

February 16, 2018

Rob King
Hampton Bays Water District
P.O. Box 1013
Hampton Bays, NY 11946

RE: Project: DIST BACT 2/14
Pace Project No.: 7042969

Dear Rob King:
Enclosed are the analytical results for sample(s) received by the laboratory on February 14, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Stu Murrell
stu.murrell@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Warren Booth, Hampton Bays Water District
John Collins, H2M Group
Stella Michaels, Hampton Bays Water District
Paul Ponturo, H2M Group



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747

New York Certification #: 10478 Primary Accrediting Body

New Jersey Certification #: NY158

Pennsylvania Certification #: 68-00350

Connecticut Certification #: PH-0435

Maryland Certification #: 208

Rhode Island Certification #: LAO00340

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: DIST BACT 2/14

Pace Project No.: 7042969

Lab ID	Sample ID	Matrix	Date Collected	Date Received
7042969001	HB27	Drinking Water	02/14/18 09:25	02/14/18 16:10
7042969002	HB2	Drinking Water	02/14/18 07:45	02/14/18 16:10
7042969003	HB3	Drinking Water	02/14/18 08:04	02/14/18 16:10
7042969004	HB4	Drinking Water	02/14/18 08:20	02/14/18 16:10
7042969005	HB5	Drinking Water	02/14/18 08:51	02/14/18 16:10
7042969006	HB6	Drinking Water	02/14/18 09:07	02/14/18 16:10
7042969007	HB7	Drinking Water	02/14/18 09:40	02/14/18 16:10
7042969008	HB8	Drinking Water	02/14/18 09:55	02/14/18 16:10
7042969009	HB9	Drinking Water	02/14/18 07:30	02/14/18 16:10
7042969010	HB10	Drinking Water	02/14/18 10:10	02/14/18 16:10
7042969011	HB11	Drinking Water	02/14/18 10:30	02/14/18 16:10

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: DIST BACT 2/14

Pace Project No.: 7042969

Lab ID	Sample ID	Method	Analysts	Analytes Reported
7042969001	HB27	SM22 9223B Colilert	BNK	2
7042969002	HB2	SM22 9223B Colilert	BNK	2
7042969003	HB3	SM22 9223B Colilert	BNK	2
7042969004	HB4	SM22 9223B Colilert	BNK	2
7042969005	HB5	SM22 9223B Colilert	BNK	2
7042969006	HB6	SM22 9223B Colilert	BNK	2
7042969007	HB7	SM22 9223B Colilert	BNK	2
7042969008	HB8	SM22 9223B Colilert	BNK	2
7042969009	HB9	SM22 9223B Colilert	BNK	2
7042969010	HB10	SM22 9223B Colilert	BNK	2
7042969011	HB11	SM22 9223B Colilert	BNK	2

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB27		Lab ID: 7042969001		Collected: 02/14/18 09:25	Received: 02/14/18 16:10	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual	
Field Chlorine and pH		Analytical Method:								
Field Residual Chlorine	0.52	mg/L			1		02/14/18 09:25		N3	
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert								
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00			
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB2		Lab ID: 7042969002		Collected: 02/14/18 07:45	Received: 02/14/18 16:10	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual	
Field Chlorine and pH		Analytical Method:								
Field Residual Chlorine	0.47	mg/L			1		02/14/18 07:45		N3	
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert								
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00			
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: HB3									
Lab ID: 7042969003									
Collected: 02/14/18 08:04 Received: 02/14/18 16:10 Matrix: Drinking Water									
Field Chlorine and pH									
Analytical Method:									
Field Residual Chlorine	0.38	mg/L			1		02/14/18 08:04		N3
MBIO Total Coliform DW									
Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert									
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00		
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB4		Lab ID: 7042969004		Collected: 02/14/18 08:20	Received: 02/14/18 16:10	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Chlorine and pH		Analytical Method:							
Field Residual Chlorine	0.58	mg/L			1		02/14/18 08:20		N3
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert							
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00		
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB5		Lab ID: 7042969005		Collected: 02/14/18 08:51	Received: 02/14/18 16:10	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual	
Field Chlorine and pH		Analytical Method:								
Field Residual Chlorine	0.66	mg/L			1		02/14/18 08:51		N3	
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert								
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00			
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB6		Lab ID: 7042969006		Collected: 02/14/18 09:07	Received: 02/14/18 16:10	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual	
Field Chlorine and pH		Analytical Method:								
Field Residual Chlorine	0.61	mg/L			1		02/14/18 09:07		N3	
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert								
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00			
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB7		Lab ID: 7042969007		Collected: 02/14/18 09:40	Received: 02/14/18 16:10	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual	
Field Chlorine and pH		Analytical Method:								
Field Residual Chlorine	0.46	mg/L			1		02/14/18 09:40		N3	
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert								
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00			
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB8		Lab ID: 7042969008		Collected: 02/14/18 09:55	Received: 02/14/18 16:10	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Chlorine and pH		Analytical Method:							
Field Residual Chlorine	0.76	mg/L			1		02/14/18 09:55		N3
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert							
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00		
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB9		Lab ID: 7042969009		Collected: 02/14/18 07:30	Received: 02/14/18 16:10	Matrix: Drinking Water			
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Chlorine and pH		Analytical Method:							
Field Residual Chlorine	0.39	mg/L			1		02/14/18 07:30		N3
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert							
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00		
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB10 **Lab ID: 7042969010** Collected: 02/14/18 10:10 Received: 02/14/18 16:10 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
Field Chlorine and pH									
Analytical Method:									
Field Residual Chlorine	0.61	mg/L			1		02/14/18 10:10		N3
MBIO Total Coliform DW									
Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert									
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00		
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: DIST BACT 2/14

Pace Project No.: 7042969

Sample: HB11		Lab ID: 7042969011		Collected: 02/14/18 10:30	Received: 02/14/18 16:10	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual	
Field Chlorine and pH		Analytical Method:								
Field Residual Chlorine	0.49	mg/L			1		02/14/18 10:30		N3	
MBIO Total Coliform DW		Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert								
Total Coliforms	Absent				1	02/14/18 18:00	02/15/18 12:00			
E.coli	Absent				1	02/14/18 18:00	02/15/18 12:00			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: DIST BACT 2/14

Pace Project No.: 7042969

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N3 Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DIST BACT 2/14

Pace Project No.: 7042969

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7042969001	HB27		56477		
7042969002	HB2		56477		
7042969003	HB3		56477		
7042969004	HB4		56477		
7042969005	HB5		56477		
7042969006	HB6		56477		
7042969007	HB7		56477		
7042969008	HB8		56477		
7042969009	HB9		56477		
7042969010	HB10		56477		
7042969011	HB11		56477		
7042969001	HB27	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969002	HB2	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969003	HB3	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969004	HB4	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969005	HB5	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969006	HB6	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969007	HB7	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969008	HB8	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969009	HB9	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969010	HB10	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705
7042969011	HB11	SM22 9223B Colilert	56426	SM22 9223B Colilert	56705

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

WO#: 7042969



7042969 7042969 FAX: (031) 728-8436

47

Sample Request Form PUBLIC WATER SUPPLIER

WELL OFF LINE

WELL RUN TO SYSTEM

Date: 2-13-18

Collected By: K. TUTTILL

Accepted By: [Signature]

Cooler Temp: 2.6 °C

YES NO VOC'S PRESERVED WITH HCl

Back 16/6

Client Info:

Name or Code: HAMPTON BAYS WATER DISTRICT

Address: PO BOX 1013

HAMPTON BAYS, NEW YORK 11946

(031) 728-0179

Phone #: _____

Attn: _____

Proj. # or (Name): _____

Bill To: _____

Copies To: _____

Sample Info:

Date/Time Collected:	Sample Type	Location	Origin	Treatment Type	Purpose	Field Readings Cl ₂ pH/Temp	Analysis	Lab No.
9:25AM 2-13-18	PW	#27	D	-	RO	7.02 .52	BACT w/ccl	001
7:45AM 2-13-18	PW	#2	D	-	RO	7.22 .47	BACT w/ccl	002
9:04AM 2-13-18	PW	#3	D	-	RO	7.06 .38	BACT w/ccl	003
8:20AM 2-13-18	PW	#4	D	-	RO	7.03 .58	BACT w/ccl	004
8:51AM 2-13-18	PW	#5	D	-	RO	7.02 .66	BACT w/ccl	005
9:10AM 2-13-18	PW	#6	D	-	RO	7.03 .61	BACT w/ccl	006
9:40AM 2-13-18	PW	#7	D	-	RO	7.07 .46	BACT w/ccl	007
9:55AM 2-13-18	PW	#8	D	-	RO	7.05 .76	BACT w/ccl	008
7:30AM 2-13-18	PW	#9	D	-	RO	7.24 .39	BACT w/ccl	009
10:16AM 2-13-18	PW	#10	D	-	RO	7.04 .61	BACT w/ccl	010
10:30AM 2-13-18	PW	#11	D	-	RO	7.00 .49	BACT w/ccl	010
Remarks:								
8:35AM 2-13-18	PW	B-ANGELONE 17 KING ST.	D	-	S	7.18 .36	metals	

Sample Types

- PW - Potable Water
- GW - Groundwater
- SW - Surface Water
- WW - Waste Water
- AQ - Aqueous
- S - Soil

Purpose

- RO - Routine
- RE - Resample
- S - Special

Origin

- D - Distribution
- RW - Raw Well
- TW - Treated Well
- T - Tank
- MW - Monitoring Well
- I - Influent
- E - Effluent

Treatment Types

- AST - Air Stripper
- GAC - Granular Activated Charcoal
- N - Nitrate Removal Plant
- FE - Iron Removal Plant
- O - Other

WO#: 7042969

PM: SWM Due Date: 03/16/18

CLIENT: HBW

Sample Condition Upon Receipt

Client Name: HBW

Project #

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Custody Seal on Cooler/Box Present: Yes No

Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Type of Ice: Wet Blue Nonc

Thermometer Used: TH002 Correction Factor: +0.0

Samples on ice, cooling process has begun

Cooler Temperature (°C): 2.6 Cooler Temperature Corrected (°C): 2.6

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil N/A, water sample

Date and Initials of person examining contents: ED 2/14/18

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

			COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for MS/MSD)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	12.
-Includes date/time/ID/Analysis Matrix SL WT OIL			
All containers needing preservation have been checked	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot #			Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH>9 Sulfide, NaOH>12 Cyanide)	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed: _____ Lot # of added preservative: _____ Date/Time preservative added: _____
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis			
Samples checked for dechlorination:	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable): _____			

Client Notification/ Resolution: _____

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____