminated Soil Certification**  
**by Licensed Professional Engineer or Licensed Professional Geologist**  
**for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation**  
**LPC-663**

**Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)**

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (I) is uncontaminated soil and (II) is within a pH range of 6.28 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/624-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

## I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 307: Illinois Route 64 Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):  
696 West North Avenue

City: Elmhurst State: IL Zip Code: 60126

County: DuPage Township: York

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.57690, -90.12345):

Latitude: 41.905338° Longitude: -87.967054°  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

## II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	<u>Illinois Department of Transportation</u>	Name:	_____
Street Address:	<u>201 West Center Court</u>	Street Address:	_____
PO Box:	_____	PO Box:	_____
City:	<u>Schaumburg</u> State: <u>IL</u>	City:	_____ State: _____
Zip Code:	<u>60196-1096</u> Phone: <u>847-705-4159</u>	Zip Code:	_____ Phone: _____
Contact:	<u>Sam Mead</u>	Contact:	_____
Email, if available:	<u>Sam.Mead@illinois.gov</u>	Email, if available:	_____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

IL 632-2622  
LPC 663 Rev. 8/2012

Project Name: FAP 307: Illinois Route 64  
Latitude: 41.905336° Longitude: -87.967054°

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Location A4805B05 was sampled within the construction zone adjacent to ISGS #1849-5 (Commercial Plaza #3). Refer to PSI Report, Table 4-3 and Figures 4-1A and 4-1B.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

See attached data summary table and associated laboratory package 500-66782.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Steven Gobelman (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Illinois Department of Transportation  
Street Address: 2300 South Dirksen Parkway  
City: Springfield State: IL Zip Code: 62764  
Phone: 217-785-4246  
Steven Gobelman

Printed Name:

  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

Date: 12/5/13



**Analytical Data Summary**  
**PTB #166-14; Work Order 48 - IDOT Job # P-91-393-08**

**Key to Data Tables**

- µg/kg = Micrograms per kilogram.
- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

**Criteria Qualifiers**

- # = pH is outside of the acceptable range for a CCDD or uncontaminated soil fill operation.
- † = Concentration exceeds most stringent Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- m = Concentration exceeds the Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations for Metropolitan Statistical Areas.
- \* = Concentration exceeds the Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations for Chicago corporate limits.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the Soil Component of the Groundwater Ingestion Exposure Route (Class I groundwater) and the detected concentration is considered to exceed the MAC.
-  = Concentration exceeds the most Stringent MAC, but is below the MAC for an MSA.

PTB #166-14; Work Order 48 - IDOT Job # P-91-393-08

CONTAMINANTS OF CONCERN

SITE	ISGS #1849-5 (Commercial Plaza #3)	Comparison Criteria			
		MACs	TACO		
BORING	A4805B05				
SAMPLE	A4805B05 (0-2)				
MATRIX	Soil				
DEPTH (meters)	0.0-0.6				
pH	7.95	Most Stringent	Within an MSA	Within Chicago	SCGIER
<b>VOCs (None Detected)</b>					
<b>SVOCs (µg/kg)</b>					
Acenaphthene	22 J	570000	—	—	—
Acenaphthylene	13 J	—	—	—	—
Anthracene	79	12000000	—	—	—
Benzo[a]anthracene	530	900	1800	1100	—
Benzo[a]pyrene	600 †	90	2100	1300	—
Benzo[b]fluoranthene	820	900	2100	1500	—
Benzo[g,h,i]perylene	600	—	—	—	—
Benzo[k]fluoranthene	400	9000	—	—	—
Bis[2-ethylhexyl] phthalate	170 J	46000	—	—	—
Chrysene	720	88000	—	—	—
Dibenzo[a,h]anthracene	170 †	90	420	200	—
Fluoranthene	1,500	3100000	—	—	—
Fluorene	23 J	560000	—	—	—
Indeno[1,2,3-cd]pyrene	460	900	1600	900	—
Phenanthrene	460	—	—	—	—
Pyrene	1,100	2300000	—	—	—
<b>Inorganics (mg/kg)</b>					
Arsenic	9.8	11.3	13	—	—
Barium	160	1500	—	—	—
Beryllium	0.78	22	—	—	—
Cadmium	0.78	5.2	—	—	—
Chromium	21	21	—	—	—
Cobalt	9.4	20	—	—	—
Copper	32	2900	—	—	—
Iron	19,000 †m	15000	15900	—	—
Lead	61	107	—	—	—
Magnesium	14,000	325000	—	—	—
Manganese	520	630	636	—	—
Mercury	0.058	0.89	—	—	—
Nickel	20	100	—	—	—
Vanadium	28	550	—	—	—
Zinc	97	5100	—	—	—
<b>TCLP Metals (mg/L)</b>					
Barium	0.52	—	—	—	2
Cadmium	0.0020 J	—	—	—	0.005
Manganese	0.093	—	—	—	0.15
Mercury	0.000028 J	—	—	—	0.002
Selenium	0.010 J	—	—	—	0.05
Zinc	0.063 J	—	—	—	5

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-66782-1  
Client Project/Site: IDOT - North Avenue - WO 48

For:  
Ecology and Environment, Inc.  
33 West Monroe St.  
Suite 1410  
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:  
11/27/2013 1:29:52 PM

Richard Wright, Senior Project Manager  
(708)534-5200  
richard.wright@testamericainc.com



### LINKS

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results through  
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The  
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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAP and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

Client Sample Results

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

Client Sample ID: A4805B05 (0-2)

Lab Sample ID: 500-66782-9

Date Collected: 11/13/13 14:10

Matrix: Solid

Date Received: 11/14/13 06:30

Percent Solids: 81.5

Method: 8260B - VOC									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<5.5		5.5	1.2	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Vinyl chloride	<5.5		5.5	1.2	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Bromomethane	<5.5		5.5	1.7	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Chloroethane	<5.5		5.5	1.5	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,1-Dichloroethene	<5.5		5.5	0.89	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Carbon disulfide	<5.5		5.5	0.82	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Acetone	<5.5		5.5	2.4	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Methylene Chloride	<5.5		5.5	1.5	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
trans-1,2-Dichloroethene	<5.5		5.5	0.76	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Methyl tert-butyl ether	<5.5		5.5	0.91	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,1-Dichloroethane	<5.5		5.5	0.87	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
cis-1,2-Dichloroethene	<5.5		5.5	0.78	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Methyl Ethyl Ketone	<5.5		5.5	2.0	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Chloroform	<5.5		5.5	0.63	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,1,1-Trichloroethane	<5.5		5.5	0.82	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Carbon tetrachloride	<5.5		5.5	1.0	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Benzene	<5.5		5.5	0.76	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,2-Dichloroethane	<5.5		5.5	0.82	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Trichloroethene	<5.5		5.5	0.91	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,2-Dichloropropane	<5.5		5.5	0.84	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Bromodichloromethane	<5.5		5.5	0.95	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
cis-1,3-Dichloropropene	<5.5		5.5	0.72	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
methyl isobutyl ketone	<5.5		5.5	1.4	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Toluene	<5.5		5.5	0.77	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
trans-1,3-Dichloropropene	<5.5		5.5	0.89	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,1,2-Trichloroethane	<5.5		5.5	0.75	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Tetrachloroethene	<5.5		5.5	0.84	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
2-Hexanone	<5.5		5.5	1.6	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Dibromochloromethane	<5.5		5.5	0.96	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Chlorobenzene	<5.5		5.5	0.56	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Ethylbenzene	<5.5		5.5	1.1	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Styrene	<5.5		5.5	0.72	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Bromoform	<5.5		5.5	1.3	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,1,2,2-Tetrachloroethane	<5.5		5.5	1.1	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Xylenes, Total	<11		11	0.50	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
1,3-Dichloropropene, Total	<5.5		5.5	0.72	ug/Kg	☐	11/13/13 14:10	11/19/13 13:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 134				11/13/13 14:10	11/19/13 13:42	1
Toluene-d8 (Surr)	99		75 - 122				11/13/13 14:10	11/19/13 13:42	1
4-Bromofluorobenzene (Surr)	105		70 - 122				11/13/13 14:10	11/19/13 13:42	1
Dibromofluoromethane	106		75 - 120				11/13/13 14:10	11/19/13 13:42	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<200		200	89	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Bis(2-chloroethyl)ether	<200		200	60	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
1,3-Dichlorobenzene	<200		200	45	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
1,4-Dichlorobenzene	<200		200	52	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
1,2-Dichlorobenzene	<200		200	48	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

Client Sample ID: A4805B05 (0-2)

Lab Sample ID: 500-66782-9

Date Collected: 11/13/13 14:10

Matrix: Solid

Date Received: 11/14/13 06:30

Percent Solids: 81.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	<200		200	65	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
2,2'-oxybis[1-chloropropane]	<200		200	47	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
N-Nitrosodi-n-propylamine	<200		200	49	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Hexachloroethane	<200		200	61	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2-Chlorophenol	<200		200	69	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
Nitrobenzene	<40		40	10	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Bis(2-chloroethoxy)methane	<200		200	41	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
1,2,4-Trichlorobenzene	<200		200	43	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Isophorone	<200		200	45	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
2,4-Dimethylphenol	<400		400	150	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Hexachlorobutadiene	<200		200	63	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
Naphthalene	<40		40	6.2	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2,4-Dichlorophenol	<400		400	96	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
4-Chloroaniline	<810		810	190	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2,4,6-Trichlorophenol	<400		400	140	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2,4,5-Trichlorophenol	<400		400	92	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Hexachlorocyclopentadiene	<810		810	230	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
2-Methylnaphthalene	<200		200	64	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2-Nitroaniline	<200		200	54	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2-Chloronaphthalene	<200		200	45	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
4-Chloro-3-methylphenol	<400		400	140	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2,6-Dinitrotoluene	<200		200	79	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2-Nitrophenol	<400		400	95	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
3-Nitroaniline	<400		400	120	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Dimethyl phthalate	<200		200	53	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2,4-Dinitrophenol	<810		810	710	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Acenaphthylene	13 J		40	5.3	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
2,4-Dinitrotoluene	<200		200	64	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Acenaphthene	22 J		40	7.2	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Dibenzofuran	<200		200	47	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
4-Nitrophenol	<810		810	380	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Fluorene	23 J		40	5.7	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
4-Nitroaniline	<400		400	170	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
4-Bromophenyl phenyl ether	<200		200	53	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Hexachlorobenzene	<81		81	9.3	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Diethyl phthalate	<200		200	68	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
4-Chlorophenyl phenyl ether	<200		200	47	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Pentachlorophenol	<810		810	650	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
N-Nitrosodiphenylamine	<200		200	48	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
4,6-Dinitro-2-methylphenol	<400		400	320	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Phenanthrene	460		40	5.6	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Anthracene	79		40	6.7	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Carbazole	<200		200	100	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Di-n-butyl phthalate	<200		200	61	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Fluoranthene	1500		40	7.5	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Pyrene	1100		40	8.0	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Butyl benzyl phthalate	<200		200	77	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Benzo[a]anthracene	530		40	5.4	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Chrysene	720		40	11	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

Client Sample ID: A4805B05 (0-2)

Lab Sample ID: 500-66782-9

Date Collected: 11/13/13 14:10

Matrix: Solid

Date Received: 11/14/13 06:30

Percent Solids: 81.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	<200		200	56	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
Bis(2-ethylhexyl) phthalate	170	J	200	74	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Di-n-octyl phthalate	<200		200	66	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Benzo[b]fluoranthene	820		40	6.7	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Benzo[k]fluoranthene	400		40	12	ug/Kg	☐	11/19/13 07:26	11/22/13 19:55	1
Benzo[a]pyrene	600		40	7.8	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Indeno[1,2,3-cd]pyrene	460		40	10	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Dibenz[a,h]anthracene	170		40	7.8	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
Benzo[g,h,i]perylene	600		40	13	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1
3 & 4 Methylphenol	<200		200	67	ug/Kg	☐	11/19/13 07:25	11/22/13 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	69		25 - 110	11/19/13 07:25	11/22/13 19:55	1
Phenol-d5	71		31 - 110	11/19/13 07:25	11/22/13 19:55	1
Nitrobenzene-d5	67		25 - 115	11/19/13 07:25	11/22/13 19:55	1
2-Fluorobiphenyl	79		25 - 119	11/19/13 07:25	11/22/13 19:55	1
2,4,6-Tribromophenol	108		35 - 137	11/19/13 07:25	11/22/13 19:55	1
Terphenyl-d14	83		36 - 134	11/19/13 07:25	11/22/13 19:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.45	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Arsenic	9.8		0.56	0.11	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Barium	160	B	0.56	0.060	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Beryllium	0.78		0.22	0.045	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Cadmium	0.78		0.11	0.014	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Chromium	21		0.56	0.065	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Cobalt	9.4		0.28	0.056	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Copper	32		0.56	0.11	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Iron	19000	B	11	4.8	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Lead	61		0.28	0.083	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Magnesium	14000		5.6	1.2	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Manganese	520		0.56	0.11	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Nickel	20		0.56	0.11	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Selenium	<0.56		0.56	0.20	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Silver	<0.28		0.28	0.020	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Thallium	<0.56		0.56	0.24	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Vanadium	28		0.28	0.041	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1
Zinc	97	B	1.1	0.23	mg/Kg	☐	11/14/13 13:00	11/20/13 13:42	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1
Barium	0.52	B	0.50	0.010	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1
Beryllium	<0.0040		0.0040	0.0040	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1
Cadmium	0.0020	J	0.0050	0.0020	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1
Chromium	<0.025		0.025	0.010	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1
Cobalt	<0.025		0.025	0.0050	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1
Copper	<0.025		0.025	0.010	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1
Iron	<0.20		0.20	0.20	mg/L	☐	11/21/13 10:00	11/21/13 23:28	1

TestAmerica Chicago

**Client Sample Results**

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

**Client Sample ID: A4805B05 (0-2)**

**Lab Sample ID: 500-66782-9**

Date Collected: 11/13/13 14:10

Matrix: Solid

Date Received: 11/14/13 06:30

Method: 6010B - Metals (ICP) - TCLP (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.0075		0.0075	0.0075	mg/L		11/21/13 10:00	11/21/13 23:28	1
Manganese	0.093		0.025	0.010	mg/L		11/21/13 10:00	11/21/13 23:28	1
Nickel	<0.025		0.025	0.010	mg/L		11/21/13 10:00	11/21/13 23:28	1
Selenium	0.010	J B	0.050	0.010	mg/L		11/21/13 10:00	11/21/13 23:28	1
Silver	<0.025		0.025	0.0050	mg/L		11/21/13 10:00	11/21/13 23:28	1
Vanadium	<0.025		0.025	0.0050	mg/L		11/21/13 10:00	11/21/13 23:28	1
Zinc	0.063	J	0.10	0.020	mg/L		11/21/13 10:00	11/21/13 23:28	1

Method: 6020A - Metals (ICP/MS) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/21/13 10:00	11/21/13 20:16	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/21/13 10:00	11/21/13 20:16	1

Method: 7470A - Mercury (CVAA) - TCLP									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000028	J B	0.00020	0.000020	mg/L		11/21/13 15:15	11/22/13 10:07	1

Method: 7471B - Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.058		0.020	0.0092	mg/Kg		11/18/13 15:00	11/19/13 10:35	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.95		0.200	0.200	SU			11/20/13 17:24	1

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### Definitions/Glossary

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

#### Qualifiers

##### GC/MS Semi VOA

Qualifier	Qualifier Description
-	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

##### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	Duplicate RPD exceeds the control limit
F	MS/MSD Recovery and/or RPD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

#### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
a	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NG	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TestAmerica Chicago

**Certification Summary**

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT- North Avenue - WO 48

TestAmerica Job ID: 500-66782-1

**Laboratory: TestAmerica Chicago**

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-14
California	NELAP	9	01132CA	04-30-14
Georgia	State Program	4	N/A	04-30-14
Hawaii	State Program	9	N/A	04-30-14
Illinois	NELAP	5	100201	04-30-14
Indiana	State Program	5	C-IL-02	04-30-14
Iowa	State Program	7	82	05-01-14
Kansas	NELAP	7	E-10161	10-31-14
Kentucky	State Program	4	90023	12-31-13
Kentucky (UST)	State Program	4	66	04-30-14
Louisiana	NELAP	6	30720	06-30-14
Massachusetts	State Program	1	M-IL035	06-30-14
Mississippi	State Program	4	N/A	04-30-14
North Carolina DENR	State Program	4	291	12-31-13
North Dakota	State Program	8	R-194	04-30-14
Oklahoma	State Program	6	8908	08-31-14
South Carolina	State Program	4	77001	04-30-14
Texas	NELAP	6	T104704252-09-TX	02-28-14
USDA	Federal		P330-12-00039	02-06-15
Wisconsin	State Program	5	999580010	08-31-14
Wyoming	State Program	8	8TMS-O	04-30-14

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\* Expired certification is currently pending renewal and is considered valid.

TestAmerica Chicago



# Chain of Custody Record

Lab Job #: 501-66782  
 Chain of Custody Number: AE5-48-03  
 Page 1 of 1  
 Temperature °C of Cooler: 2.6

Report To: Scott Cooper  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Client: Ecology Environment  
 Project Name: North Avenue (FL64)  
 Project Location/State: DuPage County, IL  
 Sampler: Scott Cooper  
 Client Project #: EE-104694-600-0170  
 Lab Project #: 50808967  
 Lab P#: Dick Wray W  
 500-96782.COC

Lab ID	M/S/MS	Sample ID	Sampling		Preservative	Parameter	Matrix	# of Containers	Time	Date	Comments
			Date	Time							
1		A4801B01 (2-4)	11-13-13	0945	Vol	Vol					
2		A4801B03 (0-1.5)	11-13-13	1030	X	X	X	X			
3		A4801B02 (0-2)	11-13-13	1050	X	X	X	X			
4		A4801B01 (0-1)	11-13-13	1115	X	X	X	X			
5		A4801B02 (0-1)	11-13-13	1125	X	X	X	X			
6		A4805B01 (0-1.5)	11-13-13	1215	X	X	X	X			
7		A4805B03 (0-1)	11-13-13	1230	X	X	X	X			
8		A4805B04 (2-4)	11-13-13	1340	X	X	X	X			
9		A4805B05 (0-2)	11-13-13	1410	X	X	X	X			

Preservative Key  
 1. HCL, Cool to 4°  
 2. H2SO4, Cool to 4°  
 3. HNO3, Cool to 4°  
 4. NaOH, Cool to 4°  
 5. NaOH/Zn, Cool to 4°  
 6. NaHSO4  
 7. Cool to 4°  
 8. None  
 9. Other

Turnaround Time Required (Business Days)  
 Requested Due Date: 1 Day 2 Days 5 Days 7 Days 10 Days 15 Days Other

Sample Disposal  
 Return to Client  
 Disposal by Lab

Requested By: Scott Cooper Company: Ecology Environment Date: 11/13/13 Time: 1515  
 Received By: Shawn Company: Ecology Environment Date: 11/13/13 Time: 1515  
 Received By: Shawn Company: Ecology Environment Date: 11/14/13 Time: 0630

Lab Courier: EA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater  
 W - Water  
 S - Soil  
 SL - Sludge  
 MS - Miscellaneous  
 OL - Oil  
 A - Air

Client Comments: \_\_\_\_\_  
 Lab Comments: \_\_\_\_\_  
 Page 86 of 87  
 11/27/2013