



engineering and constructing a better tomorrow

10/31/03

DC
MAG910056

October 27, 2005

Douglas Corb
NPDES Permit Unit
Mail Code (CPE)
Office of Ecosystem Protection
Environmental Protection Agency
One Congress Street, Suite 110
Boston, Massachusetts 02114-2023

RE: Notice of Intent for Remediation General Permit
NPDES Exclusion # MA 031-093
Conductorlab Site
430 Main Street
Groton, MA 01450

Dear Mr. Corb:

On behalf of Honeywell International, Inc., MACTEC Engineering and Consulting, Inc. (MACTEC) is forwarding the enclosed completed forms. This form entitled "Section B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit" is for the above-referenced site. The table of contents provides a listing of the appendices provided with backup and support of the information in the forms, including the latest laboratory analyses.

Honeywell and MACTEC remain committed to the safe and effective operation of the groundwater treatment plant. Please contact us at 781-245-6606 with any questions.

Sincerely,
MACTEC Engineering and Consulting, Inc.

Kerry Tull, P.G., LSP
Senior Principal

Eric Axelrod, LSP
Project Manager

Enclosure

cc: Maria Kaouris / Honeywell
James O'Loughlin, P.E., LSP / Parsons
Mike Scott / Nutter, McClennen, Fish

MACTEC Project Files [P:\W2-mfg\Honeywell\Conductor Labs\TransitionItems\NOI for RGPltr.doc



"Tull, Kerry"
<KRTULL@mactec.com>
12/08/2005 09:03 AM

To: Doug Corb/R1/USEPA/US@EPA
cc
bcc
Subject: RE: Honeywell-Groton Treatment Facility NOI

Thanks Doug I'll do that ASAP.

-----Original Message-----

From: corb.doug@epamail.epa.gov [mailto:corb.doug@epamail.epa.gov]
Sent: Thursday, December 08, 2005 8:54 AM
To: Tull, Kerry
Subject: Honeywell-Groton Treatment Facility NOI

Kerry:

I am looking at the October 27 NOI for the Honeywell discharge. The parameter table (believed present/absent) does not contain supporting sample data, methods or ML. Please send or fax replacement table pages with the data included as well as a signature/certification page for the updated table pages so that we may approve the NOI. If you have questions please call or email me. Thank you.

Doug Corb
Environmental Scientist
US EPA
Mail Code CMP, Suite 1100
One Congress Street
Boston, MA 02114-2023
(617) 918-1565
(617) 918-0565 Fax
corb.doug@epa.gov



Doug Corb/R1/USEPA/US
12/08/2005 08:53 AM

To "Tull, Kerry" <KRTULL@mactec.com>
cc
bcc
Subject Honeywell-Groton Treatment Facility NOI 

Kerry:

I am looking at the October 27 NOI for the Honeywell discharge. The parameter table (believed present/absent) does not contain supporting sample data, methods or ML. Please send or fax replacement table pages with the data included as well as a signature/certification page for the updated table pages so that we may approve the NOI. If you have questions please call or email me. Thank you.

Doug Corb
Environmental Scientist
US EPA
Mail Code CMP, Suite 1100
One Congress Street
Boston, MA 02114-2023
(617) 918-1565
(617) 918-0565 Fax
corb.doug@epa.gov



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Appendix E	MSDS for Treatment System Additive
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Appendix G	Influent/Effluent Analytical Results October 2005

B. Suggested Form for Notice of Intent (NOD) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of facility/site: Conductorlab Site		Facility/site address:	
Location of facility/site: Longitude: 42.613 latitude: 71.584	Facility SIC code(s): N/A Site Closed	Street: 430 Main Street	
b) Name of facility/site owner: Honeywell / Grimes Aerospace		Town: Groton	County: Middlesex
Email address of owner: Maria.Kaouris@Honeywell.com		State: MA	Zip: 01450-1232
Telephone no. of facility/site owner: 973-455-3302		Owner is (check one): 1. Federal _____ 2. State/Tribal _____	
Fax no. of facility/site owner: 973-455-3082		3. Private ☒ 4. other, if so, describe: _____	
Address of owner (if different from site): _____			
Street: 101 Columbia Road		State: NJ	Zip: 07960
Town: Morristown		County: Morris	
c) Legal name of operator: Same as Owner		Operator telephone no: Same as Owner	
		Operator fax no.: -	Operator email: -
Operator contact name and title: Same as Owner			
Address of operator (if different from owner): -		Street: -	County: -
Town: -	State: -	Zip: -	County: -
d) Check "yes" or "no" for the following:			
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ☒ No ☐ if "yes," number: MA 031-093			
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ☐ No ☒ if "yes," date and tracking #: _____			
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ☐ No ☒			
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes ☒ No ☐			

c) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <u>X</u> No <u> </u> If "yes," please list: Tier 1A Permit 1. site identification # assigned by the state of NH or MA: MADEP RIN 2-00053 2. permit or license # assigned: Same 3. state agency contact information: name, location, and telephone number: MADEP, Denise Child, 627 Main St., Worcester, MA 01608	f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y <u> </u> N <u>X</u>, if Y, number: <u> </u> 2. phase I or II construction storm water general permit? Y <u> </u> N <u>X</u>, if Y, number: <u> </u> 3. individual NPDES permit? Y <u> </u> N <u>X</u>, if Y, number: <u> </u> 4. any other water quality related permit? Y <u> </u> N <u>X</u>, if Y, number: <u> </u>
--	---

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage: Groundwater contaminated with VOCs and Metals is treated using Electrochemical Reduction, Multimedia Filter & Carbon Treatment. Influent concentrations have been reduced to below detection limits for over 14 years of operation. Discharge is piped to an infiltration gallery upgradient of site wells and to a surface discharge point which empties into an unnamed brook.

b) Provide the following information about each discharge:

1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>0.04</u> ft ³ /s
2 Infiltration Galleries	Average flow <u>0.02</u> ft ³ /s maximum flow a design value? Y <u>X</u> N <u> </u>
1 Surface	For average flow, include the units and appropriate notation if this value is a design value or estimate if not available. Approximately 75% of Effluent (Approximately 11,250 GPD) is Discharged to Surface.

3) Latitude and longitude of each discharge within 100 feet: pt.1: long 42.618 lat 71.584 pt.2: long. lat. ; pt.3: long. lat. ; pt.4: long. lat. ; pt.5: long. lat. ; pt.6: long. lat. ; pt.7: long. lat. ; pt.8: long. lat. ; etc.

4) If hydrostatic testing, total volume of the discharge (gals):

Is discharge ongoing Yes X No ?

5) Is the discharge intermittent or seasonal?

Is discharge ongoing Yes X No ?

c) Expected dates of discharge (mm/dd/yy): start 1989 end Through 2007

d) Please attach a line drawing or flow schematic showing water flow through the facility including:

1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for all of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants X	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is believed present or believed absent in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids	X									
2. Total Residual Chlorine	X									
3. Total Petroleum Hydrocarbons	X									
4. Cyanide	X									
5. Benzene	X									
6. Toluene		X								
7. Ethylbenzene		X								
8. (m,p,o) Xylenes		X								
9. Total BTEX ⁴		X								

⁴ BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide ⁵ (1,2- Dibromo-methane)	X									
11. Methyl-tert-Butyl Ether (MtBE)	X									
12. tert-Butyl Alcohol (TBA)	X									
13. tert-Amyl Methyl Ether (TAME)	X									
14. Naphthalene	X									
15. Carbon Tetra-chloride	X									
16. 1,4 Dichlorobenzene	X									
17. 1,2 Dichlorobenzene	X									
18. 1,3 Dichlorobenzene	X									
19. 1,1 Dichloroethane		X								
20. 1,2 Dichloroethane	X									
21. 1,1 Dichloroethylene		X								
22. cis-1,2 Dichloro-ethylene	X									
23. Dichloromethane (Methylene Chloride)		X								
24. Tetrachloroethylene	X									

⁵EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane		X								
26. 1,1,2 Trichloroethane		X								
27. Trichloroethylene	X									
28. Vinyl Chloride		X								
29. Acetone	X									
30. 1,4 Dioxane	X									
31. Total Phenols	X									
32. Pentachlorophenol	X									
33. Total Phthalates ⁶ (Phthalate esters)	X									
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	X									
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	X									
a. Benzo(a) Anthracene	X									
b. Benzo(a) Pyrene	X									
c. Benzo(b)Fluoranthene	X									
d. Benzo(k) Fluoranthene	X									
e. Chrysene	X									

⁶The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h)anthracene	X									
g. Indeno(1,2,3-cd)Pyrene	X									
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	X									
h. Acenaphthene	X									
i. Acenaphthylene	X									
j. Anthracene	X									
k. Benzo(ghi) Perylene	X									
l. Fluoranthene	X									
m. Fluorene	X									
n. Naphthalene-	X									
o. Phenanthrene	X									
p. Pyrene	X									
37. Total Polychlorinated Biphenyls (PCBs)		X								
38. Antimony		X								
39. Arsenic		X								
40. Cadmium		X								
41. Chromium III		X								
42. Chromium VI		X								

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper		X								
44. Lead		X								
45. Mercury	X									
46. Nickel		X								
47. Selenium	X									
48. Silver	X									
49. Zinc	X									
50. Iron		X								
Other (describe):		X								

c) For discharges where metals are believed present, please fill out the following:

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <u> N </u> X <u> </u>	If yes, which metals? None
<i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: <u> N/A </u> DF: <u> </u>	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <u> </u> N <u> </u> X <u> </u> If "Yes," list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system: <u>Attached</u>				
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks
	Chlorination	Dechlorination	Other (please describe): <u>Electrochemical Reduction, Polymer Addition</u>	
c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system: Average flow rate of discharge <u>10.42</u> Maximum flow rate of treatment system <u>19.44</u> Design flow rate of treatment system <u>19.44</u>				
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): <u>Polymer</u>				

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct	Within facility	Storm drain	River/brook	Wetlands	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: <u>75% of Discharge goes into unnamed Brook which leads to Gratuity Brook (1000 FT) then Gratuity Brook Discharges to Nashua River.</u>						
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: <u>Attached</u> 1. For multiple discharges, number the discharges sequentially. 2. For indirect discharges, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.						
d) Provide the state water quality classification of the receiving water: _____						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water: <u>Seasonal, Dry</u> _____ cfs Please attach any calculation sheets used to support stream flow and dilution calculations.						
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes _____ No <u>X</u> If yes, for which pollutant(s)? Is there a TMDL? Yes _____ No <u>X</u> If yes, for which pollutant(s)?						

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ☒ No ☒
Has any consultation with the federal services been completed? Yes ☐ No ☐ or is consultation underway? Yes ☒ No ☐
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one): a "no jeopardy" opinion? ☐ or written concurrence ☐ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?
b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge? Yes ☐ No ☒ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ☐ No ☒

7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: Conductorlab Site

Operator signature: Maria Kaouris

Title: Remediation Manager

Date: 10/18/05

April 24, 2003

Mr. John Hackler
Senior Engineer, NPDES Permit Unit
US Environmental Protection Agency
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Subject: NPDES Permit Application
Conductorlab Site – Groton, Massachusetts
RTN 2-00053

Dear Mr. Hackler:

In response to your letter dated February 7, 2003, please find enclosed a groundwater treatment system schematic, an updated summary table of quarterly analyses of recovery well samples for the period 2002 (Table 1), and summary tables of monthly analyses of groundwater treatment system influent and effluent samples for the period January 2002 through February 2003 (Tables 2 and 3, respectively). Presented below is additional information regarding constituents discussed in your letter and previously detected on site.

VOCs

Recovery wells and monitoring wells at the Site are monitored for VOCs by Method 8260B on a quarterly and semi-annual basis, respectively. During the four quarters of monitoring conducted in 2002, the only VOCs detected were trichloroethene, cis-1,2 dichloroethene, trans-1,2-dichloroethene, tetrachloroethene, and vinyl chloride. Results from the first quarter of 2003 are not yet available. Data from the recovery wells is presented in Table 1.

Groundwater treatment plant influent and effluent is monitored on a monthly basis for VOCs by Method 8260B. As shown on Table 2, only trichloroethene, cis-1,2 dichloroethene, tetrachloroethene, and 1,1,1, trichloroethane have been detected in the influent. As shown on Table 3, VOCs were not detected in the effluent during the period January 2002 through February 2003.

Other Organic Compounds

During initial site characterization efforts, 12 groundwater samples were collected for PCB analysis, 14 groundwater samples were collected for pesticide analysis; and 14 groundwater samples were collected for SVOC analysis. PCBs and pesticides were not detected in the samples. Similarly, with the exception of bis(2-ethylhexyl) phthalate, a common sampling / laboratory contaminant, SVOCs were only detected in one sample, and at low concentrations (i.e., phenol, 58.2 ug/l, and N-nitrosodi-n-propylamine, 10.5 ug/l). Sampling and analyses for PCBs, pesticides, and SVOCs was not included in the initial discharge permit for the GWTP, and these constituents are not expected to be a constituent of concern in the GWTP effluent.



In addition, during initial site characterization efforts, 40 groundwater samples were analyzed for total cyanide. Total cyanide was detected in 8 of the 40 samples. Detected concentrations ranged from 0.010 mg/l to 0.040 mg/l, with a median and mean of 0.020 mg/l. The 2002 National Recommended Water Quality Criteria fresh water chronic criteria for free cyanide is 0.0054 mg/l. Groundwater samples were not analyzed for free cyanide, which is typically a fraction of total cyanide. Based on the infrequency of detection, and the low concentrations that were detected, cyanide is not expected to be a constituent of concern in groundwater treatment plant effluent. Sampling and analyses for cyanide was not included in the initial discharge permit for the GWTP.

Metals

Prior to design of the groundwater treatment plant, site groundwater was analyzed for a comprehensive list of metals. A summary of the metals analyzed for is presented on Table 4. As shown on Table 4, only arsenic, chromium, hexavalent chromium, copper, iron, manganese, nickel, and zinc were detected in more than 10% of the samples. These metals are discussed below.

Arsenic was detected in 17% of the samples, in concentrations ranging from 0.006 mg/l to 1.0 mg/l. The average detected concentration was 0.108 mg/l; the median detected concentration was 0.018 mg/l. Review of the data indicates that the maximum detected concentration is an outlier, and that 78% of the detected concentrations were below the 2002 National Recommended Water Quality Criteria fresh water chronic criteria of 0.150 mg/l. Arsenic compounds were not identified as having been used at the facility, based on a review of available documentation concerning facility operations. Sampling and analyses for arsenic was not included in the initial discharge permit for the GWTP, and arsenic is not expected to be a constituent of concern in the GWTP effluent.

Zinc was detected in 33% of the samples. Review of historical data indicates that GWTP influent and effluent were monitored for zinc in 1993 and 1994. Results are summarized on Table 5. As shown on Table 5, detected concentrations of zinc in the effluent averaged 0.030 mg/l, well below the 2002 National Recommended Water Quality Criteria fresh water chronic criteria of 0.120 mg/l. Monitoring for zinc ceased after 1994.

Chromium, hexavalent chromium, copper, iron, manganese, and nickel are included in the current monthly influent and effluent sampling for the GWTP. Sample results are summarized on Tables 2 and 3, respectively. The February 7, 2003 letter requested verification of the nickel concentrations in the recovery wells presented on Table 1. Upon review, a discrepancy with the units of measurement was confirmed. Table 1 has been updated to reflect that the maximum detected concentration of nickel was 29 µg/l at RW-4 in September 2002 and that the maximum detected concentration of Cr+6 was 2450 µg/l at RW-6 in September 2002.

Other Parameters

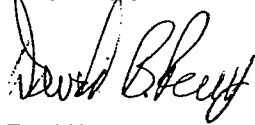
The current monitoring program includes influent and effluent testing for fluoride and sulfate. Sample results are summarized on Tables 2 and 3.

Review of the available historical correspondence did not indicate why fluoride was included in the initial discharge permit. Review of historical documentation did indicate that fluoboric acid was used on site in a plating process. Recent GWTP influent and effluent concentrations of fluoride are presented on Tables 2 and 3. There are no 2002 National Recommended Water Quality Criteria for fluoride.

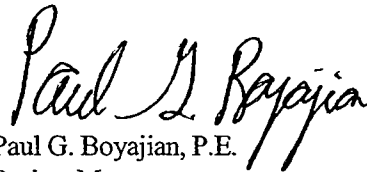
According to correspondence from the MADEP in July 1994, sulfate was included in the MADEP groundwater permit "due to the high background levels of sulfate and the occasional addition of H_2SO_4 to the system..." During routine operations of the treatment system, H_2SO_4 is added to the system for acid wash of the electrochemical reduction unit and for pH adjustment. In addition, caustic (NaOH) is added to the system for pH adjustment. The addition of chemicals into the treatment process is at an intermediate point in the process – the pH is monitored and corrected before the final stages of treatment. Recent GWTP influent and effluent concentrations of sulfate are also presented on Tables 2 and 3. There are no 2002 National Recommended Water Quality Criteria for sulfate.

Based on the performance of the treatment system, the proposed limits described in the draft Attachment A to your February 7, 2003 letter are achievable. If you have any further questions regarding this information, please contact David Perry at (617) 457-7884.

Very truly yours,



David B. Perry
Project Engineer



Paul G. Boyajian, P.E.
Project Manager

Enclosures

cc: Maria Kaouris (Honeywell)
Tom Byrne (Honeywell)
Michael Scott (Nutter, McClennen, & Fish)
James M. O'Loughlin, P.E., LSP (Parsons)

FIGURE 4-1
GROUNDWATER TREATMENT SYSTEM SCHEMATIC
CONDUCTORLAB SITE, GROTON, MA

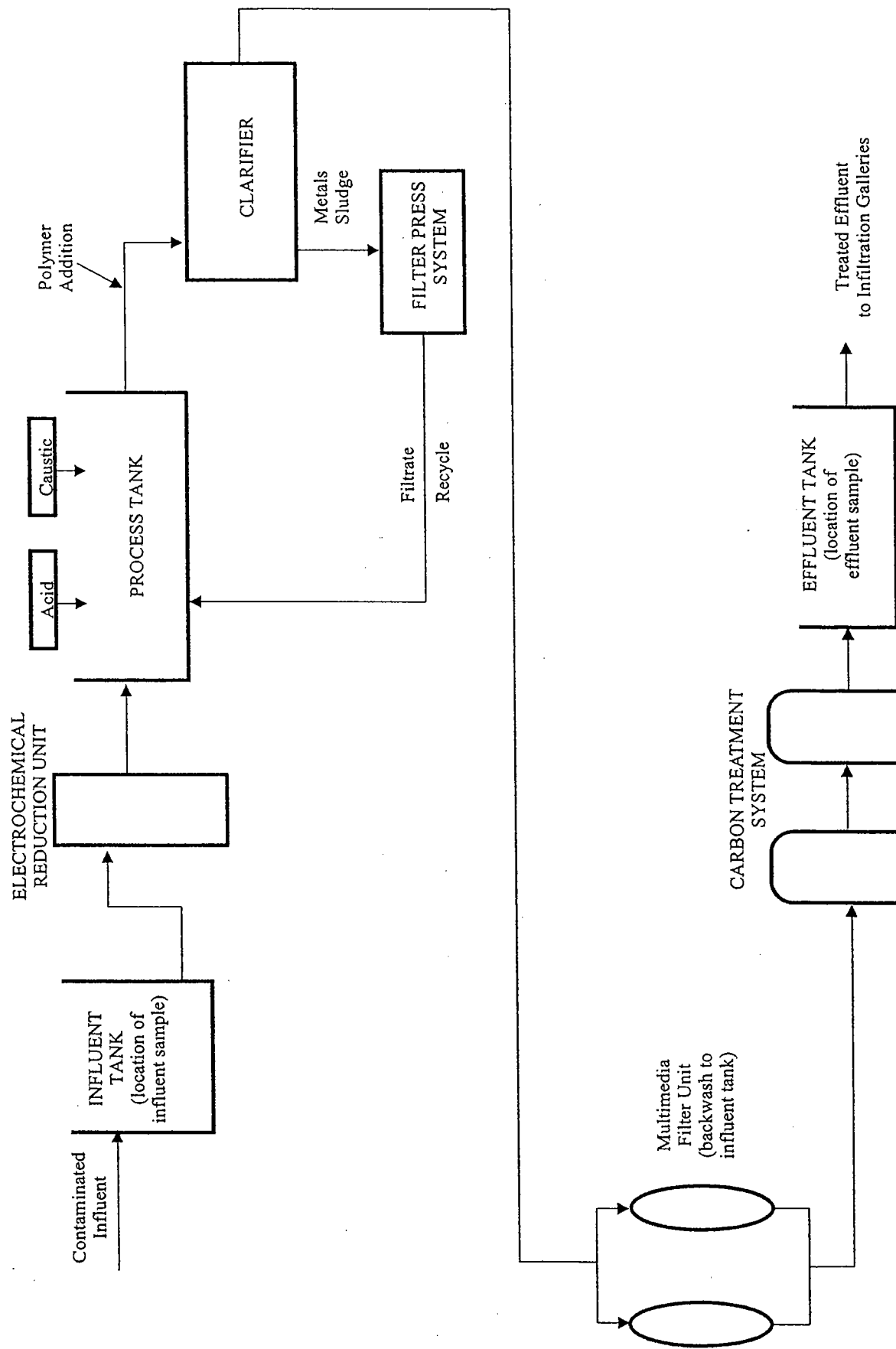


Table 2
Monthly Analytical Results
Influent Data
Conductorlab Site - Groton, Massachusetts

All values in ug/l	01/21/02	02/26/02	03/20/02	04/26/02	05/21/02	06/20/02	07/22/02	08/23/02	09/20/02	10/24/02	11/19/02	12/20-26/2002	01/30/03	02/25/03
Volatiles:														
1,1,2-Dichloroethene	69	44	57	65	26	60	37	52	76	47	68	27	22	35
trans-1,2-Dichloroethene	5 U	5 U	5 U	20 U	5 U	10 U	20 U	20 U	50 U	20 U	20 U	10 U	5 U	5 U
Ethylene Chloride	5 U	5 U	5 U	40 U	10 U	20 U	40 U	40 U	100 U	40 U	40 U	20 U	10 U	10 U
trichloroethene	22	15	15	15	5 U	12	20 U	20 U	50 U	20 U	20 U	10 U	5 U	4
1,1-Trichloroethane	9	5 U	5 U	20 U	5 U	10 U	20 U	20 U	50 U	20 U	20 U	10 U	5 U	5 U
trichloroethene	890	530	510	500	260	558	884	1,050	1,250	810	966	430	180	240
vinyl Chloride	5 U	5 U	5 U	40 U	10 U	20 U	40 U	40 U	100 U	40 U	40 U	10 U	5 U	5 U
Dissolved Metals:														
chromium (total)	949	1,070	951	980	850	920	1,080	1,220	1,260	1,070	907	834	851	791
chromium (VI)	853	912	782	1,200	1,020	800	1,020	1,140	1,000	1,270	870	1,070	1,130	980
copper	97	73	90	86	50	76	66	56	74	41	58	92	45	57
iron	100 U	100 U	100 U	50 U	50 U	50 U	93	50 U	50 U	50 U	73	50 U	100 U	50 U
zinc	214	315	286	310	175	426	229	214	209	145	261	295	304	266
nickel	50 U	50 U	50 U	20 U	10 U	14	12	10	16	10 U	10	15	20 U	10
Organic Compounds:														
chloride	43,000	42,100	45,200	48,000	40,800	47,200	47,500	44,200	47,200	40,200	42,700	45,100	40,000	46,600
fluoride	3,630	2,720	2,880	6,700	4,000 U	4,220	3,680	3,140	2,920	3,640	4,520	2,560	2,820	2,720
sulfate	42,000	48,000	48,000	44,000	44,300	43,100	43,300	41,200	49,600	39,200	41,300	47,700	39,700	39,800

Notes

U= Indicates that the analyte was analyzed for but not detected; method detection limit is reported. For VOCs a "U" qualifier also indicates that the sample detection limit has been corrected for dilution and percent moisture. This detection limit is not necessarily the instrument detection limit.

The following test methods were used:

Volatile Organics: SW846 8260B

Chloride TIC: VOA TIC

Chloride & Sulfate: EPA300.0 Part A

Fluoride: SM18 4500FC

Chromium (VI): SM18 3500D

Metals Analysis (trace): SW846 6010B

Table 2 above contains data only for volatile organic compounds detected in recovery wells, the influent or effluent, or previously permitted. All other volatiles tested for with method 8260 were below detection limits.

Table 3
Monthly Analytical Results
Effluent Data
Conductorlab Site - Groton, Massachusetts

All values in ug/l	01/21/02	02/26/02	03/20/02	04/26/02	05/21/02	06/20/02	07/22/02	08/23/02	09/20/02	10/24/02	11/19/02	12/20-26/2002	01/31/03	02/25/03
Volatiles:														
1,2-Dichloroethene	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ethylene Chloride	5 U	5 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trichloroethene	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Trichloroethane	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
chloroethene	5 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VI Chloride	5 U	5 U	5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U
Dissolved Metals:														
Mercurium (Total)	30 U	30 U	30 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	5 U
Mercurium (VI)	10 U	11	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Lead	25 U	25 U	25 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U
Cadmium	235	100 U	100 U	50 U	53	111	62	50 U	50 U	50 U	92	104	100 U	88
Manganese	278	317	284	380	161	326	218	63	77	181	176	10 U	408	189
Chromium	50 U	50 U	50 U	20 U	10 U	13	10 U	10 U	10 U	10 U	10 U	10 U	25	11
Organic Compounds:														
Chloride	42,100	43,500	47,100	47,000	41,200	63,500	83,600	45,300	48,300	54,400	40,800	43,700	36,400	48,100
Sulfate	3,980	2,600	2,760	6,600	2,640	3,340	2,980	2,740	2,650	2,820	3,870	3,330	2,930	2,430
Total	37,000	38,000	37,000	38,000	36,100	34,000	57,200	31,600	44,500	40,300	40,900	43,600	29,700	35,000

tes

J= Indicates that the analyte was analyzed for but not detected; method detection limit is reported. For VOCs a "U" qualifier also indicates that the sample detection limit has been reached for dilution and percent moisture. This detection limit is not necessarily the instrument detection limit.

The following test methods were used:

Volatiles: SW846 8260B

Volatiles: VOA TIC

Chloride & Sulfate: EPA300.0 Part A

Mercurium: SM18 4500FC

Mercurium (VI): SM18 3500D

Volatiles Analysis (trace): SW846 6010B

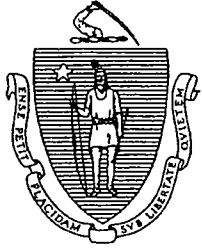
Table 3 above contains data only for volatile organic compounds detected in recovery wells, the influent or effluent, or previously permitted. All other volatiles tested for with method 30 were below detection limits.

Table 4
Groundwater and Detection Frequency - Metals
Conductorlab Site - Groton, Massachusetts

Metal	Times		Times Detected	Frequency of Detection
	Sought			
Antimony	100	1	1	1%
Arsenic	110	19	19	17%
Beryllium	99	1	1	1%
Cadmium	131	10	10	8%
Chromium	242	146	146	60%
Chromium VI	245	97	97	40%
Copper	176	73	73	41%
Iron	78	47	47	60%
Lead	167	12	12	7%
Manganese	79	62	62	78%
Mercury	58	3	3	5%
Nickel	176	33	33	19%
Selenium	50	2	2	4%
Silver	75	2	2	3%
Thallium	99	1	1	1%
Zinc	125	41	41	33%

Table 5
Groundwater Treatment Plant Data
Concentrations of Zinc in Influent & Effluent
Conductorlab Site - Groton, Massachusetts

Date	Influent (mg/l)	Effluent (mg/l)
Jun-93	LT 0.01	LT 0.01
Jul-93	LT 0.01	LT 0.01
Aug-93	0.02	LT 0.01
Sep-93	LT 0.01	0.05
Oct-93	LT 0.01	0.08
Nov-93	0.01	LT 0.01
Dec-93	LT 0.01	0.06
Jan-94	LT 0.01	0.04
Feb-94	LT 0.01	0.03
Mar-94	0.02	0.03
Apr-94	0.02	0.01
May-94	0.02	0.06
Jun-94	LT 0.01	0.01
Jul-94	LT 0.01	0.02
Aug-94	0.02	0.04
Sep-94	LT 0.01	0.02
Oct-94	LT 0.01	0.02
Dec-94	LT 0.01	LT 0.01



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Watershed Management, 627 Main Street 2nd Floor, Worcester, MA 01608

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

ELLEN ROY HERZFELDER
Secretary

LAUREN A. LISS
Commissioner

February 3, 2003

Mr. David Perry
Project Engineer
Parsons
100 Summer Street – 8th Floor
Boston, MA 02110

Re: Outstanding Resource Water
Conductorlab Site
Groton, Massachusetts

Dear Mr. Perry:

Please excuse the delay in responding to your recent inquiry regarding the need to obtain a permit required by Massachusetts Surface Water Discharge Permit Program (314 CMR 3.00) for the discharge from a ground water remediation and treatment system located at Conductorlab in Groton, Massachusetts. The discharge is currently authorized by and in compliance with the Massachusetts Contingency Plan as a Tier 1B site. The receiving water is an unnamed tributary to Gratuity Brook

Please be advised that the Department has reviewed the pertinent information and determined that the unnamed tributary to Gratuity Brook is **not** classified as an Outstanding Resource Water. Therefore, a permit is **not** required in accordance with 314 CMR 3.05(8).

If you should have any questions regarding this determination, Please contact me at (508) 849-4003 at your earliest convenience.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bryant J. Firmin".

Bryant J. Firmin
Surface Water Discharge Permit Program

Cc: Brian Pitt, USEPA, Boston, MA

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

<http://www.state.ma.us/dep> • Phone (508) 792-7470 • Fax (508) 791-4131

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 7, 2003

Mr. David Perry
Parsons
100 Summer St, 8th Floor
Boston, MA 02110

Re: Conductorlab Site, Groton, MA

Dear Mr. Perry:

EPA-New England has reviewed Parson's application submitted on behalf of Grimes Aerospace for surface water discharge and NPDES permit exclusion received on January 14, 2003 and subsequent copy of the MA DEP's 1994 groundwater permit for this site received on January 29, 2003. This letter provides our preliminary review, and a draft "Attachment A" which would become the temporary surface water requirements for direct discharge until EPA can finalize one or more general permits for groundwater remediation currently being developed for 2003, or issues an individual discharge permit. We understand the present groundwater discharge system fails periodically and there is a need to switch to a surface water discharge. We are familiar with the MA MCP process and the fact that the DEP is not required to issue permits for cleanups being done under the MCP. In fact, we just received a copy of DEP's February 3, 2003 letter to you indicating that the proposed discharge location into Gratuity Brook is not an Outstanding Resource Water which would have triggered a DEP permit or waiver. The MCP does, however, defer to EPA's authority to issue NPDES permits for surface water discharges.

In reviewing the information provided, several questions arise for which we are asking a response in order to accurately reflect the discharge characteristics and finalize the discharge requirements. The draft Attachment A represents our current understanding but may be changed after your response to this letter.

Regarding the "Chemicals of Concern (COC)", it appears from Table 1, compounds detected in groundwater monitoring wells, Mar-Sept, 2002, that the primary contaminants in the groundwater recovery wells are: Trichloroethylene (TCE), cis-1,2-Dichloroethylene (cis-1,2-DCE), total chromium (Cr+3), hexavalent chromium (Cr+6), and nickel. The DEP groundwater permit set limits for all of the above except for cis-1,2-DCE and included a number of other parameters (copper, fluoride, sulfate, PERC or tetrachloroethylene, and methylene chloride). We cannot determine from the data submitted whether these additional parameters are still required and/or what the original basis for their inclusion was. EPA's old permit file for Conductorlab has been archived to the Federal Records Center, thus we do not have it readily available to review the original plant operations and effluent characteristics. We are requesting additional input from Parsons on the COC's so we can establish the appropriate parameters.

Toll Free • 1-888-372-7341

Internet Address (URL) • <http://www.epa.gov/region1>

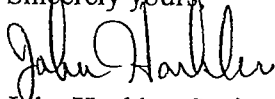
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The effluent limits EPA establishes currently for surface water are fairly similar to those used by DEP for MCP sites, usually GW-1 standards, although for some parameters, in particular metals, the surface water quality criteria where no dilution is available, are often more stringent than GW-1 standards which are usually based on MCLs (or MMCL's) or other health standards. This is the case for Cr+3, Cr+6, and nickel as included on Attachment A. The discharge is to an "unnamed brook" to Gratuity Brook, to the Nashua River which is why we use a "zero" dilution factor. The limits are not dramatically lower however, and based on the nearly 10 years of monthly effluent data for total chromium (typically 0.01 mg/l or 10 ppb) which we assume to be the lab reporting limit, the proposed limits should be achievable for the total chromium limits at a minimum. Again, we have no data on effluent Cr+6 or nickel values. The levels of Cr+6 and nickel in RW-1 and RW-4 appear quite high (as much as 2450 ug/l and 29,000 ug/l respectively). Is this correct? The draft limits are based on EPA's (and DEP's adopted) 2002 published Water Quality Criteria and, for lack of any hardness data, are set at H= 100 mg/l, and are calculated as Total Recoverable values as required by regulation (using conversion factors from dissolved metal).

Finally, since this will be a "new discharge", we will be contacting the MA DEP regarding anti-degradation review as required by NPDES regulations.

This concludes our initial comments and questions. Please contact me at (617) 918-1551 if you would like to discuss this letter further. We will not proceed further until receipt of your written response.

Sincerely yours,



John Hackler, Senior Engineer
NPDES Permit Unit

cc. B. Pitt, EPA
P. Hogan, DEP

**** CONDUCTORLAB SITE, GROTON, MA ****

ATTACHMENT A

The discharge(s) referenced in the accompanying letter must be in accordance with the following provisions:

1. No discharge of oil, sufficient to cause a sheen (as defined in 40 CFR 110), occurs to the drainage system. The discharge of a sheen of oil or gasoline constitutes an oil spill and must be reported immediately to the National Response Center (NRC) at (800) 424-8802.
2. Security provisions are maintained to assure that system failure, vandalism, or other incidents will be addressed in a timely fashion, preventing the loss of oil or contaminated water to the drainage system.
3. The flow rate shall be maintained within acceptable operating parameters and shall not exceed the design flow of the treatment system. There shall be no bypass of the treatment system unless unavoidable to prevent loss of life, personal injury, or severe property damage. No filter backwash or other maintenance waters shall be discharged without treatment.
4. Sampling and analysis, in accordance with EPA Methods, must be performed for the following chemicals with the listed limits being applicable:

CONVENTIONAL

Flow	Monitor, Daily Avg./Totalizer
pH	6.5-8.3 S.U.

ORGANICS

Trichloroethylene (TCE)	5.0 ppb
cis-1,2-Dichloroethylene (cis-1,2-DCE)	70.0 ppb

METALS (1)

Total Recoverable Chromium (Cr) (2)	86.0 ppb
Hexavalent Chromium (Cr+6) (3)	12.0 ppb
Total Recoverable Nickel (Ni) (2)	53.0 ppb

- (1) Metals limits based on "zero" dilution factor
- (2) Limits for Class B, freshwater chronic criteria @ 100 mg/l hardness (H); converted from dissolved metal to total recoverable metal
- (3) Limit for Class B, freshwater chronic criteria converted from dissolved to total

Should sampling indicate the presence of additional chemicals, discharge concentrations should not exceed the Federal Drinking Water Standards (MCL's) or 100 ppb, whichever is lower, in the effluent.

Solids - These waters shall be free from floating, suspended, and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause esthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom sediments.

Color and Turbidity - These waters shall be free from color and turbidity in concentrations or combinations that are esthetically objectionable conditions or that would impair the use assigned to this class.

Laboratory samples must be obtained from the influent to treatment, and from the effluent to the drainage system once each day for the first, third and sixth day of discharge. These samples must be analyzed with a 72-hour turnaround time. If the system is working properly, sampling for the remainder of the month shall be weekly and then monthly thereafter. The turnaround time for these samples shall ensure that no more than seven days pass between the sampling event and when the results are received and reviewed by the contractor.

If analysis indicates that the effluent limits have been exceeded, then the system must be shut down immediately and the problem corrected. Upon restarting the system, a sample must be taken and there must be 24 hour turnaround for the results. If the analysis indicates that the problem has been corrected, then the sampling schedule shall resume. If not, then the system shall be shut down again and repaired.

5. Analytical Reports, with quality control information, are to be reported to EPA and the MADEP or NHDES Project Manager by the 28th of the following month. Reports to EPA should be sent to:

NPDES Permit Unit
Mail Code (CPE)
Office of Ecosystem Protection
Environmental Protection Agency
One Congress St., Suite 1100
Boston, MA 02114-2023

RE: NPDES [please include assigned reference # on all correspondence]

6. You, or your contractor, must maintain copies of all analytical reports, and quality control information for a period of 3 years from the date of the report.

You should consider these requirements to be in effect immediately.

PARSONS

150 Federal Street • Boston, Massachusetts 02110 • (617) 946-9400 • Fax: (617) 946-9777 • www.parsons.com

May 4, 2005

NPDES Permit Unit
Mail Code (CPE)
Office of Ecosystem Protection
Environmental Protection Agency
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

RE: NPDES Exclusion # MA 031-093
April 2005 Analytical Results

Dear NPDES Permit Unit:

On behalf of Honeywell, Parsons is forwarding the enclosed analytical reports for the Conductorlab Site in Groton, Massachusetts.

The data tables below include all sampling and flow data from March 31, 2005 to April 30, 2005.

Date :4/07/2005			
Parameter	Influent	Effluent	NPDES limit
pH	6.63	7.26	6.5-8.3 S.U.
Parameter	Influent (ug/l)	Effluent (ug/l)	NPDES limit (ppb)
Trichloroethylene (TCE)	180	1 U	5.0
cis-1,2-Dichloroethylene (DCE)	100	1 U	70.0
Total Recoverable Chromium (Cr)	530	5U	86.0
Hexavalent Chromium (Cr ⁶⁺)	590	5 U	12.0
Total Recoverable Nickel (Ni)	10 U	10 U	53.0

Note 1: U= Indicates that the analyte was analyzed for but not detected; method detection limit is reported. For VOCs a "U" qualifier also indicates that the sample detection limit has been corrected for dilution and percent moisture. This detection limit is not necessarily the instrument detection limit.

Note 2: J = Indicates an estimated value. This qualifier is used when mass spectral data indicates the presence of a compound that meets the identification criteria and the result is less than the specified quantitation limit but no less than one-half the quantitation limit.

Note 3: B = Indicates an estimated result value. The result was measured between the reporting limit and the method detection limit.

Note 4: NS = Not Sampled.

Flow Data								
Period	Total Throughput		Effluent to unnamed brook			Effluent to infiltration galleries		
	Gallons	Daily Average (Gallons)	Gallons	Days in service	Daily Average (Gallons)	Gallons	Days in Service	Daily Average (Gallons)
3/31/05 to 4/30/05	734,150	24,472	734,150	30	24,472	0	0	0

Note 1: The daily average values for discharge to the brook or galleries is given as an average of flow to the receptor over the period in use – not averaged over the entire month.

Note 2: Days in Service may collectively exceed the number of days in the month since the effluent can be directed to both receptors at the same time (with flow to each metered separately).



Consistent with previous discussions with the Town of Groton Conservation Commission and the Conductorlab Oversight Committee, the treated effluent was directed into the unnamed brook throughout the month of April.

As site conditions permit (i.e. no observed breakout of groundwater near the infiltration galleries), the discharge of treated effluent to the unnamed brook will be minimized during the warmer weather/drier season. However, if groundwater breakout is observed, flow will be redirected (in part or all) to the unnamed brook.

Honeywell and Parsons remain committed to the safe and effective operation of the groundwater treatment plant. Please contact me at (617) 449-1583 with any questions.

Very truly yours,

A handwritten signature in black ink, appearing to read "Christina Grill", followed by a small "for" written in the same ink.

Christina Grill, PG
Environmental Geologist

Enclosures

cc: D. Child / MADEP
Maria Kaouris / Honeywell
James O'Loughlin, P.E., LSP / Parsons
Eric Axelrod, LSP / Mactec
Mike Scott / Nutter, McClennen, Fish
Conductorlab Oversight Committee / Town of Groton
Board of Health / Town of Groton
Conservation Commission / Town of Groton



Table 3-1
Treatment System Pumping Rates
and Water Quality Test Results
Conductorlab Site, Groton, Massachusetts

Time ⁽¹⁾	Average Influent Concentrations		Average Effluent Concentrations ^(6,7)		Flowrate ⁽⁴⁾ gpd	Flowrate ⁽⁵⁾ gpm	Estimated Mass Removal Rate	
	TCE ug/L	Total chromium ug/L	TCE ⁽²⁾ ug/L	Total chromium ⁽³⁾ ug/L			TCE lbs/day	Total chromium lbs/day
Jun-93	2100	1600	4.1	10	7,920	5.5	0.14	0.10
Jul-93	3900	2500	6.4	10	7,920	5.5	0.26	0.16
Aug-93	3400	2600	1.0	10	7,920	5.5	0.22	0.17
Sep-93	8400	2900	1.0	10	7,920	5.5	0.55	0.19
Oct-93	1600	2200	1.0	10	7,920	5.5	0.11	0.14
Nov-93	2900	2000	1.0	10	18,720	13.0	0.45	0.31
Dec-93	2600	1700	1.0	10	18,720	13.0	0.41	0.26
Jan-94	2300	1900	1.0	10	18,720	13.0	0.36	0.29
Feb-94	1200	1700	1.0	10	18,720	13.0	0.19	0.26
Mar-94	1000	1300	1.0	10	18,720	13.0	0.16	0.20
Apr-94	3200	1700	1.0	10	18,720	13.0	0.50	0.26
May-94	1500	1100	1.0	10	18,720	13.0	0.23	0.17
Jun-94	1800	1100	1.0	10	8,280	5.8	0.12	0.08
Jul-94	1500	1800	1.0	10	8,280	5.8	0.10	0.12
Aug-94	5700	1800	1.0	10	8,280	5.8	0.39	0.12
Sep-94	2300	1800	1.0	10	20,520	14.3	0.39	0.31
Oct-94	1700	1600	1.0	10	20,520	14.3	0.29	0.27
Nov-94	1500	1600	1.0	10	20,520	14.3	0.26	0.27
Dec-94	1100	1300	1.0	10	20,520	14.3	0.19	0.22
Jan-95	650	1400	1.0	10	20,520	14.3	0.11	0.24
Feb-95	880	1300	1.0	10	20,520	14.3	0.15	0.22
Mar-95	430	1100	1.0	10	20,520	14.3	0.07	0.19
Apr-95	880	1200	1.0	10	20,520	14.3	0.15	0.20
May-95	940	1300	1.0	10	8,280	5.8	0.06	0.09
Jan-97	4500	1300	1.0	40	5,040	3.5	0.19	0.05
Feb-97	230	1100	1.0	10	1,929	1.3	0.004	0.02
Mar-97	470	1600	1.0	10	6,133	4.3	0.02	0.08
Apr-97	710	1100	1.0	10	5,573	3.9	0.03	0.05
May-97	800	1300	1.5	10	5,573	3.9	0.04	0.06
Jun-97	700	1200	1.0	10	5,184	3.6	0.03	0.05
Aug-97	470	1200	1.0	10	13,248	9.2	0.05	0.13
Sep-97	440	10	1.0	780	9,504	6.6	0.03	NA
Oct-97	2600	2900	1.0	10	9,360	6.5	0.20	0.23
Nov-97	1300	1600	1.0	10	8,640	6.0	0.09	0.11
Dec-97	360	1400	1.0	10	13,104	9.1	0.04	0.15
Jan-98	500	1000	1.0	10	15,840	11.0	0.07	0.13
Feb-98	600	1200	1.0	10	13,680	9.5	0.07	0.14
Mar-98	620	1200	1.3	10	14,544	10.1	0.07	0.14
Apr-98	490	970	1.0	10	13,248	9.2	0.05	0.11
May-98	440	1300	1.0	10	12,240	8.5	0.04	0.13
Jun-98	680	1500	1.0	10	9,864	6.9	0.06	0.12
Jul-98	250	930	1.0	10	9,504	6.6	0.02	0.07
Aug-98	740	1700	1.0	10	8,064	5.6	0.05	0.11
Sep-98	400	790	1.0	10	6,480	4.5	0.02	0.04
Oct-98	220	1200	1.0	10	7,344	5.1	0.01	0.07
Nov-98	420	1100	1.0	10	10,080	7.0	0.04	0.09
Dec-98	1500	1600	1.0	10	10,080	7.0	0.13	0.13
Feb-99	1100	1200	3.2	10	13,536	9.4	0.12	0.13
Mar-99	420	1000	11.0	70	14,544	10.1	0.05	0.11
Apr-99	610	970	8.4	10	18,720	13.0	0.09	0.15
May-99	690	1200	4.9	10	10,224	7.1	0.06	0.10
Jun-99	320	1000	1.0	10	10,944	7.6	0.03	0.09
Jul-99	200	710	1.0	10	6,768	4.7	0.01	0.04
Aug-99	550	3000	1.0	10	5,184	3.6	0.02	0.13
Sep-99	670	1200	1.0	10	12,096	8.4	0.07	0.12
Oct-99	880	1200	1.0	10	17,280	12.0	0.13	0.17
Nov-99	260	1300	1.0	10	21,168	14.7	0.05	0.23
Dec-99	440	1200	1.0	10	26,496	18.4	0.10	0.26
Jan-00	270	1300	6.2	10	15,408	10.7	0.03	0.17
Feb-00	550	1100	12.0	10	14,400	10.0	0.06	0.13

Table 3-1
Treatment System Pumping Rates
and Water Quality Test Results
Conductorlab Site, Groton, Massachusetts

Time ⁽¹⁾	Average Influent Concentrations		Average Effluent Concentrations ^(6,7)		Flowrate ⁽⁴⁾ gpd	Flowrate ⁽⁵⁾ gpm	Estimated Mass Removal Rate	
	TCE ug/L	Total chromium ug/L	TCE ⁽²⁾ ug/L	Total chromium ⁽³⁾ ug/L			TCE lbs/day	Total chromium lbs/day
Mar-00	190	1000	1.0	10	15,264	10.6	0.02	0.13
Apr-00	120	860	1.0	10	14,400	10.0	0.01	0.10
May-00	88	930	1.0	10	14,688	10.2	0.01	0.11
Jun-00	390	1000	1.0	10	13,248	9.2	0.04	0.11
Jul-00	310	920	1.0	10	12,384	8.6	0.03	0.09
Aug-00	140	1000	1.0	10	14,400	10.0	0.02	0.12
Sep-00	440	1100	2.7	10	12,384	8.6	0.05	0.11
Oct-00	340	1100	10.0	10	13,248	9.2	0.04	0.12
Nov-00	350	1100	1.0	10	6,624	4.6	0.02	0.06
Dec-00	300	1200	1.0	10	12,816	8.9	0.03	0.13
Jan-01	150	970	1.0	10	7,653	5.3	0.01	0.06
Feb-01	320	1100	1.0	10	6995	4.9	0.02	0.06
Mar-01	120	940	1.0	10	7594	5.3	0.01	0.06
Apr-01	227	770	1.0	10	6565	4.6	0.01	0.04
May-01	344	958	1.0	10	6614	4.6	0.02	0.05
Jun-01	451	702	1.0	10	5930	4.1	0.02	0.03
Jul-01	228	970	1.0	10	10035	7.0	0.02	0.08
Aug-01	291	1370	1.0	10	13766	9.6	0.03	0.16
Sep-01	1600	1110	1.0	10	7947	5.5	0.11	0.07
Oct-01	980	1180	<5.0	<30	6390	4.4	0.05	0.06
Nov-01	1,200	1230	<5.0	<30	6378	4.4	0.06	0.07
Dec-01	550	1150	<5.0	<30	6978	4.8	0.03	0.07
Jan-02	890	949	<5.0	<30	4923	3.4	0.04	0.04
Feb-02	530	1070	<5.0	<30	8615	6.0	0.04	0.08
Mar-02	510	951	<5.0	<30	12689	8.8	0.05	0.10
Apr-02	500	1200	<1.0	<5	14291	9.9	0.06	0.14
May-02	260	850	<1.0	<5	22621	15.7	0.05	0.16
Jun-02	558	920	<1.0	<5	16220	11.3	0.08	0.12
Jul-02	884	1080	<1.0	<5	11734	8.1	0.09	0.11
Aug-02	1050	1220	<1.0	<5	9870	6.9	0.09	0.10
Sep-02	1250	1260	<1.0	<5	9366	6.5	0.10	0.10
Oct-02	810	1270	<1.0	<5	11165	7.8	0.08	0.12
Nov-02	966	870	<1.0	<5	9195	6.4	0.07	0.07
Dec-02	430	1070	<1.0	<5	8136	5.7	0.03	0.07
Jan-03	180	851	<1.0	<10	5966	4.1	0.01	0.04
Feb-03	240	791	<1.0	<5	12511	8.7	0.03	0.08
Mar-03	210	541	<1.0	<5	13545	9.4	0.02	0.06
Apr-03	350	717	<1.0	<5	10848	7.5	0.03	0.06
May-03	230	717	<1.0	<5	11483	8.0	0.02	0.07
Jun-03	220	693	<1.0	<5	12060	8.4	0.02	0.07

(1) For Sept 97 the effluent concentration of total chromium was greater than influent concentration.

(2) Assumes detection limit of 1.0 ug/L for TCE prior to October 2001.

(3) Assumes detection limit of 10 mg/L for total chromium prior to October 2001.

(4) Flow rate data based on Operation and Maintenance Reports dated January 1995 and January 1996; Phase V Inspection and Monitoring Semi-Annual Reports, August 1997, August 1998, September 1998, and December 1999; and Phase V Inspection and Monitoring Annual Report, January 2001.

(5) Reported flow rate data based on the following: O & M June 1993 to May 1994 stated that during November 1993 to May 1994, the average recovery rate was 12 to 14 gpm and during June 1993 to November 1993, the average recovery rate was 4 to 7 gpm. O & M June 1994 to May 1995 stated that during September 1993 to April 1995, the average recovery rate was 10 to 18.5 gpm and during June 1994 to August 1994 and May 1995 to June 1995, the average recovery rate was 4 to 7.5 gpm.

(6) Effluent standards in compliance with Massachusetts Groundwater Quality Standards established by 314 CMR 6.00 and applicable Reportable Concentrations established by 314 CMR 40.

(7) Shaded cells indicate that effluent exceeded former permit requirements; permit expired May 7, 1997. Since 1997, MCP regulates effluent concentrations (see footnote 6) - no discharge permit is required under 314 CMR 3.00.

(8) NA= Not available

ARIES CHEMICAL INCORPORATED
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 315-366-1488 FAX: 315-366-1658

Origination Date: 06-10-00
 Revision Date: 08-15-02

3644

SECTION 1 - GENERAL INFORMATION

TRADE NAME: Aries 3644, 3765
 EMERGENCY PHONE NO: INFOTRAC #800-535-5053
 CHEMICAL NAME: Anionic Flocculant
 DISTRIBUTOR'S D-U-N-S NO: 14-861-3045

HAZARDOUS MATERIAL DESCRIPTION: Nonhazardous
 FREIGHT CLASS: 55
 SHIPPING NUMBER: N/A

SYNONYMS: Anionic polyacrylamide in water-in-oil emulsion
 FORMULA: Mixture
 CHEMICAL FAMILY: Anionic Polymer
 MOLECULAR WEIGHT: Mixture

SECTION 2 - HAZARDOUS INGREDIENTS

INGREDIENTS	% BY WT.	CAS NO.	OSHA	ACGIH	TWA
Petroleum Distillate	20.5-22.5	064742-47-8	500 ppm		
Sodium metabisulfite	0.6-0.8	007631-90-5	5mg/m3		

HAZARD RATING	HEALTH		REACTIVITY	
	FIRE	1	SPECIAL	0

SECTION 3 - PHYSICAL AND CHEMICAL PROPERTIES

SPECIFIC GRAVITY: - .99 - 1.1
 pH: 6.8 (In water)
 BOILING POINT: -350-500 F
 SOLUBILITY IN WATER: Limited by viscosity
 VAPOR PRESSURE: N/A
 PERCENT VOLATILE BY VOLUME: 64-65
 EVAPORATION RATE: N/A
 APPEARANCE AND ODOR: Grayish-white, viscous emulsion; faint ammonia odor.
 MATERIAL: Liquid.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A
 FLAMMABLE LIMITS: LEL: N/A UEL: N/A
 AUTO IGNITION TEMPERATURE: N/A
 EXTINGUISHING MEDIA: Use water spray, carbon dioxide or dry chemical to extinguish fires. Use water to keep containers cool.
 SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, positive pressure breathing apparatus and full fire-fighting protective clothing.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Thermal decomposition may release oxides of carbon and nitrogen, ammonia, hydrogen chloride.

SECTION 7 - SPILL OR LEAK PROCEDURE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: When exposure level is not known, wear NIOSH approved, positive pressure, self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. Spilled material should be absorbed onto inert material and scooped into an approved container for disposal. Flush remainder thoroughly with water and scrub to remove residue. Repeat if slipperiness remains.

WASTE DISPOSAL METHODS: Dispose of in accordance with Federal, State and Local regulations.

ENVIRONMENTAL TOXICITY DATA: Not available.

HAZARDOUS WASTE 40CFR261: N/A

HAZARDOUS WASTE NO: N/A

CONTAINER DISPOSAL: Returnable.

SECTION 8 - SPECIAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Where exposure level is not known, wear NIOSH approved, positive pressure, self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure.

EYE PROTECTION: For operations where eye or face contact can occur, wear eye protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

PROTECTION CLOTHING: Protective clothing such as impervious gloves, apron, workpants, long sleeve workshirt or disposable coveralls are recommended to prevent skin contact.

VENTILATION: Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

OTHER: Food, beverages and tobacco products should not be carried, stored or consumed where this material is in use. Before eating, drinking or smoking, wash face and hands with soap and water. Avoid skin contact.

SECTION 5 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE: Acute oral (rat) and dermal (rabbit) LD50 values are estimated to be greater than 5,000 mg/kg and greater than 2,000 mg/kg, respectively. The 4-hour inhalation LC50 (rat) value is estimated to be greater than 20 mg/L. Direct contact with this material can cause moderate skin and mild eye irritation.

INGESTION: Drink copious quantities of water. Immediately seek medical attention.

SKIN CONTACT: In case of skin contact, remove contaminated clothing without delay. Flush skin thoroughly with water. Do not reuse clothing without laundering. If irritation persists, seek medical attention.

EYE CONTACT: In case of eye contact, immediately irrigate with plenty of water for 15 minutes, lifting eyelids often. Seek medical attention.

INHALATION: Remove individual to fresh air. Initiate artificial resuscitation and CPR if necessary. Seek medical attention.

CARCINOGENICITY: Not a carcinogen.

SECTION 6 - REACTIVITY DATA

STABILITY: HAZARDOUS POLYMERIZATION:
Stable Will not occur.

CONDITIONS TO AVOID: Store away from sources of heat and ignition. Do not cut, grind or weld near containers.

MATERIALS TO AVOID: Strong oxidizing agents. This material reacts slowly with iron, copper and aluminum, resulting in corrosion and product degradation.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monoxide; carbon dioxide; ammonia; hydrogen chloride vapor; oxides of nitrogen.

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment. Do not cut, weld or grind near containers.

OTHER PRECAUTIONS: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

SECTION 10 - REGULATORY INFORMATION

SECTION 313 - SUPPLIER NOTIFICATION

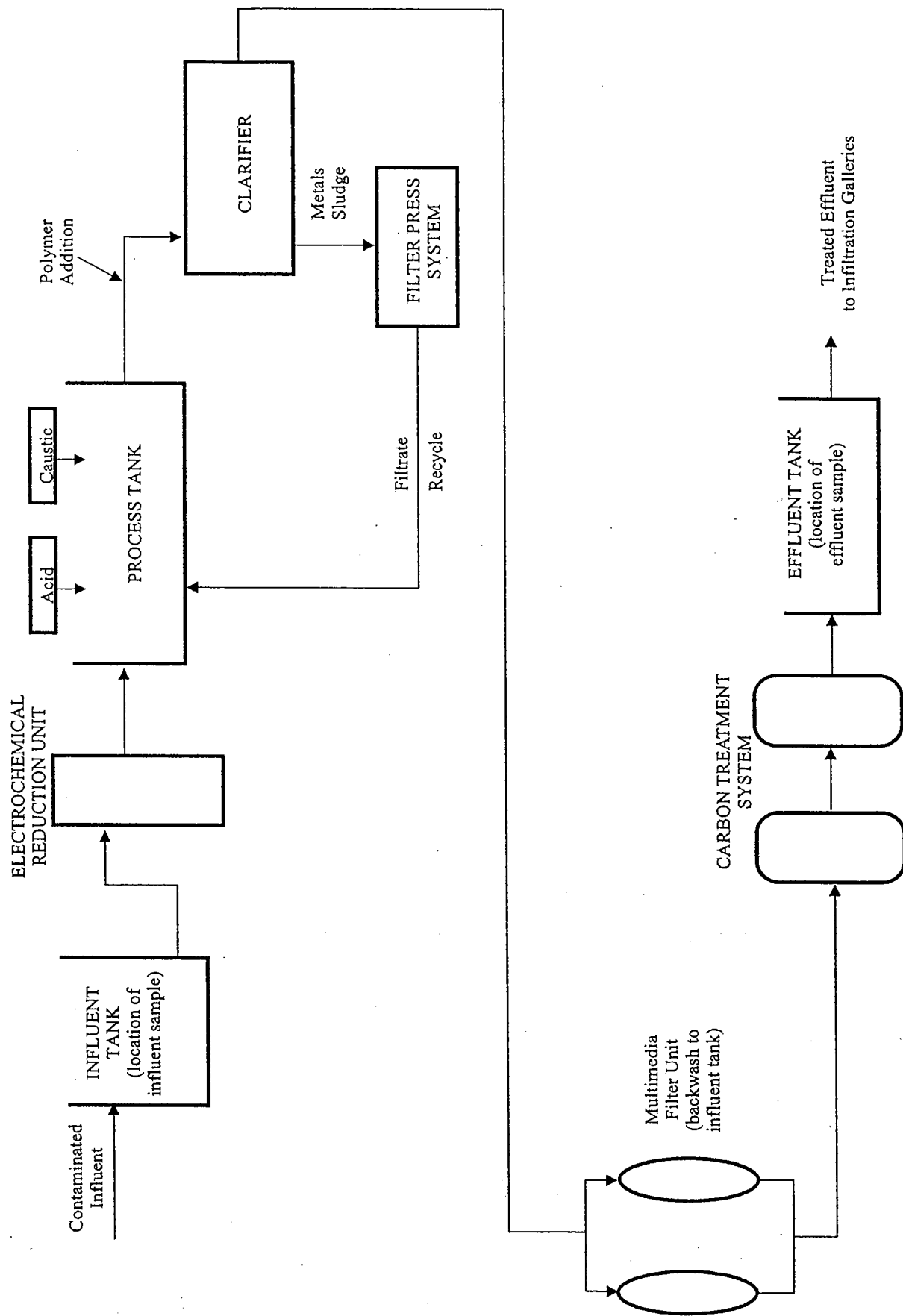
THIS PRODUCT DOES NOT CONTAIN ANY TOXIC CHEMICALS WHICH ARE REPORTABLE UNDER SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (40 CFR 372).

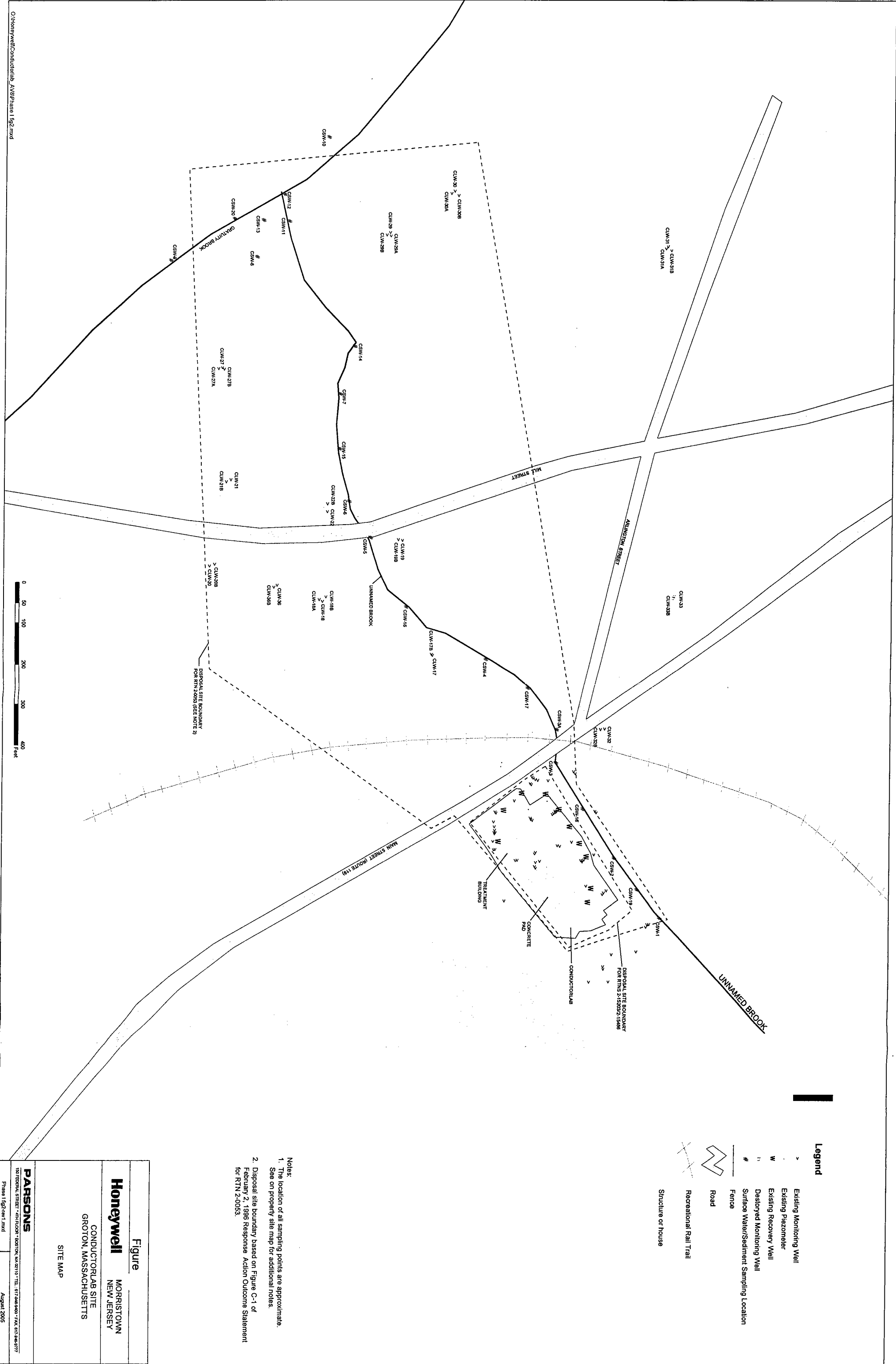
TSCA (Toxic Substances Control Act) Status: The components of this product are listed on the TSCA Inventory.

APPROVED BY: MARK MARCIN
TECHNICAL DIRECTOR

WHILE ARCS CHEMICAL INC. BELIEVES THE DATA SET FORTH HEREIN IS ACCURATE AS OF THE DATE HEREOF, ARCS CHEMICAL MAKES NO WARRANTY WITH RESPECT THERETO AND EXPRESSLY DISCLAIMS ALL LIABILITY FOR REFINANCE THEREON OF SUCH DATA AND IS OFFERED SOLELY FOR YOUR CONSIDERATION, INVESTIGATION, AND VERIFICATION.

FIGURE
GROUNDWATER TREATMENT SYSTEM SCHEMATIC
CONDUCTORLAB SITE, GROTON, MA





Robert Jackson
Honeywell International
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STL Westfield
53 Southampton Road
Westfield, MA 01085

Tel: 413 572 4000 Fax: 413 572 3707
www.stl-inc.com

10/18/2005

Report Number: 229878

Dear Robert Jackson,

The analysis of your sample(s) submitted on 09/29/2005 is now complete and the appropriate analytical report is enclosed. The samples were prepared and analyzed according to established methodologies and protocols. All holding times were met for the methods performed on these samples, unless otherwise noted in the report's case narrative.

If you have any questions regarding this report, please contact your Project Manager, Rebecca C. Mason.

For questions, concerns or comments regarding our service, please do not hesitate to contact me directly. Thank you for selecting STL Westfield, and we look forward to working with you on future projects.

Steven C. Hartmann
Laboratory Director
STL WESTFIELD

Technical Review: SF 10.19.05

Total number of pages in this report: 57

CASE NARRATIVE FOR REPORT NUMBER: 229878

Client Name : Honeywell International

Project Name : Conductorlab Site

Date : 10/18/05

229878-(1-2) The Method 1664 Oil and Grease analyses were performed at STL-Chicago, 2417 Bond Street, University Park, IL 60466.

229878-1 For method SW846 8270C, the extraction surrogate Phenol-d5 recovered low and outside method control limits (14.5%). Per method, re-extraction is only required if two or more surrogates from any one fraction or any single surrogate falls below 10%.

229878-2 For method SW846 8270C, the extraction surrogates 2-Fluorobiphenyl (base extractable) and Phenol-d5 (acid extractable) recovered low and outside method control limits (29.2 and 10.3%, respectively). Per method, re-extraction is only required if two or more surrogates from any one fraction or any single surrogate falls below 10%.

Date: 10/18/2005

```
Project Number.....: 20000365
Customer Project ID....: CONDUCTORLAB SITE
Project Description....: Conductorlab Site
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[illegible]

LABORATORY TEST RESULTS

Job Number: 229878

Date: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Customer Sample ID: C092905-Influent
Date Sampled.....: 09/29/2005
Time Sampled.....: 10:30
Sample Matrix.....: Water

Laboratory Sample ID: 229878-1
Date Received.....: 09/29/2005
Time Received.....: 18:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	REPORTING LIMIT	UNITS	DATE	TECH
SM18 4500CLF	Chlorine, Tot. Residual	ND	U	0.050	mg/L	09/30/05	pjs
EPA 160.2	Solids, Total Suspended (TSS)	ND	U	5.0	mg/L	10/04/05	rac
SW846 7196A	Hexavalent Chromium	0.48		0.050	mg/L	09/30/05	kmm
SW846 9014	Cyanide, Total	ND	U	0.010	mg/L	10/04/05	kmm
SW846 7470A	Mercury (CVAA) Liquid Waste Mercury (Hg)	ND	U	0.20	ug/L	10/05/05	bpg
SW846 6010B	Metals Analysis (ICP) Iron (Fe)	28	B	50	ug/L	10/17/05	bpg
SW846 6010B	Metals Analysis (ICP) Antimony (Sb)	2	B	6	ug/L	10/13/05	bpg
	Arsenic (As)	ND	U	5	ug/L	10/13/05	bpg
	Cadmium (Cd)	ND	U	1.0	ug/L	10/13/05	bpg
	Chromium (Cr)	740		5.0	ug/L	10/13/05	bpg
	Copper (Cu)	17		2	ug/L	10/13/05	bpg
	Lead (Pb)	ND	U	5	ug/L	10/13/05	bpg
	Nickel (Ni)	5	B	10	ug/L	10/13/05	bpg
	Selenium (Se)	ND	U	10	ug/L	10/13/05	bpg
	Silver (Ag)	ND	U	5.0	ug/L	10/13/05	bpg
	Zinc (Zn)	4	B	10	ug/L	10/13/05	bpg
SW846 8011	GC-Microextraction Microextraction	Complete			Text	10/04/05	pjs
SW846 8270C	Semivolatile Organics						
	Phenol	ND	U	10	ug/L	10/07/05	baf
	Pentachlorophenol	ND	U	50	ug/L	10/07/05	baf
	Naphthalene	ND	U	5.0	ug/L	10/07/05	baf
	Acenaphthylene	ND	U	5.0	ug/L	10/07/05	baf
	Acenaphthene	ND	U	5.0	ug/L	10/07/05	baf
	Fluorene	ND	U	5.0	ug/L	10/07/05	baf
	Phenanthrene	ND	U	5.0	ug/L	10/07/05	baf
	Anthracene	ND	U	5.0	ug/L	10/07/05	baf
	Fluoranthene	ND	U	5.0	ug/L	10/07/05	baf
	Pyrene	ND	U	5.0	ug/L	10/07/05	baf
	Benzo(a)anthracene	ND	U	5.0	ug/L	10/07/05	baf
	Chrysene	ND	U	5.0	ug/L	10/07/05	baf
	Bis(2-ethylhexyl)phthalate	ND	U	10	ug/L	10/07/05	baf
	Benzo(b)fluoranthene	ND	U	5.0	ug/L	10/07/05	baf
	Benzo(k)fluoranthene	ND	U	5.0	ug/L	10/07/05	baf
	Benzo(a)pyrene	ND	U	5.0	ug/L	10/07/05	baf
	Indeno(1,2,3-cd)pyrene	ND	U	5.0	ug/L	10/07/05	baf
	Dibenzo(a,h)anthracene	ND	U	5.0	ug/L	10/07/05	baf

* In Description = Dry Wgt.

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STL

MADEP MA014
RIDOH57
CTDPH 0494
VT DECWSD
NH DES 253903-A

NELAP FL E87912 TOX
NELAP NJ MA008 TOX
NELAP NY 10843
NY DOH 10843



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LABORATORY TEST RESULTS

Job Number: 229878

Date: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Customer Sample ID: C092905-Influent
Date Sampled.....: 09/29/2005
Time Sampled.....: 10:30
Sample Matrix.....: Water

Laboratory Sample ID: 229878-1
Date Received.....: 09/29/2005
Time Received.....: 18:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	REPORTING LIMIT	UNITS	DATE	TECH
SW846 8011	Benzo(ghi)perylene	ND	U	5.0	ug/L	10/07/05	baf
	GC Micro-Extractable Volatiles						
EPA 608	1,2-Dibromoethane (EDB)	ND	U	0.020	ug/L	10/05/05	pjs
	Pesticides/PCBs (Organochlorine)						
EPA 608	Aroclor 1016	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1221	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1232	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1242	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1248	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1254	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1260	ND	U	1.0	ug/L	10/07/05	jcs
	Chlordane, total	ND	U	0.50	ug/L	10/07/05	jcs
SW846 8260B	Volatile Organics						
	Benzene	ND	U	25	ug/L	10/06/05	blw
	Toluene	ND	U	25	ug/L	10/06/05	blw
	Ethylbenzene	ND	U	25	ug/L	10/06/05	blw
	m&p-Xylenes	ND	U	25	ug/L	10/06/05	blw
	o-Xylene	ND	U	25	ug/L	10/06/05	blw
	1,1-Dichloroethene	ND	U	25	ug/L	10/06/05	blw
	Methyl-tert-butyl-ether (MTBE)	ND	U	25	ug/L	10/06/05	blw
	1,1-Dichloroethane	ND	U	25	ug/L	10/06/05	blw
	cis-1,2-Dichloroethene	250	U	25	ug/L	10/06/05	blw
	Carbon tetrachloride	ND	U	25	ug/L	10/06/05	blw
	1,2-Dichloroethane	ND	U	25	ug/L	10/06/05	blw
	1,3-Dichlorobenzene	ND	U	25	ug/L	10/06/05	blw
	1,4-Dichlorobenzene	ND	U	25	ug/L	10/06/05	blw
	1,2-Dichlorobenzene	ND	U	25	ug/L	10/06/05	blw
	Naphthalene	ND	U	120	ug/L	10/06/05	blw
	tert-Butyl alcohol (TBA)	ND	U	1200	ug/L	10/06/05	blw
	tert-Amyl methyl ether (TAME)	ND	U	120	ug/L	10/06/05	blw
	Vinyl chloride	12	J	25	ug/L	10/06/05	blw
	Acetone	ND	U	1200	ug/L	10/06/05	blw
	Methylene chloride	ND	U	50	ug/L	10/06/05	blw
	1,1,1-Trichloroethane	ND	U	25	ug/L	10/06/05	blw
	Trichloroethene (TCE)	1500	U	25	ug/L	10/06/05	blw
	1,1,2-Trichloroethane	ND	U	25	ug/L	10/06/05	blw
	Tetrachloroethene	14	J	25	ug/L	10/06/05	blw
	1,4-Dioxane	ND	U	1200	ug/L	10/06/05	blw

* In Description = Dry Wgt.

Page 3

**SEVERN
TRENT**

STL

MADEP MA014
RIDOH57
CTDPH 0494
VT DECWSD
NH DES 253903-A

NELAP FL E87912 TOX
NELAP NJ MA008 TOX
NELAP NY 10843
NY DOH 10843



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Fax: (978) 667-7871

LABORATORY TEST RESULTS

Job Number: 229878

Date: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Customer Sample ID: C092905-Effluent
Date Sampled.....: 09/29/2005
Time Sampled.....: 11:00
Sample Matrix.....: Water

Laboratory Sample ID: 229878-2
Date Received.....: 09/29/2005
Time Received.....: 18:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	REPORTING LIMIT	UNITS	DATE	TECH
SM18 4500CLF	Chlorine, Tot. Residual	ND	U	0.050	mg/L	09/30/05	pjs
EPA 160.2	Solids, Total Suspended (TSS)	ND	U	5.0	mg/L	10/04/05	rac
SW846 7196A	Hexavalent Chromium	0.0027	B	0.0050	mg/L	09/30/05	kmm
SW846 9014	Cyanide, Total	ND	U	0.010	mg/L	10/04/05	kmm
SW846 7470A	Mercury (CVAA) Liquid Waste Mercury (Hg)	ND	U	0.20	ug/L	10/05/05	bpg
SW846 6010B	Metals Analysis (ICP) Iron (Fe)	45	B	50	ug/L	10/17/05	bpg
SW846 6010B	Metals Analysis (ICP) Antimony (Sb)	ND	U	6	ug/L	10/17/05	bpg
	Arsenic (As)	ND	U	5	ug/L	10/17/05	bpg
	Cadmium (Cd)	ND	U	1.0	ug/L	10/17/05	bpg
	Chromium (Cr)	ND	U	5.0	ug/L	10/17/05	bpg
	Copper (Cu)	ND	U	2	ug/L	10/17/05	bpg
	Lead (Pb)	ND	U	5	ug/L	10/17/05	bpg
	Nickel (Ni)	3	B	10	ug/L	10/17/05	bpg
	Selenium (Se)	ND	U	10	ug/L	10/17/05	bpg
	Silver (Ag)	ND	U	5.0	ug/L	10/17/05	bpg
	Zinc (Zn)	2	B	10	ug/L	10/17/05	bpg
SW846 8011	GC-Microextraction Microextraction	Complete			Text	10/04/05	pjs
SW846 8270C	Semivolatile Organics						
	Phenol	ND	U	10	ug/L	10/07/05	baf
	Pentachlorophenol	ND	U	50	ug/L	10/07/05	baf
	Naphthalene	ND	U	5.0	ug/L	10/07/05	baf
	Acenaphthylene	ND	U	5.0	ug/L	10/07/05	baf
	Acenaphthene	ND	U	5.0	ug/L	10/07/05	baf
	Fluorene	ND	U	5.0	ug/L	10/07/05	baf
	Phenanthrene	ND	U	5.0	ug/L	10/07/05	baf
	Anthracene	ND	U	5.0	ug/L	10/07/05	baf
	Fluoranthene	ND	U	5.0	ug/L	10/07/05	baf
	Pyrene	ND	U	5.0	ug/L	10/07/05	baf
	Benzo(a)anthracene	ND	U	5.0	ug/L	10/07/05	baf
	Chrysene	ND	U	5.0	ug/L	10/07/05	baf
	Bis(2-ethylhexyl)phthalate	ND	U	10	ug/L	10/07/05	baf
	Benzo(b)fluoranthene	ND	U	5.0	ug/L	10/07/05	baf
	Benzo(k)fluoranthene	ND	U	5.0	ug/L	10/07/05	baf
	Benzo(a)pyrene	ND	U	5.0	ug/L	10/07/05	baf
	Indeno(1,2,3-cd)pyrene	ND	U	5.0	ug/L	10/07/05	baf
	Dibenzo(a,h)anthracene	ND	U	5.0	ug/L	10/07/05	baf

* In Description = Dry Wgt.

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STL

MADEP MA014
RIDOH57
CTDPH 0494
VT DECWSD
NH DES 253903-A

NELAP FL E87912 TOX
NELAP NJ MA008 TOX
NELAP NY 10843
NY DOH 10843



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STL Billerica-Service Center
148 Rangeway Rd.
N. Billerica, MA 01862
Tel: (978) 667-1400
Fax: (978) 667-7871

Job Number: 229878

LABORATORY TEST RESULTS

Date: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Customer Sample ID: C092905-Effluent

Date Sampled.....: 09/29/2005

Time Sampled.....: 11:00

Sample Matrix.....: Water

Laboratory Sample ID: 229878-2

Date Received.....: 09/29/2005

Time Received.....: 18:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	REPORTING LIMIT	UNITS	DATE	TECH
SW846 8011	Benzo(ghi)perylene	ND	U	5.0	ug/L	10/07/05	baf
	GC Micro-Extractable Volatiles						
EPA 608	1,2-Dibromoethane (EDB)	ND	U	0.020	ug/L	10/05/05	pjs
	Pesticides/PCBs (Organochlorine)						
	Aroclor 1016	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1221	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1232	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1242	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1248	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1254	ND	U	1.0	ug/L	10/07/05	jcs
	Aroclor 1260	ND	U	1.0	ug/L	10/07/05	jcs
	Chlordane, total	ND	U	0.50	ug/L	10/07/05	jcs
SW846 8260B	Volatile Organics						
	Benzene	ND	U	1.0	ug/L	10/06/05	blw
	Toluene	ND	U	1.0	ug/L	10/06/05	blw
	Ethylbenzene	ND	U	1.0	ug/L	10/06/05	blw
	m&p-Xylenes	ND	U	1.0	ug/L	10/06/05	blw
	o-Xylene	ND	U	1.0	ug/L	10/06/05	blw
	1,1-Dichloroethene	ND	U	1.0	ug/L	10/06/05	blw
	Methyl-tert-butyl-ether (MTBE)	ND	U	1.0	ug/L	10/06/05	blw
	1,1-Dichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	cis-1,2-Dichloroethene	ND	U	1.0	ug/L	10/06/05	blw
	Carbon tetrachloride	ND	U	1.0	ug/L	10/06/05	blw
	1,2-Dichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	1,3-Dichlorobenzene	ND	U	1.0	ug/L	10/06/05	blw
	1,4-Dichlorobenzene	ND	U	1.0	ug/L	10/06/05	blw
	1,2-Dichlorobenzene	ND	U	1.0	ug/L	10/06/05	blw
	Naphthalene	ND	U	5.0	ug/L	10/06/05	blw
	tert-Butyl alcohol (TBA)	ND	U	50	ug/L	10/06/05	blw
	tert-Amyl methyl ether (TAME)	ND	U	5.0	ug/L	10/06/05	blw
	Vinyl chloride	ND	U	1.0	ug/L	10/06/05	blw
	Acetone	ND	U	50	ug/L	10/06/05	blw
	Methylene chloride	ND	U	2.0	ug/L	10/06/05	blw
	1,1,1-Trichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	Trichloroethene (TCE)	ND	U	1.0	ug/L	10/06/05	blw
	1,1,2-Trichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	Tetrachloroethene	ND	U	1.0	ug/L	10/06/05	blw
	1,4-Dioxane	ND	U	50	ug/L	10/06/05	blw

* In Description = Dry Wgt.

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STL

MADEP MA014
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NH DES 253903-A

NELAP FL E87912 TOX
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Fax: (978) 667-7871

Job Number: 229878

LABORATORY TEST RESULTS

Date: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Customer Sample ID: C092805-TripBlank

Date Sampled.....: 09/28/2005

Time Sampled.....: 12:00

Sample Matrix.....: Water

Laboratory Sample ID: 229878-3

Date Received.....: 09/29/2005

Time Received.....: 18:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	REPORTING LIMIT	UNITS	DATE	TECH
SW846 8260B	Volatile Organics						
	Benzene	ND	U	1.0	ug/L	10/06/05	blw
	Toluene	ND	U	1.0	ug/L	10/06/05	blw
	Ethylbenzene	ND	U	1.0	ug/L	10/06/05	blw
	m&p-Xylenes	ND	U	1.0	ug/L	10/06/05	blw
	o-Xylene	ND	U	1.0	ug/L	10/06/05	blw
	1,1-Dichloroethene	ND	U	1.0	ug/L	10/06/05	blw
	Methyl-tert-butyl-ether (MTBE)	ND	U	1.0	ug/L	10/06/05	blw
	1,1-Dichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	cis-1,2-Dichloroethene	ND	U	1.0	ug/L	10/06/05	blw
	Carbon tetrachloride	ND	U	1.0	ug/L	10/06/05	blw
	1,2-Dichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	1,3-Dichlorobenzene	ND	U	1.0	ug/L	10/06/05	blw
	1,4-Dichlorobenzene	ND	U	1.0	ug/L	10/06/05	blw
	1,2-Dichlorobenzene	ND	U	1.0	ug/L	10/06/05	blw
	Naphthalene	ND	U	5.0	ug/L	10/06/05	blw
	tert-Butyl alcohol (TBA)	ND	U	50	ug/L	10/06/05	blw
	tert-Amyl methyl ether (TAME)	ND	U	5.0	ug/L	10/06/05	blw
	Vinyl chloride	ND	U	1.0	ug/L	10/06/05	blw
	Acetone	ND	U	50	ug/L	10/06/05	blw
	Methylene chloride	ND	U	2.0	ug/L	10/06/05	blw
	1,1,1-Trichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	Trichloroethene (TCE)	ND	U	1.0	ug/L	10/06/05	blw
	1,1,2-Trichloroethane	ND	U	1.0	ug/L	10/06/05	blw
	Tetrachloroethene	ND	U	1.0	ug/L	10/06/05	blw
	1,4-Dioxane	ND	U	50	ug/L	10/06/05	blw

* In Description = Dry Wgt.

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SEVERN
TRENT

STL

MADEP MA014
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NH DES 253903-ANELAP FL E87912 TOX
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Fax: (978) 667-7871

Job Number: 229878

LABORATORY CHRONICLE

Date: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Lab ID: 229878-1	Client ID: C092905-Influent	Date Recvd: 09/29/2005	Sample Date: 09/29/2005		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED DILUTION
3010A	Acid Digestion, Total (ICP)	1	50654		10/03/2005 0000
SM18 4500CLF	Chlorine, (DPD)	1	50603		09/30/2005 0000
SW846 9014	Cyanide (Colorimetric)	1	50741		10/04/2005 0000
SW8469010A MCP	Cyanide Preparation Aqueous Matrix	1	50706		10/03/2005 0000
SW846 3510C	Extraction Sep. Funnel (SVOC)	1	50760		10/04/2005 0000
EPA 608 Extr.	Extraction Sep. Funnel Prep for EPA 608	1	50903		10/06/2005 0000
SW846 8011	GC Micro-Extractable Volatiles	1	50773		10/05/2005 0211
SW846 8011	GC-Microextraction	1	50747		10/04/2005 0000
SW846 7196A	Hexavalent Chromium	1	50723		09/30/2005 0844 10
SW846 7470A	Mercury (CVAA) Aqueous Preparation	1	50685		10/03/2005 1554
SW846 7470A	Mercury (CVAA) Liquid Waste	1	50977	50685	10/05/2005 1401
SW846 6010B	Metals Analysis (ICP)	1	51289	50654	10/13/2005 1634
SW846 6010B	Metals Analysis (ICP)	1	51420	50654	10/17/2005 1628
EPA 608	Pesticides/PCBs (Organochlorine)	1	51015	50903	10/07/2005 2236
SW846 8270C	Semivolatile Organics	1	51025	50760	10/07/2005 2148
EPA 160.2	Solids, Total Suspended (TSS)	1	50845		10/04/2005 0000
	Special Instructions	1	50959		
	Special Instructions	1	51017		10/10/2005 0000
SW846 8260B	Volatile Organics	1	50949		10/06/2005 1843 25
Lab ID: 229878-2	Client ID: C092905-Effluent	Date Recvd: 09/29/2005	Sample Date: 09/29/2005		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED DILUTION
3010A	Acid Digestion, Total (ICP)	1	50654		10/03/2005 0000
SM18 4500CLF	Chlorine, (DPD)	1	50603		09/30/2005 0000
SW846 9014	Cyanide (Colorimetric)	1	50741		10/04/2005 0000
SW8469010A MCP	Cyanide Preparation Aqueous Matrix	1	50706		10/03/2005 0000
SW846 3510C	Extraction Sep. Funnel (SVOC)	1	50760		10/04/2005 0000
EPA 608 Extr.	Extraction Sep. Funnel Prep for EPA 608	1	50903		10/06/2005 0000
SW846 8011	GC Micro-Extractable Volatiles	1	50773		10/05/2005 0227
SW846 8011	GC-Microextraction	1	50747		10/04/2005 0000
SW846 7196A	Hexavalent Chromium	1	50723		09/30/2005 0844
SW846 7470A	Mercury (CVAA) Aqueous Preparation	1	50685		10/03/2005 1600
SW846 7470A	Mercury (CVAA) Liquid Waste	1	50977	50685	10/05/2005 1404
SW846 6010B	Metals Analysis (ICP)	1	51420	50654	10/17/2005 1720
SW846 6010B	Metals Analysis (ICP)	1	51395	50654	10/17/2005 1820
EPA 608	Pesticides/PCBs (Organochlorine)	1	51015	50903	10/07/2005 2301
SW846 8270C	Semivolatile Organics	1	51025	50760	10/07/2005 2226
EPA 160.2	Solids, Total Suspended (TSS)	1	50845		10/04/2005 0000
	Special Instructions	1	50959		
	Special Instructions	1	51017		10/10/2005 0000
SW846 8260B	Volatile Organics	1	50949		10/06/2005 1907 1
Lab ID: 229878-3	Client ID: C092805-TripBlank	Date Recvd: 09/29/2005	Sample Date: 09/28/2005		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED DILUTION
	Special Instructions	1	50959		
SW846 8260B	Volatile Organics	1	50949		10/06/2005 1930 1

Job Number.: 229878

SURROGATE RECOVERIES REPORT

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Method.....: Pesticides/PCBs (Organochlorine)
Batch(s).....: 51015Method Code...: 608
Test Matrix...: WaterPrep Batch.....: 50903
Equipment Code:

Lab ID	DT	Sample ID	Date	DCB	TCX
LCD			10/08/2005	156.5	144.0
LCS			10/08/2005	83.4	86.3
MB			10/08/2005	125.3	94.5
229878- 1		C092905-Influent	10/07/2005	117.1	116.0
229878- 2		C092905-Effluent	10/07/2005	121.4	100.5

Test	Test Description	Limits
DCB	Decachlorobiphenyl (surr)	30.0 - 150.
TCX	Tetrachloro-m-xylene (surr)	30.0 - 150.

Job Number.: 229878

SURROGATE RECOVERIES REPORT

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Method.....: Volatile Organics
Batch(s).....: 50949Method Code...: 8260
Test Matrix...: WaterPrep Batch....:
Equipment Code: VHPMS1

Lab ID	DT	Sample ID	Date	12DCED	DBRFLM	TOLD8
LCD			10/06/2005	104.8	101.2	100.8
LCS			10/06/2005	103.5	101.1	101.4
MB			10/06/2005	102.7	101.6	99.2
229878- 1		C092905-Influent	10/06/2005	95.9	99.0	100.4
229878- 2		C092905-Effluent	10/06/2005	120.8	102.7	100.5
229878- 3		C092805-TripBlank	10/06/2005	96.5	99.4	94.5

Test	Test Description	Limits
12DCED	1,2-Dichloroethane-d4 (surr)	70.0 - 130.
DBRFLM	Dibromofluoromethane (surr)	70.0 - 130.
TOLD8	Toluene-d8 (surr)	70.0 - 130.

Job Number.: 229878

SURROGATE RECOVERIES REPORT

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Method.....: Semivolatile Organics
Batch(s).....: 51025Method Code....: 8270
Test Matrix....: WaterPrep Batch.....: 50760
Equipment Code: EHPGC1

Lab ID	DT	Sample ID	Date	246TBP	2FLUBP	2FLUPH	NITRD5	PHEND5	TERD14
LCD			10/04/2005	75.9	74.3	43.7	72.1	32.7	73.4
LCS			10/04/2005	74.7	70.7	34.8	65.4	25.0	73.3
MB			10/04/2005	73.7	69.2	34.7	70.8	30.9	76.9
229878- 1		C092905-Influent	10/07/2005	37.3	35.8	24.1	37.1	14.5*	52.5
229878- 2		C092905-Effluent	10/07/2005	29.2	29.2*	16.9	30.0	10.3*	39.9

Test	Test Description	Limits
246TBP	2,4,6-Tribromophenol (surr)	15.0 - 110.
2FLUBP	2-Fluorobiphenyl (surr)	30.0 - 130.
2FLUPH	2-Fluorophenol (surr)	15.0 - 110.
NITRD5	Nitrobenzene-d5 (surr)	30.0 - 130.
PHEND5	Phenol-d5 (surr)	15.0 - 110.
TERD14	Terphenyl-d14 (surr)	30.0 - 130.

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 8270C

Method Description.: Semivolatile Organics

Batch.....: 51025

Analyst....: baf

LCD	Laboratory Control Sample Duplicate	E051SPK058	50760		10/04/2005	1607
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Phenol	ug/L	14.960	11.460	40.000	10.000	U 37.4 26.5	30.0-130.0	*
Naphthalene	ug/L	24.750	22.180	40.000	5.000	U 61.9 11.0	40.0-140.0	
Acenaphthylene	ug/L	31.200	30.010	40.000	5.000	U 78.0 3.9	40.0-140.0	
Acenaphthene	ug/L	27.580	26.520	40.000	5.000	U 69.0 3.9	40.0-140.0	
Fluorene	ug/L	27.510	27.390	40.000	5.000	U 68.8 0.4	40.0-140.0	
Pentachlorophenol	ug/L	27.810	28.390	40.000	50.000	U 69.5 2.1	30.0-130.0	
Phenanthrene	ug/L	29.630	29.440	40.000	5.000	U 74.1 0.6	40.0-140.0	
Anthracene	ug/L	30.070	30.110	40.000	5.000	U 75.2 0.1	40.0-140.0	
Fluoranthene	ug/L	28.650	28.840	40.000	5.000	U 71.6 0.7	40.0-140.0	
Pyrene	ug/L	30.360	29.390	40.000	5.000	U 75.9 3.2	40.0-140.0	
Benzo(a)anthracene	ug/L	27.910	27.730	40.000	5.000	U 69.8 0.6	40.0-140.0	
Chrysene	ug/L	27.850	27.590	40.000	5.000	U 69.6 0.9	40.0-140.0	
Bis(2-ethylhexyl)phthalate	ug/L	28.110	28.140	40.000	10.000	U 70.3 0.1	40.0-140.0	
Benzo(b)fluoranthene	ug/L	29.260	27.950	40.000	5.000	U 73.2 4.6	40.0-140.0	
Benzo(k)fluoranthene	ug/L	32.250	33.500	40.000	5.000	U 80.6 3.8	40.0-140.0	
Benzo(a)pyrene	ug/L	30.190	30.050	40.000	5.000	U 75.5 0.5	40.0-140.0	
Indeno(1,2,3-cd)pyrene	ug/L	26.070	25.650	40.000	5.000	U 65.2 1.6	40.0-140.0	
Dibenzo(a,h)anthracene	ug/L	26.670	26.170	40.000	5.000	U 66.7 1.9	40.0-140.0	
Benzo(ghi)perylene	ug/L	23.880	23.500	40.000	5.000	U 59.7 1.6	40.0-140.0	

Job Number.: 229878		QUALITY CONTROL RESULTS			Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE			ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: SW846 8270C	Batch.....: 51025	Analyst....: baf
Method Description.: Semivolatile Organics		

LCS	Laboratory Control Sample	E051SPK058	50760		10/04/2005	1522
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Phenol	ug/L	11.460		40.000	10.000	U 28.6	30-130	*
Naphthalene	ug/L	22.180		40.000	5.000	U 55.5	40-140	
Acenaphthylene	ug/L	30.010		40.000	5.000	U 75.0	40-140	
Acenaphthene	ug/L	26.520		40.000	5.000	U 66.3	40-140	
Fluorene	ug/L	27.390		40.000	5.000	U 68.5	40-140	
Pentachlorophenol	ug/L	28.390	J	40.000	50.000	U 71.0	30-130	
Phenanthrene	ug/L	29.440		40.000	5.000	U 73.6	40-140	
Anthracene	ug/L	30.110		40.000	5.000	U 75.3	40-140	
Fluoranthene	ug/L	28.840		40.000	5.000	U 72.1	40-140	
Pyrene	ug/L	29.390		40.000	5.000	U 73.5	40-140	
Benzo(a)anthracene	ug/L	27.730		40.000	5.000	U 69.3	40-140	
Chrysene	ug/L	27.590		40.000	5.000	U 69.0	40-140	
Bis(2-ethylhexyl)phthalate	ug/L	28.140		40.000	10.000	U 70.3	40-140	
Benzo(b)fluoranthene	ug/L	27.950		40.000	5.000	U 69.9	40-140	
Benzo(k)fluoranthene	ug/L	33.500		40.000	5.000	U 83.8	40-140	
Benzo(a)pyrene	ug/L	30.050		40.000	5.000	U 75.1	40-140	
Indeno(1,2,3-cd)pyrene	ug/L	25.650		40.000	5.000	U 64.1	40-140	
Dibenzo(a,h)anthracene	ug/L	26.170		40.000	5.000	U 65.4	40-140	
Benzo(ghi)perylene	ug/L	23.500		40.000	5.000	U 58.8	40-140	

Job Number.: 229878		QUALITY CONTROL RESULTS		Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE		ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: SW846 8270C	Analyst....: baf
Method Description.: Semivolatile Organics	Batch.....: 51025

MB	Method Blank		50760		10/04/2005 1438
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Phenol	ug/L	10.000	U					
Naphthalene	ug/L	5.000	U					
Acenaphthylene	ug/L	5.000	U					
Acenaphthene	ug/L	5.000	U					
Fluorene	ug/L	5.000	U					
Pentachlorophenol	ug/L	50.000	U					
Phenanthrene	ug/L	5.000	U					
Anthracene	ug/L	5.000	U					
Fluoranthene	ug/L	5.000	U					
Pyrene	ug/L	5.000	U					
Benzo(a)anthracene	ug/L	5.000	U					
Chrysene	ug/L	5.000	U					
Bis(2-ethylhexyl)phthalate	ug/L	10.000	U					
Benzo(b)fluoranthene	ug/L	5.000	U					
Benzo(k)fluoranthene	ug/L	5.000	U					
Benzo(a)pyrene	ug/L	5.000	U					
Indeno(1,2,3-cd)pyrene	ug/L	5.000	U					
Dibenzo(a,h)anthracene	ug/L	5.000	U					
Benzo(ghi)perylene	ug/L	5.000	U					

QUALITY CONTROL RESULTS

Job Number.: 229878

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 8011

Method Description.: GC Micro-Extractable Volatiles

Batch.....: 50773

Analyst....: pjs

LCD	Laboratory Control Sample Duplicate	S04HSPK303			10/04/2005	2154
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
1,2-Dibromoethane (EDB)	ug/L	0.305	0.286	0.251	0.020 U	121.5 6.4	70.0-130.0 20.0	

Job Number.: 229878		QUALITY CONTROL RESULTS		Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE		ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: SW846 8011	Analyst....: pjs
Method Description.: GC Micro-Extractable Volatiles	Batch.....: 50773

LCS	Laboratory Control Sample	S04HSPK303			10/04/2005 2137
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
1,2-Dibromoethane (EDB)	ug/L	0.286		0.251	0.020	U 113.9	70-130	

Job Number.: 229878		QUALITY CONTROL RESULTS			Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE			ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: SW846 8011	Analyst....: pjs
Method Description.: GC Micro-Extractable Volatiles	Batch.....: 50773

MB	Method Blank					10/04/2005	2122
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
1,2-Dibromoethane (EDB)	ug/L	0.020	U					

Job Number.: 229878		QUALITY CONTROL RESULTS				Report Date.: 10/18/2005	
CUSTOMER: Honeywell International			PROJECT: CONDUCTORLAB SITE			ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	

Test Method.....: SW846 8011	Batch.....: 50773	Analyst....: pjs
Method Description.: GC Micro-Extractable Volatiles		

MS	Matrix Spike	S04HSPK303	229761-7		10/04/2005 2355
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
1,2-Dibromoethane (EDB)	ug/L	0.294		0.251	0.020	U 117	% 65-135	

MS	Matrix Spike	S04HSPK303	229762-3		10/05/2005 0141
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
1,2-Dibromoethane (EDB)	ug/L	0.291		0.251	0.020	U 116	% 65-135	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 8011

Method Description.: GC Micro-Extractable Volatiles

Batch.....: 50773

Analyst....: pjs

MSD	Matrix Spike Duplicate	S04HSPK303	229761-7		10/05/2005	0010		
Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
1,2-Dibromoethane (EDB)	ug/L	0.290	0.294	0.251	0.020 U	116 1	65-135 20	

MSD	Matrix Spike Duplicate	S04HSPK303	229762-3		10/05/2005	0156		
Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
1,2-Dibromoethane (EDB)	ug/L	0.298	0.291	0.251	0.020 U	119 2	65-135 20	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: EPA 608

Method Description.: Pesticides/PCBs (Organochlorine)

Batch.....: 51015

Analyst...: jcs

LCD	Laboratory Control Sample Duplicate	E05IWRK005	50903		10/08/2005	0128
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Aroclor 1016	ug/L	2.533	2.257		1.000	U		
Aroclor 1260	ug/L	2.595	2.297		1.000	U		

QUALITY CONTROL RESULTS	
Job Number.: 229878	Report Date.: 10/18/2005
CUSTOMER: Honeywell International	PROJECT: CONDUCTORLAB SITE
ATTN: Robert Jackson	
QC Type	Description
Reag. Code	Lab ID
Dilution Factor	Date Time

Test Method.....: EPA 608	Batch.....: 51015	Analyst...: jcs
Method Description.: Pesticides/PCBs (Organochlorine)		

LCS	Laboratory Control Sample	E051WRK005	50903		10/08/2005 0103
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Aroclor 1016	ug/L	2.257			1.000	U		
Aroclor 1260	ug/L	2.297			1.000	U		

Job Number.: 229878		QUALITY CONTROL RESULTS		Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE		ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: EPA 608	Batch.....: 51015	Analyst...: jcs
Method Description.: Pesticides/PCBs (Organochlorine)		

MB	Method Blank		50903		10/08/2005 0039
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Aroclor 1016	ug/L	1.000	U					
Aroclor 1221	ug/L	1.000	U					
Aroclor 1232	ug/L	1.000	U					
Aroclor 1242	ug/L	1.000	U					
Aroclor 1248	ug/L	1.000	U					
Aroclor 1254	ug/L	1.000	U					
Aroclor 1260	ug/L	1.000	U					
Chlordane, total	ug/L	0.500	U					

QUALITY CONTROL RESULTS					
Job Number.: 229878			Report Date.: 10/18/2005		
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE		ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: SW846 8260B	Analyst....: blw
Method Description.: Volatile Organics	Batch.....: 50949

LCD	Laboratory Control Sample Duplicate	V04EWRK001			10/06/2005 1336
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Vinyl chloride	ug/L	16.690	16.800	20.000	1.000	U 83.5	70.0-130.0	
1,1-Dichloroethene	ug/L	15.600	16.630	20.000	1.000	U 0.7	25.0	
Acetone	ug/L	247.160	233.970	200.000	50.000	U 78.0	70.0-130.0	
Methylene chloride	ug/L	16.360	17.020	20.000	2.000	U 6.4	25.0	
Methyl-tert-butyl-ether (MTBE)	ug/L	17.240	17.880	20.000	1.000	U 123.6	70.0-130.0	
1,1-Dichloroethane	ug/L	15.820	16.840	20.000	1.000	U 5.5	25.0	
cis-1,2-Dichloroethene	ug/L	16.240	16.890	20.000	1.000	U 81.8	70.0-130.0	
1,1,1-Trichloroethane	ug/L	16.000	16.940	20.000	1.000	U 4.0	25.0	
Carbon tetrachloride	ug/L	16.600	17.690	20.000	1.000	U 86.2	70.0-130.0	
Benzene	ug/L	15.970	16.840	20.000	1.000	U 3.6	25.0	
1,2-Dichloroethane	ug/L	16.150	16.810	20.000	1.000	U 79.1	70.0-130.0	
Trichloroethene (TCE)	ug/L	15.810	16.660	20.000	1.000	U 6.2	25.0	
Toluene	ug/L	15.740	16.540	20.000	1.000	U 81.2	70.0-130.0	
1,1,2-Trichloroethane	ug/L	16.520	17.110	20.000	1.000	U 3.9	25.0	
Tetrachloroethene	ug/L	16.330	17.050	20.000	1.000	U 80.0	70.0-130.0	
Ethylbenzene	ug/L	15.860	16.850	20.000	1.000	U 5.7	25.0	
m&p-Xylenes	ug/L	32.140	33.950	40.000	1.000	U 83.0	70.0-130.0	
o-Xylene	ug/L	15.860	16.780	20.000	1.000	U 6.4	25.0	
1,3-Dichlorobenzene	ug/L	16.050	16.870	20.000	1.000	U 79.8	70.0-130.0	
1,4-Dichlorobenzene	ug/L	16.190	16.780	20.000	1.000	U 5.3	25.0	
1,2-Dichlorobenzene	ug/L	16.150	16.640	20.000	1.000	U 80.8	70.0-130.0	
Naphthalene	ug/L	16.940	17.660	20.000	5.000	U 4.0	25.0	
tert-Butyl alcohol (TBA)	ug/L	173.620	211.790	200.000	50.000	U 79.0	70.0-130.0	
1,4-Dioxane	ug/L	230.760	217.450	200.000	50.000	U 5.2	25.0	
tert-Amyl methyl ether (TAME)	ug/L	16.160	16.800	20.000	5.000	U 78.7	70.0-130.0	
						U 5.0	25.0	
						U 82.6	70.0-130.0	
						U 3.5	25.0	
						U 81.7	70.0-130.0	
						U 4.3	25.0	
						U 79.3	70.0-130.0	
						U 6.1	25.0	
						U 80.3	70.0-130.0	
						U 5.5	25.0	
						U 79.3	70.0-130.0	
						U 5.6	25.0	
						U 80.2	70.0-130.0	
						U 5.0	25.0	
						U 81.0	70.0-130.0	
						U 3.6	25.0	
						U 80.8	70.0-130.0	
						U 3.0	25.0	
						U 84.7	70.0-130.0	
						U 4.2	25.0	
						U 86.8	70.0-130.0	
						U 19.8	25.0	
						U 115.4	70.0-130.0	
						U 5.9	25.0	
						U 80.8	70.0-130.0	
						U 3.9	25.0	

Page 22 * % = % REC, R = RPD, A = ABS Diff, D = % Diff

SEVERN
TRENT

STL

MADEP MA014
RIDOH57
CTDPH 0494
VT DECWSD
NH DES 253903-A

NELAP FL E87912 TOX
NELAP NJ MA008 TOX
NELAP NY 10843
NY DOH 10843



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Fax: (978) 667-7871

Job Number.: 229878		QUALITY CONTROL RESULTS			Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE			ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: SW846 8260B	Analyst....: blw
Method Description.: Volatile Organics	Batch.....: 50949

LCS	Laboratory Control Sample	V04EWRK001			10/06/2005	1313
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Vinyl chloride	ug/L	16.800		20.000	1.000	U 84.0	70-130	
1,1-Dichloroethene	ug/L	16.630		20.000	1.000	U 83.2	70-130	
Acetone	ug/L	233.970		200.000	50.000	U 117.0	70-130	
Methylene chloride	ug/L	17.020		20.000	2.000	U 85.1	70-130	
Methyl-tert-butyl-ether (MTBE)	ug/L	17.880		20.000	1.000	U 89.4	70-130	
1,1-Dichloroethane	ug/L	16.840		20.000	1.000	U 84.2	70-130	
cis-1,2-Dichloroethene	ug/L	16.890		20.000	1.000	U 84.5	70-130	
1,1,1-Trichloroethane	ug/L	16.940		20.000	1.000	U 84.7	70-130	
Carbon tetrachloride	ug/L	17.690		20.000	1.000	U 88.5	70-130	
Benzene	ug/L	16.840		20.000	1.000	U 84.2	70-130	
1,2-Dichloroethane	ug/L	16.810		20.000	1.000	U 84.0	70-130	
Trichloroethene (TCE)	ug/L	16.660		20.000	1.000	U 83.3	70-130	
Toluene	ug/L	16.540		20.000	1.000	U 82.7	70-130	
1,1,2-Trichloroethane	ug/L	17.110		20.000	1.000	U 85.5	70-130	
Tetrachloroethene	ug/L	17.050		20.000	1.000	U 85.2	70-130	
Ethylbenzene	ug/L	16.850		20.000	1.000	U 84.2	70-130	
m&p-Xylenes	ug/L	33.950		40.000	1.000	U 84.9	70-130	
o-Xylene	ug/L	16.780		20.000	1.000	U 83.9	70-130	
1,3-Dichlorobenzene	ug/L	16.870		20.000	1.000	U 84.3	70-130	
1,4-Dichlorobenzene	ug/L	16.780		20.000	1.000	U 83.9	70-130	
1,2-Dichlorobenzene	ug/L	16.640		20.000	1.000	U 83.2	70-130	
Naphthalene	ug/L	17.660		20.000	5.000	U 88.3	70-130	
tert-Butyl alcohol (TBA)	ug/L	211.790		200.000	50.000	U 105.9	70-130	
1,4-Dioxane	ug/L	217.450		200.000	50.000	U 108.7	70-130	
tert-Amyl methyl ether (TAME)	ug/L	16.800		20.000	5.000	U 84.0	70-130	

Job Number.: 229878		QUALITY CONTROL RESULTS		Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE		ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: SW846 8260B	Batch.....: 50949	Analyst...: blw
Method Description.: Volatile Organics		

MB	Method Blank				10/06/2005 1511
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Vinyl chloride	ug/L	1.000	U					
1,1-Dichloroethene	ug/L	1.000	U					
Acetone	ug/L	50.000	U					
Methylene chloride	ug/L	2.000	U					
Methyl-tert-butyl-ether (MTBE)	ug/L	1.000	U					
1,1-Dichloroethane	ug/L	1.000	U					
cis-1,2-Dichloroethene	ug/L	1.000	U					
1,1,1-Trichloroethane	ug/L	1.000	U					
Carbon tetrachloride	ug/L	1.000	U					
Benzene	ug/L	1.000	U					
1,2-Dichloroethane	ug/L	1.000	U					
Trichloroethene (TCE)	ug/L	1.000	U					
Toluene	ug/L	1.000	U					
1,1,2-Trichloroethane	ug/L	1.000	U					
Tetrachloroethene	ug/L	1.000	U					
Ethylbenzene	ug/L	1.000	U					
m&p-Xylenes	ug/L	1.000	U					
o-Xylene	ug/L	1.000	U					
1,3-Dichlorobenzene	ug/L	1.000	U					
1,4-Dichlorobenzene	ug/L	1.000	U					
1,2-Dichlorobenzene	ug/L	1.000	U					
Naphthalene	ug/L	5.000	U					
tert-Butyl alcohol (TBA)	ug/L	50.000	U					
1,4-Dioxane	ug/L	50.000	U					
tert-Amyl methyl ether (TAME)	ug/L	5.000	U					

Job Number.: 229878		QUALITY CONTROL RESULTS			Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE			ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: SW846 8260B	Batch.....: 50949	Analyst....: blw
Method Description.: Volatile Organics		

MS	Matrix Spike	V04EWRK001	229969-2	10	10/06/2005	1400
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Vinyl chloride	ug/L	181.900		200.000	10.000	U 91	%	70-130	
1,1-Dichloroethene	ug/L	180.700		200.000	10.000	U 90	%	70-130	
Acetone	ug/L	2481.000		2000.000	500.000	U 124	%	70-130	
Methylene chloride	ug/L	182.400		200.000	20.000	U 91	%	70-130	
Methyl-tert-butyl-ether (MTBE)	ug/L	187.700		200.000	10.000	U 94	%	70-130	
1,1-Dichloroethane	ug/L	177.900		200.000	10.000	U 89	%	70-130	
cis-1,2-Dichloroethene	ug/L	225.400		200.000	41.500	92	%	70-130	
1,1,1-Trichloroethane	ug/L	177.300		200.000	10.000	U 89	%	70-130	
Carbon tetrachloride	ug/L	184.100		200.000	10.000	U 92	%	70-130	
Benzene	ug/L	178.700		200.000	10.000	U 89	%	70-130	
1,2-Dichloroethane	ug/L	175.500		200.000	10.000	U 88	%	70-130	
Trichloroethene (TCE)	ug/L	568.700		200.000	361.700	104	%	70-130	
Toluene	ug/L	174.600		200.000	10.000	U 87	%	70-130	
1,1,2-Trichloroethane	ug/L	179.500		200.000	10.000	U 90	%	70-130	
Tetrachloroethene	ug/L	183.900		200.000	10.000	U 92	%	70-130	
Ethylbenzene	ug/L	176.400		200.000	10.000	U 88	%	70-130	
m&p-Xylenes	ug/L	355.200		400.000	10.000	U 89	%	70-130	
o-Xylene	ug/L	175.000		200.000	10.000	U 88	%	70-130	
1,3-Dichlorobenzene	ug/L	175.000		200.000	10.000	U 88	%	70-130	
1,4-Dichlorobenzene	ug/L	176.000		200.000	10.000	U 88	%	70-130	
1,2-Dichlorobenzene	ug/L	174.500		200.000	10.000	U 87	%	70-130	
Naphthalene	ug/L	174.700		200.000	50.000	U 87	%	70-130	
tert-Butyl alcohol (TBA)	ug/L	1945.500		2000.000	500.000	U 97	%	70-130	
1,4-Dioxane	ug/L	2062.700		2000.000	500.000	U 103	%	70-130	
tert-Amyl methyl ether (TAME)	ug/L	174.400		200.000	50.000	U 87	%	70-130	

QUALITY CONTROL RESULTS					
Job Number.: 229878			Report Date.: 10/18/2005		
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE		ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: SW846 8260B
Method Description.: Volatile Organics

Batch.....: 50949

Analyst....: blw

MSD	Matrix Spike Duplicate	V04EWRK001	229969-2	10	10/06/2005 1424
Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value QC Calc. * Limits F
Vinyl chloride	ug/L	179.700	181.900	200.000	10.000 U 90 70-130
1,1-Dichloroethene	ug/L	164.600	180.700	200.000	10.000 U 82 30 70-130
Acetone	ug/L	2389.400	2481.000	2000.000	500.000 U 119 30 70-130
Methylene chloride	ug/L	167.600	182.400	200.000	20.000 U 84 30 70-130
Methyl-tert-butyl-ether (MTBE)	ug/L	187.700	187.700	200.000	10.000 U 94 30 70-130
1,1-Dichloroethane	ug/L	166.500	177.900	200.000	10.000 U 83 30 70-130
cis-1,2-Dichloroethene	ug/L	213.000	225.400	200.000	41.500 86 30 70-130
1,1,1-Trichloroethane	ug/L	165.000	177.300	200.000	10.000 U 82 30 70-130
Carbon tetrachloride	ug/L	167.600	184.100	200.000	10.000 U 84 30 70-130
Benzene	ug/L	164.600	178.700	200.000	10.000 U 82 30 70-130
1,2-Dichloroethane	ug/L	161.400	175.500	200.000	10.000 U 81 30 70-130
Trichloroethene (TCE)	ug/L	551.700	568.700	200.000	361.700 95 30 70-130
Toluene	ug/L	160.800	174.600	200.000	10.000 U 80 30 70-130
1,1,2-Trichloroethane	ug/L	165.200	179.500	200.000	10.000 U 83 30 70-130
Tetrachloroethene	ug/L	169.400	183.900	200.000	10.000 U 85 30 70-130
Ethylbenzene	ug/L	164.400	176.400	200.000	10.000 U 82 30 70-130
m&p-Xylenes	ug/L	330.400	355.200	400.000	10.000 U 83 30 70-130
o-Xylene	ug/L	163.500	175.000	200.000	10.000 U 82 30 70-130
1,3-Dichlorobenzene	ug/L	164.100	175.000	200.000	10.000 U 82 30 70-130
1,4-Dichlorobenzene	ug/L	161.700	176.000	200.000	10.000 U 81 30 70-130
1,2-Dichlorobenzene	ug/L	161.000	174.500	200.000	10.000 U 80 30 70-130
Naphthalene	ug/L	165.800	174.700	200.000	50.000 U 83 30 70-130
tert-Butyl alcohol (TBA)	ug/L	2062.200	1945.500	2000.000	500.000 U 103 30 70-130
1,4-Dioxane	ug/L	2145.500	2062.700	2000.000	500.000 U 107 30 70-130
tert-Amyl methyl ether (TAME)	ug/L	163.000	174.400	200.000	50.000 U 82 30 70-130

Page 26 * % = % REC, R = RPD, A = ABS Diff, D = % Diff



STL

MADEP MA014
RIDOH57
CTDPH 0494
VT DECWSD
NH DES 253903-A

NELAP FL E87912 TOX
NELAP NJ MA008 TOX
NELAP NY 10843
NY DOH 10843



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Tel: (978) 667-1400
Fax: (978) 667-7871

Job Number.: 229878		QUALITY CONTROL RESULTS			Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE			ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: SW846 6010B	Batch.....: 51289	Analyst....: bpg
Method Description.: Metals Analysis (ICP)		

LCD	Laboratory Control Sample Duplicate	M05ISPK009	50654		10/13/2005 1533
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Antimony (Sb)	ug/L	1027.17	1031.15	1000.00		102.7	80.0-120.0	
Arsenic (As)	ug/L	1041.53	1022.52	1000.00		0.4	20.0	
Cadmium (Cd)	ug/L	1007.17	990.50	1000.00		104.2	80.0-120.0	
Chromium (Cr)	ug/L	982.15	968.75	1000.00		1.8	20.0	
Copper (Cu)	ug/L	963.84	953.48	1000.00		100.7	80.0-120.0	
Lead (Pb)	ug/L	995.09	984.38	1000.00		1.7	20.0	
Nickel (Ni)	ug/L	929.16	911.52	1000.00		98.2	80.0-120.0	
Selenium (Se)	ug/L	964.60	956.33	1000.00		1.4	20.0	
Silver (Ag)	ug/L	205.11	203.34	200.00		96.4	80.0-120.0	
Zinc (Zn)	ug/L	961.62	941.67	1000.00		1.1	20.0	
						99.5	80.0-120.0	
						1.1	20.0	
						92.9	80.0-120.0	
						1.9	20.0	
						96.5	80.0-120.0	
						0.9	20.0	
						102.6	80.0-120.0	
						0.9	20.0	
						96.2	80.0-120.0	
						2.1	20.0	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 6010B

Method Description.: Metals Analysis (ICP)

Batch.....: 51289

Analyst....: bpg

LCS	Laboratory Control Sample	M05ISPK009	50654		10/13/2005	1527
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Antimony (Sb)	ug/L	1031.15		1000.00		103.1	80-120	
Arsenic (As)	ug/L	1022.52		1000.00		102.3	80-120	
Cadmium (Cd)	ug/L	990.50		1000.00		99.1	80-120	
Chromium (Cr)	ug/L	968.75		1000.00		96.9	80-120	
Copper (Cu)	ug/L	953.48		1000.00		95.3	80-120	
Lead (Pb)	ug/L	984.38		1000.00		98.4	80-120	
Nickel (Ni)	ug/L	911.52		1000.00		91.2	80-120	
Selenium (Se)	ug/L	956.33		1000.00		95.6	80-120	
Silver (Ag)	ug/L	203.34		200.00		101.7	80-120	
Zinc (Zn)	ug/L	941.67		1000.00		94.2	80-120	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 6010B

Method Description.: Metals Analysis (ICP)

Batch.....: 51289

Analyst....: bpg

MB	Method Blank				10/13/2005	1121
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Antimony (Sb)	ug/L	6.00	U					
Arsenic (As)	ug/L	10.00	U					
Cadmium (Cd)	ug/L	1.00	U					
Chromium (Cr)	ug/L	5.00	U					
Copper (Cu)	ug/L	10.00	U					
Lead (Pb)	ug/L	5.00	U					
Nickel (Ni)	ug/L	10.00	U					
Selenium (Se)	ug/L	10.00	U					
Silver (Ag)	ug/L	5.00	U					
Zinc (Zn)	ug/L	50.00	U					

MB	Method Blank			50654		10/13/2005	1539
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Antimony (Sb)	ug/L	6.00	U					
Arsenic (As)	ug/L	10.00	U					
Cadmium (Cd)	ug/L	1.00	U					
Chromium (Cr)	ug/L	5.00	U					
Copper (Cu)	ug/L	10.00	U					
Lead (Pb)	ug/L	5.00	U					
Nickel (Ni)	ug/L	10.00	U					
Selenium (Se)	ug/L	10.00	U					
Silver (Ag)	ug/L	5.00	U					
Zinc (Zn)	ug/L	50.00	U					

Job Number.: 229878		QUALITY CONTROL RESULTS		Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE		ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: SW846 6010B	Analyst....: bpg
Method Description.: Metals Analysis (ICP)	Batch.....: 51289

MD	Sample Duplicate		229705-10		10/13/2005 1551
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Antimony (Sb)	ug/L	6.00	U		6.00	U 0.0	20.0	
Arsenic (As)	ug/L	10.00	U		10.00	U 0.0	20.0	
Cadmium (Cd)	ug/L	1.00	U		1.00	U 0.0	20.0	
Chromium (Cr)	ug/L	5.00	U		5.00	U 0.0	20.0	
Copper (Cu)	ug/L	10.00	U		10.00	U 0.0	20.0	
Lead (Pb)	ug/L	5.00	U		5.00	U 0.0	20.0	
Nickel (Ni)	ug/L	10.00	U		10.00	U 0.0	20.0	
Selenium (Se)	ug/L	10.00	U		10.00	U 0.0	20.0	
Silver (Ag)	ug/L	5.00	U		5.00	U 0.0	20.0	
Zinc (Zn)	ug/L	50.00	U		50.00	U 0.0	20.0	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 6010B

Method Description.: Metals Analysis (ICP)

Batch.....: 51289

Analyst....: bpg

MS	Matrix Spike	M05ISPK009	229705-10		10/13/2005	1556
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Antimony (Sb)	ug/L	1016.66		1000.00	6.00	U 101	% 75-125	
Arsenic (As)	ug/L	1023.33		1000.00	10.00	U 102	% 75-125	
Cadmium (Cd)	ug/L	979.69		1000.00	1.00	U 98	% 75-125	
Chromium (Cr)	ug/L	960.92		1000.00	5.00	U 96	% 75-125	
Copper (Cu)	ug/L	956.18		1000.00	10.00	U 96	% 75-125	
Lead (Pb)	ug/L	970.22		1000.00	5.00	U 97	% 75-125	
Nickel (Ni)	ug/L	906.19		1000.00	10.00	U 91	% 75-125	
Selenium (Se)	ug/L	941.75		1000.00	10.00	U 94	% 75-125	
Silver (Ag)	ug/L	201.07		200.00	5.00	U 100	% 75-125	
Zinc (Zn)	ug/L	935.07		1000.00	50.00	U 93	% 75-125	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 6010B

Method Description.: Metals Analysis (ICP)

Batch.....: 51420

Analyst....: bpg

LCD	Laboratory Control Sample Duplicate	M05ISPK009	50654		10/17/2005	1608
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Iron (Fe)	ug/L	1023.35	1011.03	1000.00		102.3 1.2	80.0-120.0 20.0	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 60108

Method Description.: Metals Analysis (ICP)

Batch.....: 51420

Analyst....: bpg

LCS	Laboratory Control Sample	M05ISPK009	50654		10/17/2005	1605
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Iron (Fe)	ug/L	1011.03		1000.00		101.1		80-120	

Job Number.: 229878		QUALITY CONTROL RESULTS			Report Date.: 10/18/2005	
CUSTOMER: Honeywell International		PROJECT: CONDUCTORLAB SITE			ATTN: Robert Jackson	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: SW846 60108	Batch.....: 51420	Analyst....: bpg
Method Description.: Metals Analysis (ICP)		

MB	Method Blank		50654		10/17/2005 1611
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Iron (Fe)	ug/L	50.00	U					

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 60108

Method Description.: Metals Analysis (ICP)

Batch.....: 51420

Analyst....: bpm

MD	Sample Duplicate		229705-10		10/17/2005	1618
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Iron (Fe)	ug/L	50.00	U		50.00	U 0.0	20.0	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 60108

Method Description.: Metals Analysis (ICP)

Batch.....: 51420

Analyst....: bpg

MS	Matrix Spike	M05ISPK009	229705-10		10/17/2005	1621
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Iron (Fe)	ug/L	1029.12		1000.00	50.00	U 101	% 75-125	

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Test Method.: SM18 4500CLF

Batch.: 50603

Analyst.: pjs

Method Description.: Chlorine, (DPD)

Test Code.: CLTR

Parameter.: Chlorine, Tot. Residual

QC	Lab ID	Reagent	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc. F	*	Limits	Date	Time
MB			mg/L	0.05000	U						09/30/2005	0000
LCS		B051CHL001	mg/L	1.06000		1.00000	0.05000	U	106.0		09/30/2005	0000
LCS		B051CHL001	mg/L	1.01000	1.06000	1.00000	0.05000	U	101.0		09/30/2005	0000

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Test Method.....: SW846 7470A

Batch.....: 50977

Analyst....: bpg

Method Description.: Mercury (CVAA) Liquid Waste

Test Code.: HG

Parameter.....: Mercury (Hg)

QC	Lab ID	Reagent	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc. F	*	Limits	Date	Time
MB	50685		ug/L	0.20	U						10/05/2005	1314
LCS	50685	M05ISPK013	ug/L	4.83		5.00		96.6		80-120	10/05/2005	1317
LCD	50685	M05ISPK013	ug/L	5.05	4.83	5.00		101.0		80.0-120.	10/05/2005	1319
								4.5		20.0		
MS	229649-1	M05ISPK013	ug/L	4.89		5.00	0.20	U	102	% 75-125	10/05/2005	1325
MD	229649-1		ug/L	0.20	U		0.20	U	0.0	20.0	10/05/2005	1327

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Test Method.....: SW846 9014

Batch.....: 50741

Analyst....: kmn

Method Description.: Cyanide (Colorimetric)

Test Code.: CN

Parameter.....: Cyanide, Total

QC	Lab ID	Reagent	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc. F	*	Limits	Date	Time
MB			mg/L	0.01000	U						10/04/2005	0000
LCS		W05IINT002	mg/L	0.09530		0.10000		95.3		80-120	10/04/2005	0000
LCD		W05IINT002	mg/L	0.09200	0.09530	0.10000		92.0		80.0-120.	10/04/2005	0000
								3.5		20.0		

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Test Method.....: SW846 7196A

Batch.....: 50723

Analyst....: kmm

Method Description.: Hexavalent Chromium

Test Code.: CR6

Parameter.....: Hexavalent Chromium

QC	Lab ID	Reagent	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc. F	*	Limits	Date	Time
MB			mg/L	0.00500 U							09/30/2005	0844
LCD		W04KLCS001	mg/L	0.05050	0.04680	0.05000		101.0		80.0-120.	09/30/2005	0844
								7.6		20.0		
LCS		W04KLCS001	mg/L	0.04680		0.05000		93.6		80-120	09/30/2005	0844

Job Number.: 229878

QUALITY CONTROL RESULTS

Report Date.: 10/18/2005

CUSTOMER: Honeywell International

PROJECT: CONDUCTORLAB SITE

ATTN: Robert Jackson

Test Method.....: EPA 160.2

Batch.....: 50845

Analyst....: rac

Method Description.: Solids, Total Suspended (TSS)

Test Code.: TSS

Parameter.....: Solids, Total Suspended (TSS)

QC	Lab ID	Reagent	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc. F	*	Limits	Date	Time
LCD		W05JRGTO03	mg/L	458.00000	478.00000	500.00000		91.6		85-115	10/04/2005	0000
								4.3		20		
LCS		W05IRGT024	mg/L	478.00000		500.00000		95.6		85-115	10/04/2005	0000
MB			mg/L	5.00000 U							10/04/2005	0000

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL WESTFIELD

SDG: C092905-Influent

Job No.: 229878

Lab File ID (Standard): V02500.D

Date Analyzed: 10/06/05

Instrument ID: GCMS#2

Time Analyzed: 1249

GC Column: RTX-VMS

ID: 0.25 (mm)

Heated Purge: (Y/N) N

	IS1 FLB AREA #	RT #	IS2 CLB AREA #	RT #	IS3 DCB AREA #	RT #
12 HOUR STD	367665	7.51	301949	11.60	137690	13.88
UPPER LIMIT	735330	8.01	603898	12.10	275380	14.38
LOWER LIMIT	183833	7.01	150975	11.10	68845	13.38
SAMPLE NO.						
01 C092905-Influent	368615	7.52	299857	11.61	133074	13.88
02 C092905-Effluent	373983	7.52	310561	11.60	142083	13.88
03 C092905-TripBlank	368175	7.52	298803	11.61	132770	13.88
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 FLB = FLUOROBENZENE

IS2 CLB = CHLOROBENZENE-D5

IS3 DCB = 1,4DICHLOROBENZENE-D4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

FORM VIII VOA

3/90

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 10/18/2005

STL WESTFIELD is part of Severn Trent Laboratories, Inc. Visit us at www.stl-inc.com.

LABORATORY CERTIFICATIONS:

MADEP MA014, NY NELAC 10843, NJ NELAC MA008 (TOX), FL NELAC E87912 (TOX), CT DPH 0494, NY DOH 10843, NH DES 253901-A, VT DECWSD, RI DOH 57.

LOCATION:

STL Westfield: 53 Southampton Rd, Westfield, MA 01085. Phone: (413) 572-4000 Fax: (413) 572-3707

STL Service Center: 148 Rangeway Rd. N. Billerica, MA 01862. Phone: (978) 667-1400 Fax: (978) 667-7871

DATA REPORTING QUALIFIERS AND TERMINOLOGY:

A number of data qualifiers are widely used within the environmental testing industry and may be utilized in our data reports. The majority of the qualifiers have evolved from the EPA Contract Laboratory Program (CLP).

REPORT COMMENTS:

All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Soil, sediment and sludge sample results are reported on a "dry weight" basis.

Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert.ID# 10843.

According to 40CFR Part 136.3, pH, Total Residual Chlorine and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field analyses, they were not analyzed immediately, but as soon as possible on laboratory receipt.

Analytical result(s) reported as "ND" and/or "U", indicates the analyte was analyzed for but "Not Detected." Analytical result(s) reported as "TNTC" indicates that the microbiological test was "Too Numerous To Count."

GLOSSARY OF QUALIFIERS:

Inorganic Qualifiers (Q-column):

- U Indicates that the analyte was analyzed for but not detected.
- E Indicates an estimated value due to the presence of interference. When applied to GFAA analysis, indicates the one-point method of addition recovered between 40-85 percent.
- B Indicates an estimated result value. The result was measured between the reporting limit and the method detection limit (MDL).
- H Indicates the compound/element was found in both the sample and its associated laboratory blank. Indicates possible/probable blank contamination.

Organic Qualifiers (Q-column):

- U Indicates that the compound was analyzed for but not detected.
- J Indicates an estimated result value. This qualifier is used when mass spectral data indicated the presence of a compound that meets the identification criteria and the result is less than the specified quantitation limit, but greater than the method detection limit (MDL).
- B Indicates that the compound was found in both the sample and its associated laboratory blank. Indicates possible/probable blank contamination and warns the data user to exercise caution when applying the results to this compound.
- D Indicates all compounds identified in an analysis at a secondary dilution factor.
- E Indicates that the compound in an analysis has exceeded the instrument linear calibration range.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 10/18/2005

GLOSSARY OF TERMS:

Surrogates (Surrogate Standards): An organic compound, which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but are not normally found in environmental samples. For semi-volatiles and pesticides/Arochlors, surrogate compounds are added to every blank, sample, matrix spike, matrix spiked duplicate, matrix spike blank (LCS), and standard. These compounds are used to evaluate analytical efficiency by measuring recovery. Poor surrogate recovery may indicate a problem with the sample composition.

Internal Standard: An organic compound, which is similar to the target analyte(s) in chemical composition and behavior in the analytical process. For GC/MS semi-volatiles and volatiles, internal standards are added to every blank, sample, matrix spike, matrix spike duplicate, matrix spike blank (LCS), and standard. Internal standard responses outside of established limits will adversely affect the quantitation and final concentration of target compounds.

Matrix Spike (MS): An aliquot of a sample (water or soil) fortified (spiked) with known quantities of specific compounds (target analytes) and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for matrix interference by measuring recovery. The spiking occurs prior to sample preparation and analysis. Poor spike recovery may indicate a problem with the sample composition.

Laboratory Control Sample (LCS): An aliquot of analyte-free reagent water or sand fortified (spiked) with known quantities of specific compounds (target analytes) and subjected to the entire analytical procedure in order to indicate the appropriateness of the method efficiency.

Blank: An artificial sample of analyte-free water or solvent, designed to monitor the introduction of contaminants into the analytical process.

Method Detection Limit (MDL): The minimum concentration of an analyte or compound that can be measured and reported with 99% confidence that the result concentration is greater than zero.

Petroleum Hydrocarbon Comments:

The following comments are specific to Diesel Range Organics (DRO), by GC/FID:

Results for DRO are based on chromatographable portions of the petroleum product. The Carbon Range refers to the approximate chromatographic region covered by the specified petroleum product in straight-chain carbon units between C9-C36.

Quantitation is based on the average response factors for a series of hydrocarbons standards. The sample result from the DRO fraction is independent of the target compound assignment.

Samples yielding chromatographic patterns that do not agree with any of the method targets are reported as "unmatched".

**SUBCONTRACTED
DATA**

SEVERN
TRENT

STL

STL Chicago
2417 Bond Street
University Park, IL 60466

Tel: 708 534 5200 Fax: 708 534 5211
www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 240628

Prepared For:

Severn Trent Laboratories
Westfield Executive Park
53 Southampton Road
Westfield, MA 01085

Project: Westfield

Attention: Becky Mason

Date: 10/11/2005

Bonnie Stadelmann
Signature

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

10/11/05
Date

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX...: (708) 534-5211

This Report Contains (8) Pages

STL Chicago is part of Severn Trent Laboratories, Inc.

SAMPLE INFORMATION

Date: 10/11/2005

Job Number.: 240628

Customer...: Severn Trent Laboratories

Attn.....: Becky Mason

Project Number.....: 20000230

Customer Project ID....: WESTFIELD 229878

Project Description.....: Westfield

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
240628-1	229878-1	Water	09/29/2005	10:30	10/04/2005	08:40
240628-2	229878-2	Water	09/29/2005	11:00	10/04/2005	08:40

STL Chicago is part of Severn Trent Laboratories, Inc.

LABORATORY TEST RESULTS										
Job Number: 240628					Date: 10/11/2005					
CUSTOMER: Severn Trent Laboratories					PROJECT: WESTFIELD-229878					
Customer Sample ID: 229878-1 Date Sampled.....: 09/29/2005 Time Sampled.....: 10:30 Sample Matrix.....: Water					Laboratory Sample ID: 240628-1 Date Received.....: 10/04/2005 Time Received.....: 08:40					
ATTN: Becky Mason										
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DATE/TIME	TECH
1664A	ORG/TPH Gravimetric (HEM) TPH, Recoverable (SGT-HEM)	5.2	U	2.4	5.2	1	mg/L	162346	10/11/05 1011	hrp

* In Description = Dry Wgt.

LABORATORY TEST RESULTS											
Job Number: 240628					Date: 10/11/2005						
CUSTOMER: Severn Trent Laboratories					PROJECT: WESTFIELD 229878						
ATTN: Becky Mason											
Customer Sample ID: 229878-2 Date Sampled: 09/29/2005 Time Sampled: 11:00 Sample Matrix: Water					Laboratory Sample ID: 240628-2 Date Received: 10/04/2005 Time Received: 08:40						
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDI	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
1664A	Q&G/TPH Gravimetric (HEM) TPH, Recoverable (SGT-HEM)	5.2	U	2.4	5.2	1	mg/L	162346		10/11/05 1011	nrp

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Job Number: 240628		LABORATORY CHRONICLE				Date: 10/11/2005	
CUSTOMER: Severn Trent Laboratories		PROJECT: WESTFIELD 229878				ATTN: Becky Mason	
Lab ID: 240628-1	Client ID: 229878-1	Date Recvd: 10/04/2005		Sample Date: 09/29/2005			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTION
1664A	O&G/TPH Gravimetric (HEM)	1	162346	162346		10/11/2005 1011	
PKG INO (WC)	PKG INO (WET CHEMISTRY)	1					
Lab ID: 240628-2	Client ID: 229878-2	Date Recvd: 10/04/2005		Sample Date: 09/29/2005			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTION
1664A	O&G/TPH Gravimetric (HEM)	1	162346	162346		10/11/2005 1011	

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 10/11/2005

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

- U Analyte was not detected at or above the stated limit.
- < Not detected at or above the reporting limit.
- J Result is less than the RL, but greater than or equal to the method detection limit.
- B Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
- S Result was determined by the Method of Standard Additions.
- F AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic Flags (Flag Column)

- ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- * LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
- + MSA correlation coefficient is less than 0.995.
- 4 MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
- E SD: Serial dilution exceeds the control limits.
- H MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.
- N MS, MSD: Spike recovery exceeds the upper or lower control limits.
- W AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

- U Analyte was not detected at or above the stated limit.
- ND Compound not detected.
- J Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
- Q Result was qualitatively confirmed, but not quantified.
- C Pesticide identification was confirmed by GC/MS.
- Y The chromatographic response resembles a typical fuel pattern.
- Z The chromatographic response does not resemble a typical fuel pattern.
- E Result exceeded calibration range, secondary dilution required.
- F AFCEE: Result is an estimated value below the reporting limit or a tentatively identified compound (TIC)

Organic Flags (Flags Column)

- B MB: Batch QC is greater than reporting limit.
- * LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.
- EB1, EB2, EB3, MLE: Batch QC is greater than reporting limit
- A Concentration exceeds the instrument calibration range
- a Concentration is below the method Reporting Limit (RL)
- B Compound was found in the blank and sample.
- D Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
- H Alternate peak selection upon analytical review
- I Indicates the presence of an interference, recovery is not calculated.
- M Manually integrated compound.
- P The lower of the two values is reported when the % difference between the results of two GC columns is

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

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greater than 25%.

Abbreviations

AS	Post Digestion Spike (GFAA Samples - See Note 1 below)
Batch	Designation given to identify a specific extraction, digestion, preparation set, or analysis set
CAP	Capillary Column CCB Continuing Calibration Blank
CCV	Continuing Calibration Verification
CF	Confirmation analysis of original
C1	Confirmation analysis of A1 or D1
C2	Confirmation analysis of A2 or D2
C3	Confirmation analysis of A3 or D3
CRA	Low Level Standard Check - GFAA; Mercury
CRI	Low Level Standard Check - ICP
CV	Calibration Verification Standard
Dil Fac	Dilution Factor - Secondary dilution analysis
D1	Dilution 1
D2	Dilution 2
D3	Dilution 3
DLFac	Detection Limit Factor
DSH	Distilled Standard - High Level
DSL	Distilled Standard - Low Level
DSM	Distilled Standard - Medium Level
EB1	Extraction Blank 1
EB2	Extraction Blank 2
EB3	DI Blank
ELC	Method Extracted LCS
ELD	Method Extracted LCD
ICAL	Initial calibration
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ISA	Interference Check Sample A - ICAP
ISB	Interference Check Sample B - ICAP
Job No.	The first six digits of the sample ID which refers to a specific client, project and sample group
	Lab ID An 8 number unique laboratory identification
LCD	Laboratory Control Standard Duplicate
LCS	Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MB	Method Blank or (PB) Preparation Blank
MD	Method Duplicate
MDL	Method Detection Limit
MLE	Medium Level Extraction Blank
MRL	Method Reporting Limit Standard
MSA	Method of Standard Additions
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not Detected
PREPF	Preparation factor used by the Laboratory's Information Management System (LIMS)
PDS	Post Digestion Spike (ICAP)
RA	Re-analysis of original
A1	Re-analysis of D1
A2	Re-analysis of D2
A3	Re-analysis of D3
RD	Re-extraction of dilution
RE	Re-extraction of original
RC	Re-extraction Confirmation
RL	Reporting Limit
RPD	Relative Percent Difference of duplicate (unrounded) analyses
RRF	Relative Response Factor
RT	Retention Time

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

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RTW	Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number
SCB	Seeded Control Blank
SD	Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL)
UCB	Unseeded Control Blank
SSV	Second Source Verification Standard
SLCS	Solid Laboratory Control Standard(LCS)
PHC	pH Calibration Check LCSP pH Laboratory Control Sample
LCDP	pH Laboratory Control Sample Duplicate
MDPH	pH Sample Duplicate
MDFP	Flashpoint Sample Duplicate
LCFP	Flashpoint LCS
G1	Gelex Check Standard Range 0-1
G2	Gelex Check Standard Range 1-10
G3	Gelex Check Standard Range 10-100
G4	Gelex Check Standard Range 100-1000

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)

Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

10/01/2005

STL Westfield
53 Southampton Rd.
Westfield, MA 01085

240628

RE: Subcontracting Chain of Custody

STL WF PM: Rebecca C. Mason
Telephone Number: 413-572-4000
PO/Job#: 229878
Client: Honeywell International
Final Report Due Date: 10/12 /2005 by 3pm
Report Type: batch QC
EDD Type: none
QC Billable: N

Samp#	Sample I.D.	Sampled	Time
1	1 C092905-Influent	09/29/2005	1030
2	2 C092905-Effluent	09/29/2005	1100

Please run QC on sample:

Mthds	Method Description	#of	Analytical Mthd
Sample Distribution			Unit Price Extended
1664	TPH		Method 1664
1-2		2	
			Total Cost

Matrix: groundwater
Bottle Type & Number: amber liter with HCL

Ship To: STL Chicago
Ship Date: 10/3/05

Special Instructions:

Relinquished By: [Signature] Date: 10/3/05 Time: 1700
Signature: [Signature]
Received By: [Signature] Date: 10/4/05 Time: 0840
Signature: [Signature]
Relinquished By: [Signature] Date: _____ Time: _____
Signature: _____ Date: _____ Time: _____
Received By: _____ Date: _____ Time: _____
Signature: _____ Date: _____ Time: _____

rpjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 229878	Location.: 57345	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 09/30/2005	
Project Number.: 20000365	Project Description.: Conductorlab Site		Project Manager.....: bcm	
Customer.....: Honeywell International	Contact.: Robert Jackson			
Questions ?	(Y/N) Comments			
Chain-of-Custody Present?.....	Y			
...If "yes", completed properly?.....	Y			
Custody seal on shipping container?.....	N			
...If "yes", custody seal intact?.....				
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples iced?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2). Y				
...Temperature at receipt_____	5.8 C			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	Y			
Is a Trip Blank required?.....	Y			
Was a Trip Blank provided?.....	Y			
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Comments.....	stl pickup			
If samples were shipped was there an air bill #?..				
Sample Custodian Signature/Date.....	kar 09292005 <i>un</i> 9/29/05			
This is Page 1(A)				

