The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, CA 91304-1148

CERTIFIED MAIL

November 14, 2005



Regional Water Quality Control Board Los Angeles Region 320 West 4th Street, Suite 200 Los Angeles, CA 90013

Attention:

Information Technology Unit

Reference:

Compliance File CI-6027 and NPDES No. CA0001309

Subject:

3rd Quarter 2005 NPDES Discharge Monitoring Report Submittal-

Santa Susana Field Laboratory

Dear Sir/Madam,

The Boeing Company hereby submits the discharge monitoring report (DMR) for the Santa Susana Field Laboratory (SSFL) for the 3rd Quarter of 2005. This DMR provides the results of the sampling that occurred for the SSFL outfalls identified in Appendix A. of this report for the period of July 1st through September 30th of 2005 as required by National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001309. This quarterly DMR provides all information and data, including rainfall summaries, liquid waste shipment summaries, and analytical reports. All analyses of sampled discharges were conducted at a laboratory certified for such analysis by the appropriate agency in accordance with current EPA guidelines, procedures, or as specified in the monitoring program

Due to a lack of rain or industrial discharges during this monitoring period, sampling required under California Water Code Section 13267 request letter sent to the Boeing Company on May 20, 2004 could not be performed at Outfalls 003 or 011.

EXECUTIVE SUMMARY OF THIRD QUARTER 2005 MONITORING DATA

Due to the lack of rainfall at the facility during this quarter as noted in Appendix B, no storm water monitoring was conducted. There were no discharges associated with the domestic sewage treatment plants (Outfalls 015, 016, and 017). All sanitary waste was shipped offsite and appropriately managed at locations noted in Appendix C.

Only Outfall 012 had discharges that required monitoring. The results of which can be found in Appendix D. This Outfall monitors flow from the Alfa Engine Test facility, and as required in the NPDES the results reported herein were sent to the Board within 24 hours upon notification from Boeing's contractor of the final results.

SUMMARY OF NON-COMPLIANCE AND CORRECTIVE ACTIONS TAKEN

One instance of non-compliance was noted during the 3rd quarter 2005 monitoring period as noted in Appendix E. On August 19th, 2005 a temperature of 93.4°F was detected at Outfall 012, the Alfa Rocket engine test stand. This result exceeds the discharge limit of 86° F. A review of the sampling procedures, rocket engine test activities and ambient temperature did not reveal the reason for this slightly elevated temperature. The fact that this was the first time the temperature was elevated since monitoring was initiated at this location, and has not been repeated since, indicates this was an anomaly and not due to any specific process condition.

DATA VALIDATION DISCUSSION

Data validation was performed on the analytical results and quality control elements were found to be within acceptable limits for all analytical methods reported, except as noted on the analytical summary tables. Laboratory analytical reports, including validation reports and notes, are included in Appendix F. Attachment T-A of the NPDES permit issued to the Santa Susana Facility presents the State Water Resources Control Board (SWRCB) minimum levels (MLs) for use in reporting and determining compliance with NPDES permit limits. The analytical laboratory achieved these MLs for this reporting period. However, some constituents' daily maximum and/or monthly average discharge limits in the NPDES permit are less than their respective MLs, and less than the laboratory reporting limit (RL). In cases where the permit limit is less than the RL and ML, the RL was used to determine compliance. The specific constituents that have permit limits that are less than the RL and ML are mercury (daily maximum permit limit of 0.10 ug/L and 0.13 ug/L, monthly average limit of 0.05 ug/L, RL of 0.2 ug/L), cyanide (monthly average limit of 4.3 ug/L), RL of 5.0 ug/L, and Bis-(2-ethylhexyl) phthalate (daily maximum permit limit of 4.0, RL of 5.0 ug/L). Of these compounds, during the 3rd Ouarter 2005, none were detected at concentrations equal to or greater than its RL.

FACILITY CONTACT

If there are any questions regarding this report or it enclosures, you may contact Mr. Paul Costa at (818) 586-9177.

CERTIFICATION

I certify under penalty of law that this document and all appendices were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.



Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Ø Boeing Executed on the 14th of November 2005 at The Boeing Company, Santa Susana Field Laboratory.

Sincerely,

Steve Lafflam Division Director

Safety, Health and Environmental Affairs

SL:pj

Appendices:

- A Figure 1 Storm Water Drainage System and Outfall Locations
- B 3rd Quarter 2005 Rainfall Data Summary
- C 3rd Quarter 2005 Liquid Waste Shipment Summary Tables
- D 3rd Quarter 2005 Summary Tables, Discharge Monitoring Data, Outfall 012
- E 3rd Quarter 2005 Summary of Permit Limit Exceedances
- F 3rd Quarter 2005 Analytical Laboratory Reports and Chain-of-Custody

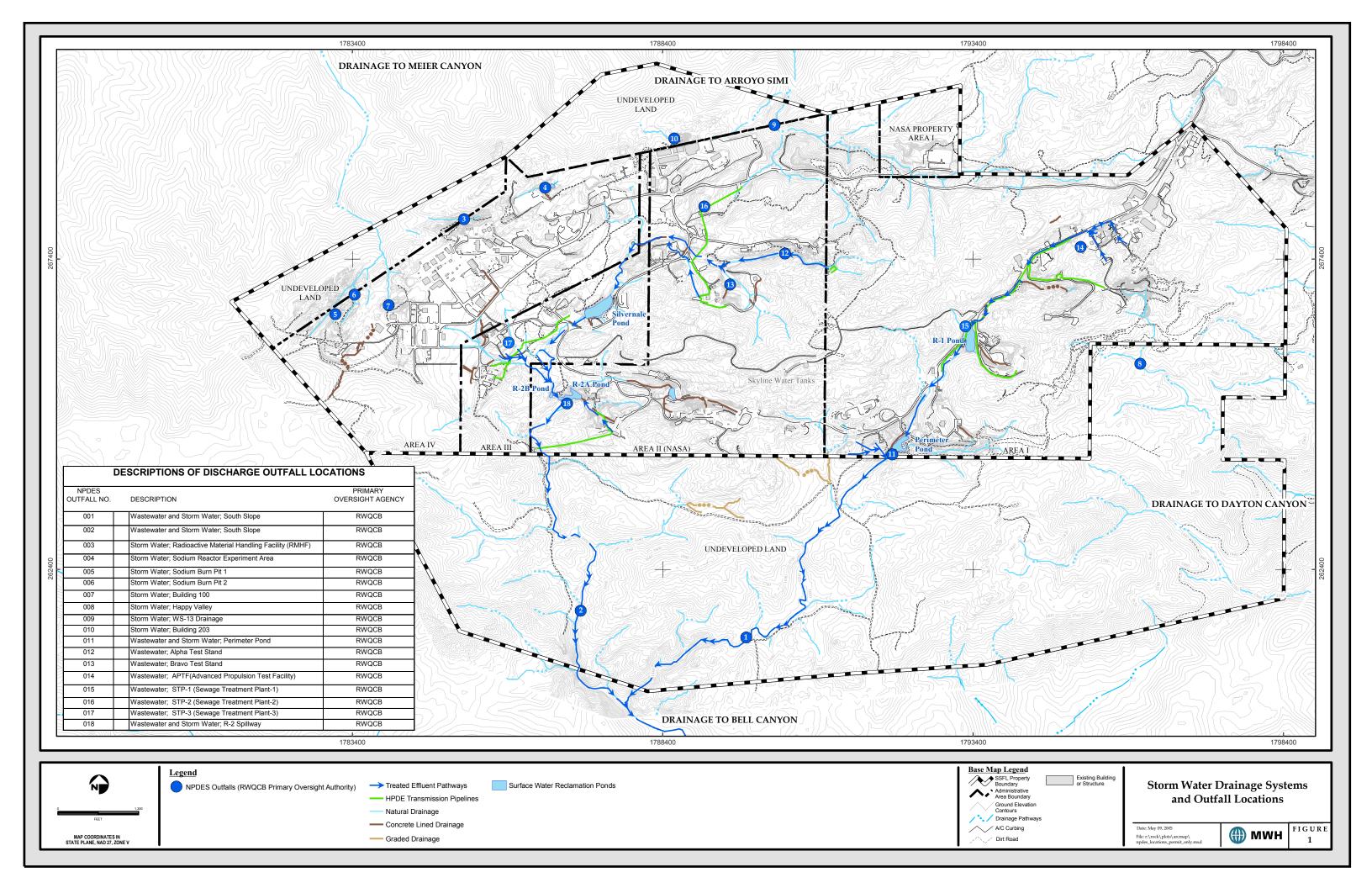
cc:

Jim Pappas, Department of Toxic Substances Control
Robert Marshall, California State University – Northridge, Library
Dale Redfield, Simi Valley Library
Lynn Light, Platt Branch, Los Angeles Library
Stephen Powter, Department of Toxic Substance Control

Stephen Baxter, Department of Toxic Substances Control

SHEA- 102723

APPENDIX A NPDES OUTFALL LOCATIONS



${\rm APPENDIX\;B}$ ${\rm 3^{rd}\;QUARTER\;2005\;RAINFALL\;DATA\;SUMMARY}$

TABLE B-1 (Page 1 of 3) DAILY RAINFALL SUMMARY

THE BOEING COMPANY-ROCKETDYNE NPDES PERMIT NUMBER CA0001309

JULY 2005

Station: AREA4 Parameter: Rain Month/Year: July 2005

HOUR OF DAY

| Ī | Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------------|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| l | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| l | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| L | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| ' | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| ۱ <u> </u> | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _ | 0 | 0 | 0 | 0 | 0 | 0 |
| ′ ⊦ | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| ⊦ | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| ' ⊩ | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| ` <u> </u> | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| . ⊩ | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| . ⊩ | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| ! ⊩ | 18 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| · | 20 | 0 | 0 | U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _ | 0 | 0 | 0 | 0 | 0 | 0 |
| , ŀ | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Ŭ | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| : ⊩ | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| íŀ | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| : | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| ıŀ | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _ | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| l | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

D A

O F

T H E

O N T H

TABLE B-1 (Page 2 of 3) DAILY RAINFALL SUMMARY

THE BOEING COMPANY-ROCKETDYNE NPDES PERMIT NUMBER CA0001309

AUGUST 2005

Station: AREA4
Parameter: Rain

Month/Year: August 2005

HOUR OF DAY

| | Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| _ | 9 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 10 | 0 | | _ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 11 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y | 12 | 0 | _ | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 14 | 0 | · | Ŭ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| O F | 15 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Г | 16 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| т | 17 | 0 | | _ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| н | 18 | 0 | _ | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ë | 19 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| _ | 20 | 0 | _ | _ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| М | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Т | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Н | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 30 | 0 | _ | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE B-1 (Page 3 of 3) DAILY RAINFALL SUMMARY

THE BOEING COMPANY-ROCKETDYNE NPDES PERMIT NUMBER CA0001309

SEPTEMBER 2005

Station: AREA4
Parameter: Rain

Month/Year: September 2005

HOUR OF DAY

| | | | | | | | | | | | | 1100 | K OF L | ואי | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 80 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Α | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Υ | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 15 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Т | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Н | 18 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 19 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 20 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| М | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 22 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N | 23 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Т | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Н | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 27 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV |
| | 30 | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV | INV |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

INV Invalid data due to a power failure in the area caused by the Topanga Wildfires.

APPENDIX C LIQUID WASTE SHIPMENTS SUMMARY TABLES

TABLE C-1 THE BOEING COMPANY - ROCKETDYNE NPDES PERMIT CA0001309 LIQUID WASTE SHIPMENTS **JULY 2005**

| | DATE | | | | |
|-----------------|---|---------|--------|--|-------------------------------------|
| DATE SHIPPED | TYPE OF LIQUID | QTY. | UNITS | TRANSPORTER | DESTINATION |
| 7/6/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| 770/2003 | WASTE WATER TROWNAREA II SEWAGE TREATMENT FEART | 3000 | GAL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | LACOD Gaugus |
| 7/6/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| 7/6/2003 | WASTE WATER FROM AREA II SEWAGE TREATMENT FLANT | 3000 | GAL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Caison |
| 7/11/0005 | WASTE WATER FROM AREA LOCKWARD TREATMENT PLANT | 5000 | 0.41 | OOLITUULEAT DOOGEOOODO INIO | 140000 |
| 7/11/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Saugus |
| | | | | | |
| 7/11/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD, LOS ANGELES, CA. | LACSD Carson |
| | | | | 4120 BANDINI BEVD. EOS ANGELES, CA. | |
| 7/11/2005 | B/1301 non-hazrinse water | 36,500 | LBS. | SOUTHWEST PROCESSORS INC. | SOUTHWEST PROCESSORS INC. |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | 4120 BANDINI BLVD. LOS ANGELES, CA. |
| 7/15/2005 | Waste Labpac Flam Liq | 85 | LBS. | ONYX ENVIRONMENTAL SERVICES INC. | ONYX ENVIRONMENTAL SERVICES INC. |
| | Waste Labpac Ox Liq, Corr | 131 | LBS. | 1704 W. FIRST ST. AZUSA, CA. 91702 | 1704 W. FIRST ST. AZUSA, CA. 91702 |
| | Waste Labpac Cor Liq, Basic, Org Waste Mixed Solvents | 5 47 | LBS. | | |
| | Waste Mixed Solvents Waste Mixed Solvents | 37 | LBS. | | |
| | Waste Loosepac Corr Lig, Basic, Org Amino | 121 | LBS. | | |
| | Waste Loosepac Paint Related Materials | 172 | LBS. | | |
| | Waste Mixed Acids - no metals | 2889 | LBS. | | |
| | Waste 301 Alkaline Cleaning Soln, KOH, NA | 922 | LBS. | | |
| | Waste Paint Waswater | 372 | LBS. | | |
| | Waste Oil / Water (N/R) | 287 | LBS. | | |
| | Waste Oil / Water (N/R) | 1154 | LBS. | | |
| | Waste Rinse Water [N/R] with trave concrete | 94 | LBS. | | |
| | | | | | |
| 7/18/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Carson |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 7/18/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 7/18/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 7/25/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| ./20/2000 | | 0000 | O, (L. | 4120 BANDINI BLVD. LOS ANGELES, CA. | E 1005 Odioon |
| 7/25/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| 1/23/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Saugus |
| | | | | | |
| 7/25/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| | | | | | |

July 05 10/27/2005

TABLE C-2 THE BOEING COMPANY - ROCKETDYNE NPDES PERMIT CA0001309 LIQUID WASTE SHIPMENTS August 05

| DATE | | | | | |
|-----------------|--|--------|--------|--|---|
| DATE SHIPPED | TYPE OF LIQUID | QTY. | UNITS | TRANSPORTER | DESTINATION |
| 8/1/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| 0/1/2000 | WHOTE WITER TROUBLETT DE WITE THE TENT | 0000 | O/ LE. | 4120 BANDINI BLVD. LOS ANGELES, CA. | E 1000 Galdan |
| 8/1/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | <u> </u> |
| 8/1/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 8/3/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 8/3/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 8/8/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 8/8/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD. LOS ANGELES. CA. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 8/15/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Carson |
| | | | | · | |
| 8/15/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Saugus |
| | | | | | |
| 8/22/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD. LOS ANGELES. CA. | LACSD Saugus |
| | | | | | |
| 8/22/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Saugus |
| 8/22/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| 8/22/2005 | WASTE WATER FROM AREAT SEWAGE TREATMENT PLANT | 5000 | GAL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Carson |
| 8/24/2005 | Perlite & Water | 10.610 | LBS. | McKITTRICK WASTE TREATMENT SITE | McKITTRICK WASTE TREATMENT SITE |
| 0/24/2003 | Perlite & Water Perlite & Water | 36,190 | LBS. | 56533 HWY 53 WEST, McKITTRICK, CA 93251 | 56533 HWY 53 WEST, McKITTRICK, CA 93251 |
| 8/29/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| 0/23/2003 | WHOLE WILLIAM ON THE STREET FEATURE OF THE S | 3000 | JAL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | Encop daugus |
| 8/29/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| 5,20,2000 | | 0000 | J, .L. | 4120 BANDINI BLVD. LOS ANGELES, CA. | 2.002 044940 |
| 8/29/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| | | | | | |

Aug 05 10/27/2005

TABLE C-3 THE BOEING COMPANY - ROCKETDYNE NPDES PERMIT CA0001309 LIQUID WASTE SHIPMENTS September 2005

| DATE SHIPPED | T175 05 110 115 | OTV | | | |
|-----------------|--|------|--------|---|--|
| SHIPPED | TYPE OF LIQUID | QTY. | UNITS | TRANSPORTER | DESTINATION |
| 9/6/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| 0/0/2000 | Wiete Wilekt Heim/Weit Gelwige Hiertiment Feliti | 0000 | O/ IL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | E 1005 Gallotti |
| | | | | | |
| 9/6/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| | | | | | |
| 9/9/2005 | Alfa Kerosene Oil, Water Bulk | 5770 | LBS. | CHEMICAL WASTE MANAGEMENT - KETTLEMAN | CHEMICAL WASTE MANAGEMENT - KETTLEMAN |
| | | | | 35251 OLD SKYLINE ROAD, KETTLEMAN CITY, CA 93239 | 35251 OLD SKYLINE ROAD, KETTLEMAN CITY, CA 93239 |
| 9/12/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| 3/12/2003 | WASTE WATERTROWAREATSEWAGE TREATMENT LEART | 3000 | OAL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | LACOD Gaison |
| | | | | 4120 B/MONT BEVB. 200 / MOZZZZO, O/1. | |
| 9/12/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| | | | | | |
| 9/19/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Carson |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| | | | | | |
| 9/19/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| 0/00/0005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | 0.41 | 4120 BANDINI BLVD. LOS ANGELES, CA. SOUTHWEST PROCESSORS INC. | LACSD Carson |
| 9/26/2005 | WASTE WATER FROM AREA II SEWAGE TREATMENT PLANT | 5000 | GAL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | LACSD Carson |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
| 9/26/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| 3/20/2000 | WHOTE WHERT HOMPICE THE WHOLE THE WITH EATT | 5000 | O/ IL. | 4120 BANDINI BLVD. LOS ANGELES, CA. | E 100D daugus |
| | | | | | |
| 9/26/2005 | WASTE WATER FROM AREA I SEWAGE TREATMENT PLANT | 5000 | GAL. | SOUTHWEST PROCESSORS INC. | LACSD Saugus |
| | | | | 4120 BANDINI BLVD. LOS ANGELES, CA. | |
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Sep 05 10/27/2005

APPENDIX D

SUMMARY TABLES, DISCHARGE MONITORING DATA OUTFALL 012

3rd QUARTER 2005 REPORTING SUMMARY NOTES THE BOEING COMPANY - ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

Notes:

- 1. For Dioxins and Furans, laboratory results may have been reported in picograms/liter (pg/L). However, the permit limit is stated in micrograms/liter (μ g/L). To evaluate permit compliance, the laboratory results have been converted to μ g/L, as necessary, to calculate the TCDD TEQ.
- 2. TCDD TEQs for the purpose of determining permit compliance are the sum of the products of the detected dioxin congener concentration multiplied by that congener's TEF. The resulting compliance TCDD TEQ does not include those congener concentrations that are reported as DNQ, as specified on Page 40 of the NPDES permit.
- 3. For some sample dates, pH was determined with a field instrument and was noted as such. These results were not validated. Since pH does not have an RL, the possible pH range is shown in the RL column.
- 4. The NPDES permit limits for mercury of $0.10~\mu g/L$ (Outfalls 1-2) and $0.13~\mu g/L$ (Outfalls 3-7) are not achievable by the laboratory; therefore, the laboratory reporting limit of $0.20~\mu g/L$ was used to determine compliance.
- 5. The volume discharged at the Alfa Test Stand (Outfall 012) is estimated based on the run time of the test.
- 6. All of the following abbreviations and/or notes may not occur on every table.

| -92.9 +/-200 | A negative radiochemical analytical result indicates the count rate of the |
|--------------|--|
| | sample was less than the background condition |
| \$ | reported result or other information was incorrectly reported by the laboratory; |
| Ψ | |
| | result was corrected by the data validator |
| | based on validation of the data, a qualifier was not required |
| -/- | no permit limit established for daily maximum or monthly average |
| <(value) | analyte not detected at a concentration greater than or equal to the DL, MDL, |
| | or RL (see laboratory report for specific detail) |
| * | result not validated |
| *1 | improper preservation of sample |
| *2 | the ICP/MS ppb check standard was recovered above the control limit; |
| | therefore, the constituent detected was qualified as estimated (J) |
| *3 | initial and or continuing calibration recoveries were outside acceptable control |
| | limits |

3rd QUARTER 2005 REPORTING SUMMARY NOTES THE BOEING COMPANY - ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

*5 blank spike/blank spike duplicate relative percent difference was outside the

control limit

*10 value was estimated detect or estimated non detect (J,UJ) due to deficiencies

in quantitation of the constituent including constituents reported by the laboratory as Estimated Maximum Possible Concentration (EMPC) values

*11 no calibration was performed for this compound; result is reported as a

tentatively identified compound (TIC)

ANR analysis not required; e.g., constituent or outfall was not required by the

permit to be sampled and analyzed (annual, semi-annual, etc.)

B laboratory method blank contamination
C calibration %RSD or %D were noncompliant

C5 Calibration verification %R was outside method control limits

%D percent difference between the initial and continuing calibration relative

response factors

deg F degrees Fahrenheit
DL detection limit

DNQ detected but not quantified (constituent value greater than or equal to the

laboratory method detection limit and less then the laboratory reporting limit)

E duplicates show poor agreement H holding time was exceeded

I ICP interference check solution results were unsatisfactory

J estimated value

K The sample dilution's set-up did not meet the oxygen depletion criteria of at

least 2 mg/l. Therefore, the reported result is an estimated value only.

L2 the laboratory control sample %R was below the method control limits

L laboratory control sample %R was outside control limits

LOD limit of detection

M1 matrix spike (MS) and/or MS duplicate were above the acceptance limits due

to sample matrix interference

M2 the MS and/or MS duplicate were below the acceptance limits due to sample

matrix interference

MDL method detection limit
MGD million gallons per day
mg/L milligrams per liter

ml/L/hr milliliters per liter per hour

NA not applicable; no permit limit established for the constituent and/or outfall

ND analyte value less than the LOD or MDL

NM not measured or determined NTU nephelometric turbidity unit

pCi/L picocurries per liter pg/L picograms per liter

Q matrix spike recovery outside of control limits

R as a validation qualifier, results are rejected; the presence or absence of

analyte cannot be verified

3rd QUARTER 2005 REPORTING SUMMARY NOTES THE BOEING COMPANY - ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

R (reason code in parentheses) %R for calibration not within control limits

RL laboratory reporting limit

RL-1 reporting limit raised due to sample matrix effects

%RSD percent relative standard deviation

S surrogate recovery was outside control limits

TEQ toxic equivalent

T presumed contamination, as indicated by a detect in the trip blank

 $\begin{array}{ll} TU_c & toxicity \ units \ (chronic) \\ U & result \ not \ detected \\ \mu g/L & micrograms \ per \ liter \end{array}$

UJ result not detected at the estimated reporting limit

umhos/cm micromhos per centimeter

WHO TEF World Health Organization toxic equivalency factor

analysis not completed due to hold time exceedence or insufficient sample

volume

Uspas3s02\DEI\Rocketdyne SSFL\SSFL Permitting and Compliance\2nd Qrtr 2005 DMR\Summary Notes

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 7/8/2005 | | | |
|---------------------------------------|----------|------------------------------------|-----------|-------------------------|--|--|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER | | |
| Ammonia as Nitrogen (N) | mg/L | -/- | ND < 0.30 | U | | |
| Biochemical Oxygen Demand (BOD 5 day) | mg/L | -/- | ND < 0.59 | U | | |
| Oil & Grease | mg/L | -/- | ND < 0.94 | U | | |
| Perchlorate | ug/L | -/- | ND < 0.80 | UJ (R) | | |
| pH (Field) | pH units | 6.5-8.5/- | 7.14 | * | | |
| Total Settleable Solids | ml/L | -/- | ND < 0.10 | U | | |
| Temperature | deg. F | 86/- | 81.5 | * | | |
| Total Cyanide | ug/L | -/- | ANR | ANR | | |
| Total Dissolved Solids | mg/L | -/- | 300 | | | |
| Total Suspended Solids | mg/L | -/- | ND < 10 | U | | |
| Turbidity | NTU | -/- | 40 | | | |
| Volume Discharged | MGD | -/- | 0.055 | * | | |
| METALS | | | | | | |
| Antimony | ug/L | -/- | ANR | ANR | | |
| Arsenic | ug/L | -/- | ANR | ANR | | |
| Beryllium | ug/L | -/- | ANR | ANR | | |
| Cadmium | ug/L | -/- | ANR | ANR | | |
| Chromium | ug/L | -/- | ANR | ANR | | |
| Copper | ug/L | -/- | ANR | ANR | | |
| Lead | ug/L | -/- | ANR | ANR | | |
| Mercury | mg/L | -/- | ANR | ANR | | |
| Nickel | ug/L | -/- | ANR | ANR | | |
| Selenium | ug/L | -/- | ANR | ANR | | |
| Silver | ug/L | -/- | ANR | ANR | | |
| Thallium | ug/L | -/- | ANR | ANR | | |
| Zinc | ug/L | -/- | ANR | ANR | | |
| ORGANICS | | | | | | |
| Benzene | ug/L | -/- | ANR | ANR | | |
| Carbon Tetrachloride | ug/L | -/- | ANR | ANR | | |
| Chloroform | ug/L | -/- | ANR | ANR | | |
| 1,1-Dichloroethane | ug/L | -/- | ANR | ANR | | |
| 1,2-Dichloroethane | ug/L | -/- | ANR | ANR | | |
| 1,1-Dichloroethene | ug/L | -/- | ANR | ANR | | |
| 1,4-Dioxane | ug/L | -/- | ND < 1.0 | U | | |
| Ethylbenzene | ug/L | -/- | ANR | ANR | | |
| Tetrachloroethene | ug/L | -/- | ANR | ANR | | |
| Toluene | ug/L | -/- | ANR | ANR | | |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 7/8/2005 | | | |
|----------------------------------|-------|------------------------------------|------------|-------------------------|--|--|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER | | |
| 1,1,1-Trichloroethane | ug/L | -/- | ANR | ANR | | |
| 1,1,2-Trichloroethane | ug/L | -/- | ANR | ANR | | |
| Trichloroethene | ug/L | -/- | ANR | ANR | | |
| Vinyl chloride | ug/L | -/- | ANR | ANR | | |
| TPH | | | | | | |
| EFH (C13 - C22) | mg/L | -/- | 0.16 | J (DNQ) | | |
| GRO (C4 - C12) | mg/L | -/- | ND < 0.050 | U | | |
| TRPH | mg/L | -/- | 5.3 | | | |
| ADDITIONAL ANALYTES | | | | | | |
| 1,1,2,2-Tetrachloroethane | ug/L | -/- | ANR | ANR | | |
| 1,2,4-Trichlorobenzene | ug/L | -/- | ANR | ANR | | |
| 1,2,3-Trichloropropane | ug/L | -/- | ND < 0.85 | U | | |
| 1,2-Dibromoethane (EDB) | ug/L | -/- | ND < 0.32 | U | | |
| 1,2-Dichlorobenzene | ug/L | -/- | ANR | ANR | | |
| 1,2-Dichloropropane | ug/L | -/- | ANR | ANR | | |
| 1,2-Diphenylhydrazine/Azobenzene | ug/L | -/- | ANR | ANR | | |
| 1,3-Dichlorobenzene | ug/L | -/- | ANR | ANR | | |
| 1,4-Dichlorobenzene | ug/L | -/- | ANR | ANR | | |
| 2,4,6-Trichlorophenol | ug/L | -/- | ANR | ANR | | |
| 2,4-Dichlorophenol | ug/L | -/- | ANR | ANR | | |
| 2,4-Dimethylphenol | ug/L | -/- | ANR | ANR | | |
| 2,4-Dinitrophenol | ug/L | -/- | ANR | ANR | | |
| 2,4-Dinitrotoluene | ug/L | -/- | ANR | ANR | | |
| 2,6-Dinitrotoluene | ug/L | -/- | ANR | ANR | | |
| 2-Chloroethylvinylether | ug/L | -/- | ANR | ANR | | |
| 2-Chloronaphthalene | ug/L | -/- | ANR | ANR | | |
| 2-Chlorophenol | ug/L | -/- | ANR | ANR | | |
| 2-Methyl-4,6-dinitrophenol | ug/L | -/- | ANR | ANR | | |
| 2-Nitrophenol | ug/L | -/- | ANR | ANR | | |
| 3,3'-Dichlorobenzidine | ug/L | -/- | ANR | ANR | | |
| 4,4'-DDD | ug/L | -/- | ANR | ANR | | |
| 4,4'-DDE | ug/L | -/- | ANR | ANR | | |
| 4,4'-DDT | ug/L | -/- | ANR | ANR | | |
| 4-Bromophenylphenylether | ug/L | -/- | ANR | ANR | | |
| 4-Chloro-3-methylphenol | ug/L | -/- | ANR | ANR | | |
| 4-Chlorophenylphenylether | ug/L | -/- | ANR | ANR | | |
| 4-Nitrophenol | ug/L | -/- | ANR | ANR | | |
| Acenaphthene | ug/L | -/- | ANR | ANR | | |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 7/8/2005 | | | |
|------------------------------|-------|------------------------------------|----------|-------------------------|--|--|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER | | |
| Acrolein | ug/L | -/- | ANR | ANR | | |
| Acrylonitrile | ug/L | -/- | ANR | ANR | | |
| Aldrin | ug/L | -/- | ANR | ANR | | |
| alpha-BHC | ug/L | -/- | ANR | ANR | | |
| Anthracene | ug/L | -/- | ANR | ANR | | |
| Aroclor-1016 | ug/L | -/- | ANR | ANR | | |
| Aroclor-1221 | ug/L | -/- | ANR | ANR | | |
| Aroclor-1232 | ug/L | -/- | ANR | ANR | | |
| Aroclor-1242 | ug/L | -/- | ANR | ANR | | |
| Aroclor-1248 | ug/L | -/- | ANR | ANR | | |
| Aroclor-1254 | ug/L | -/- | ANR | ANR | | |
| Aroclor-1260 | ug/L | -/- | ANR | ANR | | |
| Benzidine | ug/L | -/- | ANR | ANR | | |
| Benzo(a)anthracene | ug/L | -/- | ANR | ANR | | |
| Benzo(a)pyrene | ug/L | -/- | ANR | ANR | | |
| Benzo(b)fluoranthene | ug/L | -/- | ANR | ANR | | |
| Benzo(g,h,I)perylene | ug/L | -/- | ANR | ANR | | |
| Benzo(k)fluoranthene | ug/L | -/- | ANR | ANR | | |
| beta-BHC | ug/L | -/- | ANR | ANR | | |
| bis (2-Chloroethyl) ether | ug/L | -/- | ANR | ANR | | |
| bis (2-ethylhexyl) Phthalate | ug/L | -/- | ANR | ANR | | |
| bis(2-Chloroethoxy) methane | ug/L | -/- | ANR | ANR | | |
| bis(2-Chloroisopropyl) ether | ug/L | -/- | ANR | ANR | | |
| Bromodichloromethane | ug/L | -/- | ANR | ANR | | |
| Bromoform | ug/L | -/- | ANR | ANR | | |
| Bromomethane | ug/L | -/- | ANR | ANR | | |
| Butylbenzylphthalate | ug/L | -/- | ANR | ANR | | |
| Chlordane | ug/L | -/- | ANR | ANR | | |
| Chlorobenzene | ug/L | -/- | ANR | ANR | | |
| Chloroethane | ug/L | -/- | ANR | ANR | | |
| Chloromethane | ug/L | -/- | ANR | ANR | | |
| Chrysene | ug/L | -/- | ANR | ANR | | |
| cis-1,3-Dichloropropene | ug/L | -/- | ANR | ANR | | |
| delta-BHC | ug/L | -/- | ANR | ANR | | |
| Dibenzo(a,h)anthracene | ug/L | -/- | ANR | ANR | | |
| Dibromochloromethane | ug/L | -/- | ANR | ANR | | |
| Dieldrin | ug/L | -/- | ANR | ANR | | |
| Diethylphthalate | ug/L | -/- | ANR | ANR | | |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 7/8/2005 | | | |
|----------------------------|-------|------------------------------------|-----------|-------------------------|--|--|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER | | |
| Diisopropyl ether | ug/L | -/- | ND < 0.25 | UJ (C) | | |
| Dimethylphthalate | ug/L | -/- | ANR | ANR | | |
| Di-n-butylphthalate | ug/L | -/- | ANR | ANR | | |
| Di-n-octylphthalate | ug/L | -/- | ANR | ANR | | |
| Endosulfan I | ug/L | -/- | ANR | ANR | | |
| Endosulfan II | ug/L | -/- | ANR | ANR | | |
| Endosulfan sulfate | ug/L | -/- | ANR | ANR | | |
| Endrin | ug/L | -/- | ANR | ANR | | |
| Endrin aldehyde | ug/L | -/- | ANR | ANR | | |
| Fluoranthene | ug/L | -/- | ANR | ANR | | |
| Fluorene | ug/L | -/- | ANR | ANR | | |
| Heptachlor | ug/L | -/- | ANR | ANR | | |
| Heptachlor epoxide | ug/L | -/- | ANR | ANR | | |
| Hexachlorobenzene | ug/L | -/- | ANR | ANR | | |
| Hexachlorobutadiene | ug/L | -/- | ANR | ANR | | |
| Hexachlorocyclopentadiene | ug/L | -/- | ANR | ANR | | |
| Hexachloroethane | ug/L | -/- | ANR | ANR | | |
| Indeno(1,2,3-cd)pyrene | ug/L | -/- | ANR | ANR | | |
| Isophorone | ug/L | -/- | ANR | ANR | | |
| Lindane (gamma-BHC) | ug/L | -/- | ANR | ANR | | |
| Methylene Chloride | ug/L | -/- | ANR | ANR | | |
| Methyl-tert-butyl ether | ug/L | -/- | ND < 0.32 | U | | |
| Monomethyl Hydrazine | ug/L | -/- | ANR | ANR | | |
| Naphthalene | ug/L | -/- | ND < 4.5 | U | | |
| Nitrobenzene | ug/L | -/- | ANR | ANR | | |
| n-Nitrosodimethylamine | ug/L | -/- | ND < 3.7 | U | | |
| n-Nitroso-di-n-propylamine | ug/L | -/- | ANR | ANR | | |
| n-Nitrosodiphenylamine | ug/L | -/- | ANR | ANR | | |
| Pentachlorophenol | ug/L | -/- | ANR | ANR | | |
| Phenanthrene | ug/L | -/- | ANR | ANR | | |
| Phenol | ug/L | -/- | ANR | ANR | | |
| Pyrene | ug/L | -/- | ANR | ANR | | |
| tertiary Butyl Alcohol | ug/L | -/- | ND < 3.1 | U | | |
| Toxaphene | ug/L | -/- | ANR | ANR | | |
| trans-1,2-Dichloroethene | ug/L | -/- | ANR | ANR | | |
| trans-1,3-Dichloropropene | ug/L | -/- | ANR | ANR | | |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 8/2 | 16/2005 | 8/19/2005 | | |
|---------------------------------------|----------|------------------------------------|-----------|-------------------------|-----------|-------------------------|--|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER | RESULT | VALIDATION QUALIFIER | |
| Ammonia as Nitrogen (N) | mg/L | -/- | ND < 0.30 | IJ | ND < 0.30 | U | |
| Biochemical Oxygen Demand (BOD 5 day) | mg/L | -/- | 3.0 | | 2.3 | | |
| Oil & Grease | mg/L | -/- | ND < 0.94 | U | ND < 0.94 | U | |
| Perchlorate | ug/L | -/- | ND < 0.80 | U | ND < 0.80 | U | |
| pH (Field) | pH units | 6.5-8.5/- | 6.80 | * | 7.06 | * | |
| Total Settleable Solids | ml/L | -/- | ND < 0.10 | U | ND < 0.10 | U | |
| Temperature | deg. F | 86/- | 77.0 | * | 93.4 | * | |
| Total Cyanide | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Total Dissolved Solids | mg/L | -/- | 310 | | 310 | | |
| Total Suspended Solids | mg/L | -/- | 17 | | 10 | | |
| Turbidity | NTU | -/- | 49 | | 18 | | |
| Volume Discharged | MGD | -/- | 0.055 | * | 0.055 | * | |
| METALS | | | | | | | |
| Antimony | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Arsenic | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Beryllium | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Cadmium | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Chromium | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Copper | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Lead | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Mercury | mg/L | -/- | ANR | ANR | ANR | ANR | |
| Nickel | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Selenium | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Silver | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Thallium | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Zinc | ug/L | -/- | ANR | ANR | ANR | ANR | |
| ORGANICS | | | | | | | |
| Benzene | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Carbon Tetrachloride | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Chloroform | ug/L | -/- | ANR | ANR | ANR | ANR | |
| 1,1-Dichloroethane | ug/L | -/- | ANR | ANR | ANR | ANR | |
| 1,2-Dichloroethane | ug/L | -/- | ANR | ANR | ANR | ANR | |
| 1,1-Dichloroethene | ug/L | -/- | ANR | ANR | ANR | ANR | |
| 1,4-Dioxane | ug/L | -/- | ND < 0.49 | U | ND < 0.49 | U | |
| Ethylbenzene | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Tetrachloroethene | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Toluene | ug/L | -/- | ANR | ANR | ANR | ANR | |
| 1,1,1-Trichloroethane | ug/L | -/- | ANR | ANR | ANR | ANR | |
| 1,1,2-Trichloroethane | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Trichloroethene | ug/L | -/- | ANR | ANR | ANR | ANR | |
| Vinyl chloride | ug/L | -/- | ANR | ANR | ANR | ANR | |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 8/16/2005 | | 8/19/2005 | |
|--|-------|------------------------------------|------------|-------------------------|------------|-------------------------|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER | RESULT | VALIDATION QUALIFIER |
| ТРН | | | | | | |
| EFH (C13 - C22) | mg/L | -/- | 0.88 | | 0.47 | J (DNQ) |
| GRO (C4 - C12) | mg/L | -/- | 0.30 | | 0.18 | |
| TRPH | mg/L | -/- | 3.6 | | 1.6 | |
| ADDITIONAL ANALYTES | | | | | | |
| 1,1,2,2-Tetrachloroethane | ug/L | -/- | ANR | ANR | ANR | ANR |
| 1,2,4-Trichlorobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 1,2,3-Trichloropropane | ug/L | -/- | ND < 0.85 | U | ND < 0.85 | U |
| 1,2-Dibromoethane (EDB) | ug/L | -/- | ND < 0.32 | U | ND < 0.32 | U |
| 1,2-Dichlorobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 1,2-Dichloropropane | ug/L | -/- | ANR | ANR | ANR | ANR |
| 1,2-Diphenylhydrazine/Azobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 1,3-Dichlorobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 1,4-Dichlorobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2,4,6-Trichlorophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2,4-Dichlorophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2,4-Dimethylphenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2,4-Dinitrophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2,4-Dinitrotoluene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2,6-Dinitrotoluene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2-Chloroethylvinylether | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2-Chloronaphthalene | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2-Chlorophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2-Methyl-4,6-dinitrophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 2-Nitrophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 3,3'-Dichlorobenzidine | ug/L | -/- | ANR | ANR | ANR | ANR |
| 4,4'-DDD | ug/L | -/- | ANR | ANR | ANR | ANR |
| 4,4'-DDE 4.4'-DDT | ug/L | -/- | ANR | ANR | ANR | ANR |
| , | ug/L | -/- | ANR ANR | ANR ANR | ANR ANR | ANR ANR |
| 4-Bromophenylphenylether 4-Chloro-3-methylphenol | ug/L | | | | | |
| 4-Chlorophenylphenylether | ug/L | -/- | ANR | ANR | ANR | ANR |
| 4-Chlorophenylphenylether 4-Nitrophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| 1 | ug/L | -/- | ANR ANR | ANR ANR | ANR ANR | ANR ANR |
| Acenaphthene | ug/L | | | | | |
| Acrolein Acrylonitrile | ug/L | -/- | ANR ANR | ANR ANR | ANR ANR | ANR ANR |
| , | ug/L | | | | | |
| Aldrin | ug/L | -/- | ANR | ANR | ANR | ANR |
| alpha-BHC | ug/L | -/- | ANR | ANR | ANR | ANR ANR |
| Anthracene | ug/L | | ANR | ANR | ANR | |
| Aroclor-1016 Aroclor-1221 | ug/L | -/- | ANR ANR | ANR ANR | ANR ANR | ANR ANR |
| Aroclor-1221 Aroclor-1232 | ug/L | | | | | |
| A10C101-1232 | ug/L | -/- | ANR | ANR | ANR | ANR |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 8/16/2005 | | 8/19/2005 | |
|------------------------------|--------------|--------------|-----------|------------|-----------|------------|
| ANALYTE | UNITS | Permit Limit | RESULT | VALIDATION | RESULT | VALIDATION |
| | | Daily | | QUALIFIER | | QUALIFIER |
| | | Max/Monthly | | | | |
| | | Avg | | | | |
| Aroclor-1242 | ug/L | -/- | ANR | ANR | ANR | ANR |
| Aroclor-1248 | ug/L | -/- | ANR | ANR | ANR | ANR |
| Aroclor-1254 | ug/L | -/- | ANR | ANR | ANR | ANR |
| Aroclor-1260 | ug/L | -/- | ANR | ANR | ANR | ANR |
| Benzidine | ug/L | -/- | ANR | ANR | ANR | ANR |
| Benzo(a)anthracene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Benzo(a)pyrene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Benzo(b)fluoranthene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Benzo(g,h,I)perylene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Benzo(k)fluoranthene | ug/L | -/- | ANR | ANR | ANR | ANR |
| beta-BHC | ug/L | -/- | ANR | ANR | ANR | ANR |
| bis (2-Chloroethyl) ether | ug/L | -/- | ANR | ANR | ANR | ANR |
| bis (2-ethylhexyl) Phthalate | ug/L | -/- | ANR | ANR | ANR | ANR |
| bis(2-Chloroethoxy) methane | ug/L | -/- | ANR | ANR | ANR | ANR |
| bis(2-Chloroisopropyl) ether | ug/L | -/- | ANR | ANR | ANR | ANR |
| Bromodichloromethane | ug/L | -/- | ANR | ANR | ANR | ANR |
| Bromoform | ug/L | -/- | ANR | ANR | ANR | ANR |
| Bromomethane | ug/L | -/- | ANR | ANR | ANR | ANR |
| Butylbenzylphthalate | ug/L | -/- | ANR | ANR | ANR | ANR |
| Chlordane | ug/L | -/- | ANR | ANR | ANR | ANR |
| Chlorobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Chloroethane | ug/L | -/- | ANR | ANR | ANR | ANR |
| Chloromethane | ug/L | -/- | ANR | ANR | ANR | ANR |
| Chrysene | ug/L | -/- | ANR | ANR | ANR | ANR |
| cis-1,3-Dichloropropene | ug/L | -/- | ANR | ANR | ANR | ANR |
| delta-BHC | ug/L | -/- | ANR | ANR | ANR | ANR |
| Dibenzo(a,h)anthracene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Dibromochloromethane | ug/L | -/- | ANR | ANR | ANR | ANR |
| Dieldrin | ug/L | -/- | ANR | ANR | ANR | ANR |
| Diethylphthalate | ug/L | -/- | ANR | ANR | ANR | ANR |
| Diisopropyl ether | ug/L | -/- | ND < 0.25 | U | ND < 0.25 | U |
| Dimethylphthalate | ug/L | -/- | ANR | ANR | ANR | ANR |
| Di-n-butylphthalate | ug/L | -/- | ANR | ANR | ANR | ANR |
| Di-n-octylphthalate | ug/L | -/- | ANR | ANR | ANR | ANR |
| Endosulfan I | ug/L | -/- | ANR | ANR | ANR | ANR |
| Endosulfan II | ug/L | -/- | ANR | ANR | ANR | ANR |
| Endosulfan sulfate | ug/L | -/- | ANR | ANR | ANR | ANR |
| Endrin | ug/L | -/- | ANR | ANR | ANR | ANR |
| Endrin aldehyde | ug/L | -/- | ANR | ANR | ANR | ANR |
| Fluoranthene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Fluorene | ug/L ug/L | -/- | ANR | ANR | ANR | ANR |
| Heptachlor | ug/L ug/L | -/- | ANR | ANR | ANR | ANR |
| першенног | ug/L | -/- | 1 31 VIV | 7 11 VIX | 7 11 111 | 7 11 111 |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 8/2 | 16/2005 | 8/19/2005 | |
|----------------------------|-------|--------------------------------|-----------|-------------------------|-----------|-------------------------|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly | RESULT | VALIDATION QUALIFIER | RESULT | VALIDATION QUALIFIER |
| | | Avg | | | | |
| Heptachlor epoxide | ug/L | -/- | ANR | ANR | ANR | ANR |
| Hexachlorobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Hexachlorobutadiene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Hexachlorocyclopentadiene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Hexachloroethane | ug/L | -/- | ANR | ANR | ANR | ANR |
| Indeno(1,2,3-cd)pyrene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Isophorone | ug/L | -/- | ANR | ANR | ANR | ANR |
| Lindane (gamma-BHC) | ug/L | -/- | ANR | ANR | ANR | ANR |
| Methylene Chloride | ug/L | -/- | ANR | ANR | ANR | ANR |
| Methyl-tert-butyl ether | ug/L | -/- | ND < 0.32 | U | ND < 0.32 | U |
| Monomethyl Hydrazine | ug/L | -/- | ANR | ANR | ANR | ANR |
| Naphthalene | ug/L | -/- | 27 | | 30 | |
| Nitrobenzene | ug/L | -/- | ANR | ANR | ANR | ANR |
| n-Nitrosodimethylamine | ug/L | -/- | ND < 3.7 | U | ND < 3.7 | U |
| n-Nitroso-di-n-propylamine | ug/L | -/- | ANR | ANR | ANR | ANR |
| n-Nitrosodiphenylamine | ug/L | -/- | ANR | ANR | ANR | ANR |
| Pentachlorophenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| Phenanthrene | ug/L | -/- | ANR | ANR | ANR | ANR |
| Phenol | ug/L | -/- | ANR | ANR | ANR | ANR |
| Pyrene | ug/L | -/- | ANR | ANR | ANR | ANR |
| tertiary Butyl Alcohol | ug/L | -/- | ND < 3.1 | U | ND < 3.1 | U |
| Toxaphene | ug/L | -/- | ANR | ANR | ANR | ANR |
| trans-1,2-Dichloroethene | ug/L | -/- | ANR | ANR | ANR | ANR |
| trans-1,3-Dichloropropene | ug/L | -/- | ANR | ANR | ANR | ANR |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 9/ | 26/2005 |
|---------------------------------------|----------|------------------------------------|-----------|-------------------------|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER |
| Ammonia as Nitrogen (N) | mg/L | -/- | ND < 0.30 | U |
| Biochemical Oxygen Demand (BOD 5 day) | mg/L | -/- | 2.3 | |
| Oil & Grease | mg/L | -/- | ND < 0.94 | U |
| Perchlorate | ug/L | -/- | ND < 0.80 | U |
| pH (Field) | pH units | 6.5-8.5/- | 7.83 | * |
| Total Settleable Solids | ml/L | -/- | ND < 0.10 | U |
| Temperature | deg. F | 86/- | 77.7 | * |
| Total Cyanide | ug/L | -/- | ANR | ANR |
| Total Dissolved Solids | mg/L | -/- | 340 | |
| Total Suspended Solids | mg/L | -/- | 24 | |
| Turbidity | NTU | -/- | 24 | |
| Volume Discharged | MGD | -/- | 0.055 | * |
| METALS | 1,102 | , | 0.022 | |
| Antimony | ug/L | -/- | ANR | ANR |
| Arsenic | ug/L | -/- | ANR | ANR |
| Beryllium | ug/L | -/- | ANR | ANR |
| Cadmium | ug/L | -/- | ANR | ANR |
| Chromium | ug/L | -/- | ANR | ANR |
| Copper | ug/L | -/- | ANR | ANR |
| Lead | ug/L | -/- | ANR | ANR |
| Mercury | mg/L | -/- | ANR | ANR |
| Nickel | ug/L | -/- | ANR | ANR |
| Selenium | ug/L | -/- | ANR | ANR |
| Silver | ug/L | -/- | ANR | ANR |
| Thallium | ug/L | -/- | ANR | ANR |
| Zinc | ug/L | -/- | ANR | ANR |
| ORGANICS | S | | | |
| Benzene | ug/L | -/- | ANR | ANR |
| Carbon Tetrachloride | ug/L | -/- | ANR | ANR |
| Chloroform | ug/L | -/- | ANR | ANR |
| 1,1-Dichloroethane | ug/L | -/- | ANR | ANR |
| 1,2-Dichloroethane | ug/L | -/- | ANR | ANR |
| 1,1-Dichloroethene | ug/L | -/- | ANR | ANR |
| 1,4-Dioxane | ug/L | -/- | ND < 0.49 | U |
| Ethylbenzene | ug/L | -/- | ANR | ANR |
| Tetrachloroethene | ug/L | -/- | ANR | ANR |
| Toluene | ug/L | -/- | ANR | ANR |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 9/ | 26/2005 |
|----------------------------------|-------|------------------------------------|-----------|-------------------------|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER |
| 1,1,1-Trichloroethane | ug/L | -/- | ANR | ANR |
| 1,1,2-Trichloroethane | ug/L | -/- | ANR | ANR |
| Trichloroethene | ug/L | -/- | ANR | ANR |
| Vinyl chloride | ug/L | -/- | ANR | ANR |
| ТРН | | | | |
| EFH (C13 - C22) | mg/L | -/- | 1.0 | |
| GRO (C4 - C12) | mg/L | -/- | 2.3 | |
| TRPH | mg/L | -/- | 6.3 | |
| ADDITIONAL ANALYTES | | | | |
| 1,1,2,2-Tetrachloroethane | ug/L | -/- | ANR | ANR |
| 1,2,4-Trichlorobenzene | ug/L | -/- | ANR | ANR |
| 1,2,3-Trichloropropane | ug/L | -/- | ND < 0.85 | U |
| 1,2-Dibromoethane (EDB) | ug/L | -/- | ND < 0.32 | UJ (C) |
| 1,2-Dichlorobenzene | ug/L | -/- | ANR | ANR |
| 1,2-Dichloropropane | ug/L | -/- | ANR | ANR |
| 1,2-Diphenylhydrazine/Azobenzene | ug/L | -/- | ANR | ANR |
| 1,3-Dichlorobenzene | ug/L | -/- | ANR | ANR |
| 1,4-Dichlorobenzene | ug/L | -/- | ANR | ANR |
| 2,4,6-Trichlorophenol | ug/L | -/- | ANR | ANR |
| 2,4-Dichlorophenol | ug/L | -/- | ANR | ANR |
| 2,4-Dimethylphenol | ug/L | -/- | ANR | ANR |
| 2,4-Dinitrophenol | ug/L | -/- | ANR | ANR |
| 2,4-Dinitrotoluene | ug/L | -/- | ANR | ANR |
| 2,6-Dinitrotoluene | ug/L | -/- | ANR | ANR |
| 2-Chloroethylvinylether | ug/L | -/- | ANR | ANR |
| 2-Chloronaphthalene | ug/L | -/- | ANR | ANR |
| 2-Chlorophenol | ug/L | -/- | ANR | ANR |
| 2-Methyl-4,6-dinitrophenol | ug/L | -/- | ANR | ANR |
| 2-Nitrophenol | ug/L | -/- | ANR | ANR |
| 3,3'-Dichlorobenzidine | ug/L | -/- | ANR | ANR |
| 4,4'-DDD | ug/L | -/- | ANR | ANR |
| 4,4'-DDE | ug/L | -/- | ANR | ANR |
| 4,4'-DDT | ug/L | -/- | ANR | ANR |
| 4-Bromophenylphenylether | ug/L | -/- | ANR | ANR |
| 4-Chloro-3-methylphenol | ug/L | -/- | ANR | ANR |
| 4-Chlorophenylphenylether | ug/L | -/- | ANR | ANR |
| 4-Nitrophenol | ug/L | -/- | ANR | ANR |
| Acenaphthene | ug/L | -/- | ANR | ANR |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 9/ | 9/26/2005 | |
|------------------------------|-------|------------------------------------|--------|-------------------------|--|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER | |
| Acrolein | ug/L | -/- | ANR | ANR | |
| Acrylonitrile | ug/L | -/- | ANR | ANR | |
| Aldrin | ug/L | -/- | ANR | ANR | |
| alpha-BHC | ug/L | -/- | ANR | ANR | |
| Anthracene | ug/L | -/- | ANR | ANR | |
| Aroclor-1016 | ug/L | -/- | ANR | ANR | |
| Aroclor-1221 | ug/L | -/- | ANR | ANR | |
| Aroclor-1232 | ug/L | -/- | ANR | ANR | |
| Aroclor-1242 | ug/L | -/- | ANR | ANR | |
| Aroclor-1248 | ug/L | -/- | ANR | ANR | |
| Aroclor-1254 | ug/L | -/- | ANR | ANR | |
| Aroclor-1260 | ug/L | -/- | ANR | ANR | |
| Benzidine | ug/L | -/- | ANR | ANR | |
| Benzo(a)anthracene | ug/L | -/- | ANR | ANR | |
| Benzo(a)pyrene | ug/L | -/- | ANR | ANR | |
| Benzo(b)fluoranthene | ug/L | -/- | ANR | ANR | |
| Benzo(g,h,I)perylene | ug/L | -/- | ANR | ANR | |
| Benzo(k)fluoranthene | ug/L | -/- | ANR | ANR | |
| beta-BHC | ug/L | -/- | ANR | ANR | |
| bis (2-Chloroethyl) ether | ug/L | -/- | ANR | ANR | |
| bis (2-ethylhexyl) Phthalate | ug/L | -/- | ANR | ANR | |
| bis(2-Chloroethoxy) methane | ug/L | -/- | ANR | ANR | |
| bis(2-Chloroisopropyl) ether | ug/L | -/- | ANR | ANR | |
| Bromodichloromethane | ug/L | -/- | ANR | ANR | |
| Bromoform | ug/L | -/- | ANR | ANR | |
| Bromomethane | ug/L | -/- | ANR | ANR | |
| Butylbenzylphthalate | ug/L | -/- | ANR | ANR | |
| Chlordane | ug/L | -/- | ANR | ANR | |
| Chlorobenzene | ug/L | -/- | ANR | ANR | |
| Chloroethane | ug/L | -/- | ANR | ANR | |
| Chloromethane | ug/L | -/- | ANR | ANR | |
| Chrysene | ug/L | -/- | ANR | ANR | |
| cis-1,3-Dichloropropene | ug/L | -/- | ANR | ANR | |
| delta-BHC | ug/L | -/- | ANR | ANR | |
| Dibenzo(a,h)anthracene | ug/L | -/- | ANR | ANR | |
| Dibromochloromethane | ug/L | -/- | ANR | ANR | |
| Dieldrin | ug/L | -/- | ANR | ANR | |
| Diethylphthalate | ug/L | -/- | ANR | ANR | |

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

| | | | 9/ | 26/2005 |
|----------------------------|-------|------------------------------------|-----------|-------------------------|
| ANALYTE | UNITS | Permit Limit Daily Max/Monthly Avg | RESULT | VALIDATION QUALIFIER |
| Diisopropyl ether | ug/L | -/- | ND < 0.25 | U |
| Dimethylphthalate | ug/L | -/- | ANR | ANR |
| Di-n-butylphthalate | ug/L | -/- | ANR | ANR |
| Di-n-octylphthalate | ug/L | -/- | ANR | ANR |
| Endosulfan I | ug/L | -/- | ANR | ANR |
| Endosulfan II | ug/L | -/- | ANR | ANR |
| Endosulfan sulfate | ug/L | -/- | ANR | ANR |
| Endrin | ug/L | -/- | ANR | ANR |
| Endrin aldehyde | ug/L | -/- | ANR | ANR |
| Fluoranthene | ug/L | -/- | ANR | ANR |
| Fluorene | ug/L | -/- | ANR | ANR |
| Heptachlor | ug/L | -/- | ANR | ANR |
| Heptachlor epoxide | ug/L | -/- | ANR | ANR |
| Hexachlorobenzene | ug/L | -/- | ANR | ANR |
| Hexachlorobutadiene | ug/L | -/- | ANR | ANR |
| Hexachlorocyclopentadiene | ug/L | -/- | ANR | ANR |
| Hexachloroethane | ug/L | -/- | ANR | ANR |
| Indeno(1,2,3-cd)pyrene | ug/L | -/- | ANR | ANR |
| Isophorone | ug/L | -/- | ANR | ANR |
| Lindane (gamma-BHC) | ug/L | -/- | ANR | ANR |
| Methylene Chloride | ug/L | -/- | ANR | ANR |
| Methyl-tert-butyl ether | ug/L | -/- | ND < 0.32 | U |
| Monomethyl Hydrazine | ug/L | -/- | ANR | ANR |
| Naphthalene | ug/L | -/- | 39 | |
| Nitrobenzene | ug/L | -/- | ANR | ANR |
| n-Nitrosodimethylamine | ug/L | -/- | ND < 3.7 | U |
| n-Nitroso-di-n-propylamine | ug/L | -/- | ANR | ANR |
| n-Nitrosodiphenylamine | ug/L | -/- | ANR | ANR |
| Pentachlorophenol | ug/L | -/- | ANR | ANR |
| Phenanthrene | ug/L | -/- | ANR | ANR |
| Phenol | ug/L | -/- | ANR | ANR |
| Pyrene | ug/L | -/- | ANR | ANR |
| tertiary Butyl Alcohol | ug/L | -/- | ND < 3.1 | U |
| Toxaphene | ug/L | -/- | ANR | ANR |
| trans-1,2-Dichloroethene | ug/L | -/- | ANR | ANR |
| trans-1,3-Dichloropropene | ug/L | -/- | ANR | ANR |

APPENDIX E SUMMARY OF PERMIT LIMIT EXCEEDENCES

SUMMARY OF PERMIT LIMIT EXCEEDENCES

THIRD QUARTER 2005 REPORTING SUMMARY THE BOEING COMPANY-ROCKETDYNE SANTA SUSANA FIELD LABORATORY NPDES PERMIT CA0001309

July 1 through September 31, 2005

| OUTFALL | LOCATIONS | SAMPLE DATE | ANALYTE | PERMIT LIMIT Daily Max | RESULT | UNITS | VALIDATION QUALIFIER |
|-------------|-----------------|----------------|-------------|------------------------|--------|-------|-------------------------|
| Outfall 012 | Alfa Test Stand | 19-Aug-05 | Temperature | 86 | 93.4 | F | * |

APPENDIX F ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711SV64 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOG0535 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date August 12, 2005 Reviewer K. Shadowlight Reviewer's Signature Analysis/Method Semivolatiles by Method 625

| 1 | TION ITEMS' | |
|-------|---|---|
| 1. | Case Narrative | |
| | Deficiencies | |
| | | |
| 2. | Out of Scope | |
| | Analyses | |
| | | |
| | | |
| 3. | Analyses Not Conducted | |
| | | |
| 4. | Missing Hardcopy | |
| **. | Deliverables | |
| | Denver ables | |
| | | |
| 5. | Incorrect Hardcopy | |
| | Deliverables | |
| 6. | Deviations from Analysis | |
| | GC/MS Tune/Inst. Perform | |
| | Calibrations | |
| | Blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | |
| 425 | System Performance | |
| JUN | IMENTS) | Acceptable as reviewed. |
| | | |
| | | |
| * C1 | | |
| " Suc | contracted analytical laboratory is not n | neeting contract and/or method requirements. by the laboratory but no action against the laboratory is required. |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|--------------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was no within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| | False positive – reported compound was not present. Not applicable. | |
| - | False negative – compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| • | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| # | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOG0535

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES IOG0535 SVOC

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOG0535

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Semivolatiles

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

K. Shadowlight

Date of Review:

August 12, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: SDG: Analysis:

NPDES IOG0535 SVOC

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOG0535-01 | water | 625 |

SDG \naivsis:

NPDES IOG0535 SVOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 5°C. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the sample was analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibration associated with this SDG was dated 07/11/05. The average RRFs were ≥0.05 and the %RSDs were ≤35% for both target compounds listed on the sample summary form. A representative number of average RRFs and %RSDs were checked from the raw data, and no calculation or transcription errors were noted. The continuing calibration associated with the sample analysis was analyzed 07/14/05. The RRFs for both target compounds were ≥0.05, and the %Ds were ≤20%. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (5G10018-BLK1) was extracted and analyzed with this SDG. No target compounds were reported in the method blank. Review of the raw data indicated no false negatives. No qualifications were required.

Analysis:

NPDES

SVOC

IOG0535

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (5G10018-BS1/BSD1) was extracted and analyzed The percent recoveries for target compounds n-nitrosodimethylamine and naphthalene were within the respective laboratory QC limits and the RPDs were ≤20%. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

Surrogate compound 2,4,6-tribromophenol was recovered below the laboratory QC limits but ≥10%; however, as only the base-neutral surrogate compounds affect both target compounds, no qualifications were required. The remaining sample surrogate recoveries were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

SDG: Analysis:

NPDES IOG0535

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for naphthalene and n-nitrosodimethylamine by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDL. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | | ed Qua | ata lifiers |
|---|-------------------------|--------------------|--------------|--------------------|--|----------------|----------------|----------------------|--------|----------------|
| Sample ID: IOG0535-01 (Outfall Reporting Units: ug/i | 012 - Water) | | | | Samp | oled: 07/ | /08/05 | Rev | Ibel | (Prol take |
| Naphthalene N-Nitrosodimethylamine Surrogate: 2-Fluorophenol (30-120 Surrogate: Phenol-d6 (35-120%) Surrogate: 2,4,6-Tribromophenol (4 Surrogate: Nitrobenzene-d5 (45-120 Surrogate: 2-Fluorobiphenyl (45-120 Surrogate: Terphenyl-d14 (45-120) | 45-120%) 0%) 20%) | 5G10018 5G10018 | 4.5 3.7 | 10 20 | ND ND 62 % 69 % 69 % 71 % 94 % | 0.962 0.962 | | 07/15/05 07/15/05 | U | |

AMEC VALIDATED



Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711TF82

| 550 South Wadsworth Boulevard Suite 500 South Wadsworth Boulevard Suite 500 South Wadsworth Boulevard South | AMEC Earth & Environmenta | |
|---|--|--|
| Lakewood, CO 80226 Laboratory Del Mar Reviewer H. Chang Analysis/Method TPH/8015M ACTION ITEMS* 1. Case Narrative Deficiencies 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis Protocol, e.g., Holding Times GCMS Tune/Inst. Perform Calibrations Blanks Surrogates Marky Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS* Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | ard Task Order 313150010 |
| Lakewood, CO 80/226 Laboratory Del Mar Reviewer H. Chang Analysis/Method TPH/8015M ACTION ITEMS* 1. Case Narrative Deficiencies 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis Protocol, e.g., Holding Times GCMS Tunerfust. Perform Calibrations Blanks Surrogates Marrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS* * Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | SDG No. IOG0535 |
| Action trems Reviewer H. Chang Analysis/Method TPH/8015M Action items 1. Case Narrative Deficiencies 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance Comments Subcontracted analytical laboratory is not meeting contract and/or method requirements. | Lakewood, CO 80226 | |
| Reviewer's Signature Analysis/Method TPH/8015M ACTION ITEMS* 1. Case Narrative Deficiencies 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis Protocol, e.g., Holding Times GCMS Tune flast. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS* Subcontracted analytical labonatory is not meeting contract and/or method requirements. | Laboratory Del Ma | |
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| 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis A detect below the reporting limit qualified "J." Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS* Subcontracted analytical laboratory is not meeting contract and/or method requirements. | Analyses | |
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| 6. Deviations from Analysis A detect below the reporting limit qualified "J." Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b Subcontracted analytical laboratory is not meeting contract and/or method requirements. | 5. Incorrect Hardcopy | |
| Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b | | |
| Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b | | |
| Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b | | |
| Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b | 6. Deviations from Analysis | A detect below the reporting limit qualified "I" |
| Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b Subcontracted analytical laboratory is not meeting contract and/or method requirements. | The state of the s | 11 decent of the reporting mini quanticu J. |
| GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | |
| Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b Subcontracted analytical laboratory is not meeting contract and/or method requirements. | - | |
| Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | |
| Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | |
| Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | |
| Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | |
| Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS ^b a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | - · | |
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| Quantitation System Performance COMMENTS ^b a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | |
| System Performance COMMENTS ^b a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | | |
| ^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. | _ | |
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| | ^a Subcontracted analytical laboratory is not | meeting contract and/or method requirements. |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Extractable

SAMPLE DELIVERY GROUP: IOG0535

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

SDG: Analysis:

NPDES IOG0535 **TPH**

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOG0535

Project Manager:

P. Costa

Matrix:

Water

Analysis:

TPH-Extractable

OC Level:

Level IV

No. of Samples:

0

No. of Reanalyses/Dilutions:

Reviewer:

H. Chang

Date of Review:

August 10, 2005

The sample listed in Table 1 was validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015B, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis:

NPDES IOG0535 TPH

Table 1. Sample identification

DATA VALIDATION REPORT

| Client ID | EPA ID | Lab No. Matrix Method | | | | |
|-------------|-------------|-----------------------|-------|-------|--|--|
| Outfall 012 | Outfall 012 | IOG0535-01 | water | 8015B | | |

SDG: Analysis: IOG0535 TPH

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical laboratory on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the sample containers were received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel, and accounted for the analysis presented in this SDG. As the site sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The sample was extracted within seven days of sample collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 CALIBRATION

The initial calibration associated with the sample analysis was analyzed on 07/08/05. The %RSD was within the QC limit of $\leq 20\%$. The %Ds for the initial calibration verification (ICV) and continuing calibrations associated with the sample analysis were $\leq 15\%$. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.3 METHOD BLANKS

One method blank (5G11072-BLK1) was extracted and analyzed with the sample in this SDG. EFH (C13-C22) was not present above the MDL in the method blank or in the instrument blank analyzed at the beginning of the analytical sequence. Review of the chromatograms showed no false negatives. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One method blank spike/blank spike duplicate pair (5G11072-BS1/BSD1) was extracted and analyzed with the sample in this SDG. The laboratory reported recoveries of alkane range C13-C40 from spiked diesel. The recoveries were within the laboratory-established QC limits of 40-120%, and the RPD was within the QC limit of ≤25%. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

Project: SDG: NPDES IOG0535

DATA VALIDATION REPORT

Analysis:

TPH

2.5 SURROGATE RECOVERY

The sample was fortified with the surrogate compound n-octacosane. The sample surrogate recovery was within the laboratory-established QC limits of 40-125%. The recovery was recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses associated with the sample of this SDG. Evaluation of method accuracy and precision was based on the blank spike/blank spike duplicate. No qualifications were required.

2.7 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.7.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples associated with the site sample in this SDG. No qualifications were required.

2.7.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.8 COMPOUND IDENTIFICATION

The laboratory analyzed for EFH n-alkane range C13-C22 by EPA SW-846 Method 8015B. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for this SDG. No qualifications were required.

2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detect, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. An EFH detect was reported in sample Outfall 012 below the reporting limit and was qualified as estimated, "J," by the laboratory Results were reported in mg/L (ppm). No further qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Project ID: Alfa Outfall 012 - During Test

MDL Reporting Sample Dilution Date Data Analyte Method Batch Result Factor Extracted Analyzed Qualifiers Sample ID: IOG0535-01 (Outfall 012 - Water) - cont. Sampled: 07/08/05 Reporting Units: mg/l Qual EFH (C13 - C22) **EPA 8015B** 5G11072 0.082 0.50 0.16 0.98 07/11/05 07/12/05 Surrogate: n-Octacosane (40-125%) T 80 %

AMEC VALIDATED LEVEL IV

Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental

Package ID T711TF83

| 550 South | n Wadsworth Boulevar | d · | | Task Order | 313150010 | | |
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| Suite 500 | | | | | IOG0535 | | |
| Lakewood | i, CO 80226 | | No | of Analyses | | | |
| | Laboratory Del Mar | | | Date: August | | | |
| | Reviewer H. Chang | · | | Reviewer's S | | | |
| Anal | ysis/Method TPH/801 | | | Keviewei S S | ignature | | |
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| 2. Out o | of Scope | | | | | | |
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| Analy | yses | | | | | | |
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| | ng Hardcopy | | | | | | |
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| Delive | erables | | | | | | |
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| 6. Devia | tions from Analysis | | | | | | |
| Protoc | col, e.g., | | | | | | |
| Holding | g Times | | ***** | | | | |
| GC/MS | Tune/Inst. Perform | | | | | | |
| Calibra | tions | | | | | | |
| Blanks | | | | | | | |
| Surroga | ites | | | | | | |
| Matrix 5 | Spike/Dup LCS | | · · · · · · · · · · · · · · · · · · · | | | | |
| Field Q | c ' | | | | | | |
| Internal | Standard Performance | | | | | | |
| Compor | and Identification and | | | | | | |
| Quantita | ation | | | | | | |
| System | Performance | | | | | | |
| COMMENT | Sb | Acceptable as reviewed. | ······································ | *************************************** | | | |
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| | | | | | | | |
| * Subcontracter | d analytical laboratory is not m | ceting contract and/or method require | ments. | | | | |
| b Differences in | protocol have been adopted b | y the laboratory but no action against | the lab | pratory is required. | 1 | | |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOG0535

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

IOG0535 Analysis:

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOG0535

Project Manager:

P Costa Water

Matrix:

TPH-Purgeable

Analysis: QC Level:

Level IV

No. of Samples:

2 0

No. of Reanalyses/Dilutions:

Reviewer: H. Chang

Date of Review:

August 10, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015M, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: IC Analysis:

NPDES IOG0535 TPH

Table 1. Sample identification

DATA VALIDATION REPORT

| Client ID | lient ID EPA ID Lab No. | | Matrix | Method |
|-------------|-------------------------|------------|--------|-----------|
| Outfall 012 | Outfall 012 | IOG0535-01 | water | 8015M/GRO |
| Trip Blank | Trip Blank | IOG0535-02 | water | 8015M/GRO |

SDG: <u> Analysis:</u>

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at Del Mar Analytical on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the samples were received intact, and the COC indicated the samples were properly preserved. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

2.2 CALIBRATION

One gasoline standard initial calibration dated 08/20/04 was associated with the sample analyses. The %RSD for GRO (C4-C12) was within the QC limit of ≤20%. An initial calibration verification (ICV) was not analyzed. The %Ds for all CCVs bracketing the sample analyses were within the Method QC limit of ≤15%. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.3 METHOD BLANKS

One water method blank (5G14031-BLK1) was associated with the sample analyses. GRO (C4-C12) was not detected above the MDL in the method blank. Review of the raw data indicated no false negative result. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One water method blank spike (5G14031-BS1) was associated with the sample analyses. GRO (C4-C12) was recovered within the laboratory-established QC limits of 70-140%. The recovery was checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.5 SURROGATE RECOVERY

The samples were fortified with the surrogate compound 4-bromofluorobenzene (BFB). Surrogate recoveries were within the laboratory-established QC limits of 65-140%. Recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

SDG: Analysis:

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the site sample in this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

2.7 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

2.7.1 Trip Blanks, Field Blanks, and Equipment Rinsates

Sample Trip Blank was the trip blank associated with site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. Review of the raw data indicated no false negative results. There were no field blank or equipment rinsate samples associated with this SDG. No qualifications were required.

2.7.2 Field Duplicates

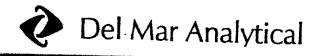
There was no field duplicate identified for the sample in this SDG.

2.8 COMPOUND IDENTIFICATION

The laboratory analyzed for GRO (C4-C12) by Method 8015M. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the samples in this SDG. No qualifications were required.

2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detects, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. The results were reported in mg/L (ppm). No qualifications were required.



17461 Derian Ave., Sulte 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | n Date rExtracted | Date Analyza | | ata lifiere |
|--|----------------|---------|--------------|--------------------|------------------|----------|----------------------|-----------------|----|----------------|
| Sample ID: IOG0535-01 (Outfa Reporting Units: mg/l | | | | | Samp | oled: 07 | 7/08/05 | | | Qual Code |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-1409) | • | 5G14031 | 0.050 | 0.10 | ND 85 % | 1 | 07/14/05 | 07/14/05 | L | |
| Sample ID: IOG0535-02 (Trip E Reporting Units: mg/l | llank - Water) | | ı | | Samp | led: 07 | //08/05 | | | |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-1409) | EPA 8015 Mod. | 5G14031 | 0.050 | 0.10 | ND 76 % | 1 | 07/14/05 | 07/14/05 | и. | |

AMEC VALIDATED LEVEL IV

Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711VO121 355 South Teller Street Task Order _ 313150010 Suite 300 SDG No. IOG0535 Lakewood, CO 80226 No. of Analyses 2 Laboratory Del Mar Analytical Date August 15, 2005 Reviewer K. Shadowlight Reviewer's Signature Analysis/Method Volatiles **ACTION ITEMS***

| 1. | Case Narrative | |
|-------|---|--|
| | Deficiencies | |
| | | |
| 2. | Out of Scope | |
| | Analyses | |
| | | |
| 3. | Analyses Not Conducted | |
| ٠, | Alialyses live Conducted | |
| | | |
| 4. | Missing Hardcopy | |
| | Deliverables | |
| | | |
| | - | |
| 5. | Incorrect Hardcopy | |
| | Deliverables | |
| 6. | Deviations from Analysis | Qualifications were assigned for a continuing %D calibration outlier |
| | GC/MS Tune/Inst. Perform | |
| | Calibrations | |
| | Blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | |
| n/o n | System Performance MMENTS ^b | |
| JUN | EVERN 15. | |
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^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|--|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within contro limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| + | False positive – reported compound was not present. Not applicable. | |
| - | False negative – compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| *# | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOG0535

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES IOG0535 VOC

1. INTRODUCTION

Task Order Title: NPDES Monitoring

Contract Task Order #: 313150010

SDG#: IOG0535

Project Manager: P. Costa

Matrix: Water

Analysis: Volatiles by 624

QC Level: Level IV

No. of Samples: 2

No. of Reanalyses/Dilutions: 0

Reviewer: K. Shadowlight

Date of Review: August 12, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method 624, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the summary forms as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis:

Table 1. Sample identification

| Client ID | EPA ID Lab No. | | Matrix | Method |
|-------------|----------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOG0535-01 | water | 624 |
| Trip Blank | Trip Blank | IOG0535-02 | water | 624 |

VOC

nalysis:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at the laboratory above the temperature limits of 4°C ±2°C, at 5°C. The samples were properly preserved. The COC noted that the samples were received intact; however, information regarding absence of headspace was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analyses presented in this SDG. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The samples were analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows shown on the quantitation reports were consistent with those specified in EPA Method 624, and all ion abundances were within the established windows. The samples and associated QC were analyzed within 12 hours of the BFB injection time. The BFB summary report was verified from the raw data and no discrepancies between the summary report and the raw data were noted. No qualifications were required.

2.3 CALIBRATION

One initial calibration dated 05/26/05 was associated with this SDG. The average RRFs were ≥0.05 for the target compounds listed on the sample result summaries. The %RSDs were ≤35% for all applicable target compounds. Two continuing calibration dated 07/13/05 (8:11 a.m. and 4:07 p.m.) were associated with the sample analyses in this SDG. The %D for di-isopropyl ether (DIPE) exceeded 20% in the calibration analyzed at 4:07 p.m.; therefore, the nondetect result for DIPE was qualified as estimated, "UJ," in associated sample Oufall 012. The remaining %Ds were ≤20% and the RRFs were ≥0.05 for the target compounds listed on the sample result summaries. representative number of %RSDs and average RRFs from the initial calibration, and %Ds and RRFs from the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. No further qualifications were required.

TOG0535 Analysis

2.4 BLANKS

Two water method blanks (5G13007-BLK1 and 5G13015-BLK1) were associated with the sample analyses. There were no detects above the MDLs for the target compounds listed on the sample result summaries. The method blank raw data showed no evidence of false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two water blank spikes (5G13007-BS1 and 5G13015-BS1) were associated with the sample analyses. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The surrogates were recovered within the QC limits of 80-120% in the samples and associated QC. A representative number of surrogate recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed for sample Outfall 012. The recoveries and RPDs were within the respective laboratory-established QC limits. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field OC samples:

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with this SDG. There were no target compounds detected above the MDLs in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.3 Field Duplicates

There were no field duplicate samples associated with this SDG.

IOG0535 \nalysis VOC

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the samples in this SDG were within the control limits established by the continuing calibration standards: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. A representative number of internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for five volatile target compounds by EPA Method 624. Chromatograms, retention times, and spectra for the samples and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. The reporting limits were supported by the lowest concentrations of the initial calibration standard and by the MDL study. As there were no sample detects in this SDG, compound quantitation was verified by recalculating a representative number of blank spike and surrogate recoveries from the raw data. Results were reported in µg/L (ppb). No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

The laboratory did not provide TICs for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

Received. 07/08

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample : Result | | Date Extracted | Date Analyza | Dated Qualit | |
|---|------------------|---------|--------------|--------------------|--------------------|----------|----------------|-----------------|------------------|------------|
| Sample ID: IOG0535-01 (Outfall (Reporting Units: ug/l | 912 - Water) - c | cont. | | | Samp | led: 07/ | 08/05 | į. | lac | Qual Coute |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5G13015 | 0.32 | 2.0 | ND | 1 | 07/13/05 | 07/13/05 | u | _ |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5G13015 | 0.32 | 5.0 | ND | 1 | | 07/13/05 | | |
| 1,2,3-Trichloropropane | EPA 624 | 5G13015 | 0.85 | 10 | ND | 1 | | 07/13/05 | | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5G13015 | 0.25 | 5.0 | ND | 1 | | 07/13/05 | 1 - | |
| tert-Butanol (TBA) | EPA 624 | 5G13015 | 3.1 | 25 | ND | 1 | | 07/13/05 | Vu | 1 |
| Surrogate: Dibromofluoromethane (| 80-120%) | | | | 112% | - | 0 () 10 , 00 | 01/12/02 | <i>y</i> • • • • | - |
| Surrogate: Toluene-d8 (80-120%) | • | | | | 106% | | | | | |
| Surrogate: 4-Bromofluorobenzene (8 | 80-120%) | | | | 109 % | • | | | 2. | 10 |
| Sample ID: IOG0535-02 (Trip Blan Reporting Units: ug/l | nk - Water) | ø | | | | ed: 07/ | 08/05 | | 16/ | Your |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5G13007 | 0.32 | 2.0 | ND | 1 | 07/13/05 | 07/13/05 | U | 1 |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5G13007 | 0.32 | 5.0 | ND | 1 | 07/13/05 | | , | |
| 1,2,3-Trichloropropane | EPA 624 | 5G13007 | 0.85 | 10 | ND | î | 07/13/05 | | - 1 | 1 |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5G13007 | 0.25 | 5.0 | ND | ī | | 07/13/05 | | |
| tert-Butanol (TBA) | EPA 624 | 5G13007 | 3.1 | 25 | ND | 1 | 07/13/05 | | ₩ 1 | |
| Surrogate: Dibromofluoromethane (80-120%) | | | | | 100 % | • | 0 // 10/03 | V (1 1 3 1 0 3 | 7 | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 98 % | | | | 1 | |
| Surrogate: 4-Bromofluorobenzene (8 | 70-120%) | | | | 98 % | | | * . | i. | |







Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental

Package ID T711VO122

| 355 South Teller Street | Task Order 313150010 | | | |
|---|----------------------|--|--|--|
| Suite 300 | SDG No. IOG0535 | | | |
| Lakewood, CO 80226 | No. of Analyses 1 | | | |
| Laboratory Del Mar Analytical | Date August 15, 2005 | | | |
| Reviewer K. Shadowlight | Reviewer's Signature | | | |
| Analysis/Method 1,4-Dioxane by Method 8260 | KShadn (tt | | | |
| | | | | |
| ACTION ITEMS* | | | | |
| 1. Case Narrative | | | | |
| Deficiencies | | | | |
| 2. Out of Scope | | | | |
| Analyses | | | | |
| | | | | |
| | | | | |
| 3. Analyses Not Conducted | | | | |
| | | | | |
| 400 to the restriction of the part of the | | | | |
| 4. Missing Hardcopy | | | | |
| Deliverables | | | | |
| | | | | |
| | | | | |
| 5. Incorrect Hardcopy | | | | |
| Deliverables | | | | |
| 6. Deviations from Analysis | | | | |
| GC/MS Tune/Inst. Perform | | | | |
| Calibrations | | | | |
| Blanks | | | | |
| Surrogates | | | | |
| Matrix Spike/Dup LCS | | | | |
| Field QC | | | | |
| Internal Standard Performance | | | | |
| Compound Identification and | | | | |
| Quantitation | | | | |
| System Performance COMMENTS ^b | | | | |
| | | | | |
| Acceptable as reviewed. | | | | |
| | | | | |
| * Subcontracted analytical laboratory is not meeting contract and/or method | d requirements. | | | |
| b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required. | | | | |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|--------------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| C | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within controllimits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparatio (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was no within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| М | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| ſ | Presumed contamination from trip blank. | Not applicable. |
| | False positive – reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| ? | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| 3 | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| • | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| • | Instrument performance for pesticides was poor, | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| # | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *I would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOG0535

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES

Analysis:

IOG0535 VOC

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

DATA VALIDATION REPORT

313150010

Sample Delivery Group #:

IOG0535

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles (1,4-dioxane)

OC Level:

Reviewer:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

K. Shadowlight

Date of Review:

August 15, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method SW-846 8260B and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

SDG No.:

NPDES IOG0535

Analysis:

VOC

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|-------------|--------|--------|
| | | Del Mar, CA | | |
| Outfall 012 | Outfall 012 | IOG0535-01 | water | 8260B |

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOG0535

VOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the Del Mar Analytical within the temperature limits of 4°C ±2°C, at 5°C. The COC noted that the sample was received intact and properly preserved; however, information regarding absence of headspace was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed by field and laboratory personnel. As the sample was couriered directly to the laboratory from the field, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The sample was analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows were consistent with those specified in EPA Method 8260B. All ion abundances were within the established windows, and the sample was analyzed within 12 hours of the BFB injection time. No qualifications were required.

2.3 CALIBRATION

One initial calibration, dated 06/06/05, was associated with this SDG. The average RRF for 1,4dioxane was ≥0.05 and the %RSD was ≤15%. One continuing calibration dated 07/12/05 was analyzed with this SDG. The RRF for 1,4-dioxane was ≥0.05 and the %D was ≤20%. The %RSD and average RRF for 1,4-dioxane in the initial calibration, and the %D and RRF for 1,4-dioxane in the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. qualifications were required.

2.4 BLANKS

One water method blank (5G12007-BLK1) was associated with this SDG. Target compound 1,4dioxane was not detected above the MDL in the method blank. The method blank raw data showed no evidence of a false negative. No qualifications were required.

SDG No.: Analysis:

NPDES IOG0535

VOC

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed a blank spike (5G12007-BS1) with this SDG. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample and QC were fortified with dibromofluoromethane. The surrogate was recovered within the laboratory QC limits of 80-125%. The surrogate recovery for the sample was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample Outfall 012 was analyzed as the MS/MSD for this SDG. The recoveries and RPD for 1,4dioxane were within the laboratory QC limits. The recoveries and RPD were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

The sample in this SDG had no associated trip blank. No qualifications were required.

2.8.1.1 Field Blanks and Equipment Rinsates

The site sample in this SDG had no associated field QC samples. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standard: $\pm 100\% - 50\%$ for internal standard areas and ± 0.50 minutes for retention times. Internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

SDG No.:

NPDES IOG0535

Analysis:

VOC

2.10 COMPOUND IDENTIFICATION

DATA VALIDATION REPORT

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for 1,4-dioxane by Method 8260B/SIM. Chromatograms, retention times, and spectra for the sample and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. The reporting limit was supported by the lowest concentration of the initial calibration standards and by the undated MDL supplied by the laboratory. As there were no sample detects, compound quantitation was verified by recalculating blank spike and surrogate recoveries from the raw data. No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs are not typically reported for SIM methods.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

VOLATILE ORGANICS by GCMS SIM

| | Analyte | Method | Batch | MDL Limit | Reporting Limit | * | | Date Extracted | Υ) | - | The second |
|---|---|---------------------|---------|--------------|--------------------|-------------|-----------|-------------------|----------|-------|------------|
| | Sample ID: IOG0535-01 (Outfall 012 Reporting Units: ug/l | - Water) | | | | Samp | oled: 07. | /08/05 | Z, | Kal , | wal |
| 6 | 1,4-Dioxane I Surrogate: Dibromofluoromethane (80- | EPA 8260B -120%) | 5G12007 | 1.0 | 2.0 | ND 112 % | 1 | 07/12/05 | 07/12/05 | U | |

AMEC VALIDATED

WEL T

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC167 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOG0535 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: 08/16/05 Reviewer L. Jarusewic Reviewer's Signature Analysis/Method General Minerals austure ACTION ITEMS Case Narrative **Deficiencies** 2. **Out of Scope** Analyses 3. **Analyses Not** Conducted 4. Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy **Deliverables Deviations from** Analysis Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Performance Calibrations **Blanks** Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance **COMMENTS** Acceptable as reviewed. Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within contro limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| [| Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| ſ | Presumed contamination from trip blank. | Not applicable. |
| | False positive - reported compound was not present. Not applicable. | |
| | False negative – compound was present but not reported. | Not applicable. |
| ! | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
| | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

*#

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IOG0535

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES

SDG No.: Analysis: IOG0535 General Minerals

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOG0535

Project Manager:

P. Costa

Matrix:

Water

Analysis:

General Minerals

OC Level:

Level IV

No. of Samples:

1

Reviewer:

L. Jarusewic

Date of Review:

August 12, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 418.1, 350.2, 405.1, 413.1, 160.2, 160.5, and 180.1, Standard Methods for the Examination of Water and Wastewater Method SM2540C, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

NPDES

SDG No.: Analysis: IOG0535

General Minerals

DATA VALIDATION REPORT

Table 1. Sample identification

| Client ID | EPA ID | Laboratory ID | Matrix | COC Method |
|-------------|-------------|---------------|--------|------------------|
| Outfall 012 | Outfall 012 | IOG0535-01 | Water | General Minerals |

NPDES

SDG No.: Analysis: IOG0535 General Minerals

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. No preservation problems were noted by the laboratory. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for all analyses presented in this SDG. No sample qualifications were required.

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The 28-day analytical holding time for total recoverable petroleum hydrocarbons, ammonia, and oil and grease, the seven-day holding time for total suspended solids and total dissolved solids, and the 48-hour holding time for BOD, total settleable solids, and turbidity were met. No qualifications were required.

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 0.995 . Initial and continuing calibration information was acceptable with recoveries within the control limits of 90-110%. For ammonia, no information regarding the standardization of the titrant was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required. For BOD, no information regarding the calibration of the oxygen meter was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required. Calibration is not applicable to the total dissolved solid, oil and grease, total suspended solids, and total settleable solids analyses. No qualifications were required.

2.3 BLANKS

Turbidity was detected in method blank 5G09041-BLK1 at 0.06 NTU; however, the turbidity method blank result was insufficient to qualify Outfall 012. The remaining method blank and CCB results reported on the summary forms and in the raw data for blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

NPDES

SDG No.: Analysis: IOG0535 General Minerals

DATA VALIDATION REPORT

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample and laboratory control sample duplicate (BOD, total recoverable petroleum hydrocarbons, and oil and grease only) recoveries were within the laboratory-established control limits. The LCS is not applicable to turbidity or total settleable solids. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analyses presented in this SDG.

2.6 LABORATORY DUPLICATES

A laboratory duplicate analysis was performed on Outfall 012 for turbidity. The RPD was within the control limit of ≤20% and no qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses performed for Outfall 012; therefore, no assessment was made with respect to this criterion. Method accuracy was based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analyses of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analyses presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

2.11 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

SDG No.:

NPDES

Analysis:

IOG0535 General Minerals

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

DATA VALIDATION REPORT

There were no field duplicate pairs associated with this SDG.



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

Attention: Bronwyn Kelly

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

MDL Reporting Sample Dilution Date

Data

Analyte

Method

Batch Limit

Limit

Result Factor Extracted Sampled: 07/08/05

Analyzed Qualifiers

Sample ID: IOG0535-01 (Outfall 012 - Water)

Reporting Units: mg/l

Total Recoverable Hydrocarbons

EPA 418.1

5G12075 0.31

07/12/05 07/12/05

AMEC VALIDATED

LEVEL IV



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | on Date rExtracted | • | ed Qual | A 1 |
|---|---------------------------|---------|--------------|--------------------|------------------|----------|-----------------------|----------|------------|--|
| Sample ID: IOG0535-01 (Outfall 012 - Water) - cont. Reporting Units: mg/l | | | | | Samj | pled: 0' | 7/08/05 | đ | tial | Care |
| Ammonia-N (Distilled) | EPA 350.2 | 5G12072 | 0.30 | 0.50 | ND | 1 | 07/12/05 | 07/12/05 | U | |
| Biochemical Oxygen Demand | EPA 405.1 | 5G08111 | 0.59 | 2.0 | ND | 1 | | 07/12/05 | Í | |
| Oil & Grease | EPA 413.1 | 5G13079 | 0.94 | 5.0 | ND | 1 | | 07/13/05 | 1 | |
| Total Dissolved Solids | SM2540C | 5G13109 | 10 | 10 | 300 | i | | 07/13/05 | • | |
| Total Suspended Solids | EPA 160.2 | 5G13095 | 10 | 10 | ND | 1 | | 07/13/05 | u | |
| Sample ID: IOG0535-01 (Outfall Reporting Units: ml/l/hr Total Settleable Solids | 012 - Water) EPA 160.5 | 5G09040 | 0.10 | 0.10 | | oled: 07 | 7/08/05 | | v - | |
| Sample ID: IOG0535-01 (Outfall Reporting Units: NTU Turbidity | | 5G09041 | 0.080 | 2.0 | Samp | led: 07 | | | ll. | en estatutura (kiralan kiralan |
| • | | 2003041 | 0.000 | 2.0 | 40 | 2 | 07/09/05 | 07/09/05 | | |
| Sample ID: IOG0535-01 (Outfall Reporting Units: ug/l | 012 - Water) | | | | Samp | led: 07 | /08/05 | | | volumente pleasemente |
| Perchlorate | EPA 314.0 | 5G15056 | 0.80 | 4.0 | ND | 1 | 07/15/05 | 07/15/05 | * | Control of the contro |

* analysis not validated

AMEC VALIDATED



CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC168 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOG0535 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date August 15, 2005 Reviewer/s Signature Reviewer L. Jarusewic Analysis/Method Perchlorate a ACTION ITEMS* Case Narrative **Deficiencies** 2. Out of Scope Analyses 3. Analyses Not Conducted Missing Hardcopy **Deliverables Incorrect Hardcopy** Deliverables 6. Deviations from Analysis Qualifications were assigned for an ICCS recovery outlier GC/MS Tune/Inst. Perform **Calibrations** Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Ouantitation System Performance COMMENTS^b

* Subcontracted analytical laboratory is not meeting contract and/or method requirements.

b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|--------------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| C | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| 1 | False positive – reported compound was not present. Not applicable. | |
| - | False negative – compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| *# | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: PERCHLORATE

SAMPLE DELIVERY GROUP: IOG0535

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

SDG No.: Analysis:

NPDES IOG0535

Perchlorate

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOG0535

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Perchlorate

QC Level:

Level IV

1

No. of Samples:

Reviewer:

L. Jarusewic

Date of Review:

August 15, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 314.0, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

SDG No.:

Analysis:

NPDES IOG0535

Perchlorate

Table 1. Sample identification

| Client ID | EPA ID | Laboratory ID | Matrix | COC Method |
|-------------|-------------|---------------|--------|-------------|
| Outfall 012 | Outfall 012 | IOG0535-01 | Water | Perchlorate |

SDG No.:

NPDES

Analysis:

IOG0535 Perchlorate

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The analysis did not require preservation and no preservation was noted in the field. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel, and accounted for the sample and analysis presented in this SDG. No qualifications were required.

2.1.3 Holding Times

The holding time was assessed by comparing the date of collection with the date of analysis. The 28-day analytical holding time for perchlorate was met, and no qualifications were required.

2.2 CALIBRATION

The initial calibration correlation coefficient was ≥0.995. The IPC-MA recovery was within the control limits of 80-120%. The ICV, CCV, and IPC recoveries were within the control limits of 90-110%. The ICCS was recovered below the control limits at 82.0%; therefore, nondetected perchlorate in Outfall 012 was qualified as estimated, "UJ." No further qualifications were required.

2.3 BLANKS

The method blank and CCB results reported on the summary form and in the raw data for the blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample associated with this SDG was recovered within the method control limits of 85-115%. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analysis presented in this SDG.

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOG0535

Perchlorate

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was assessed based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analysis of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analysis presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample result reported on the Form I was verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

2.11 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

INORGANICS

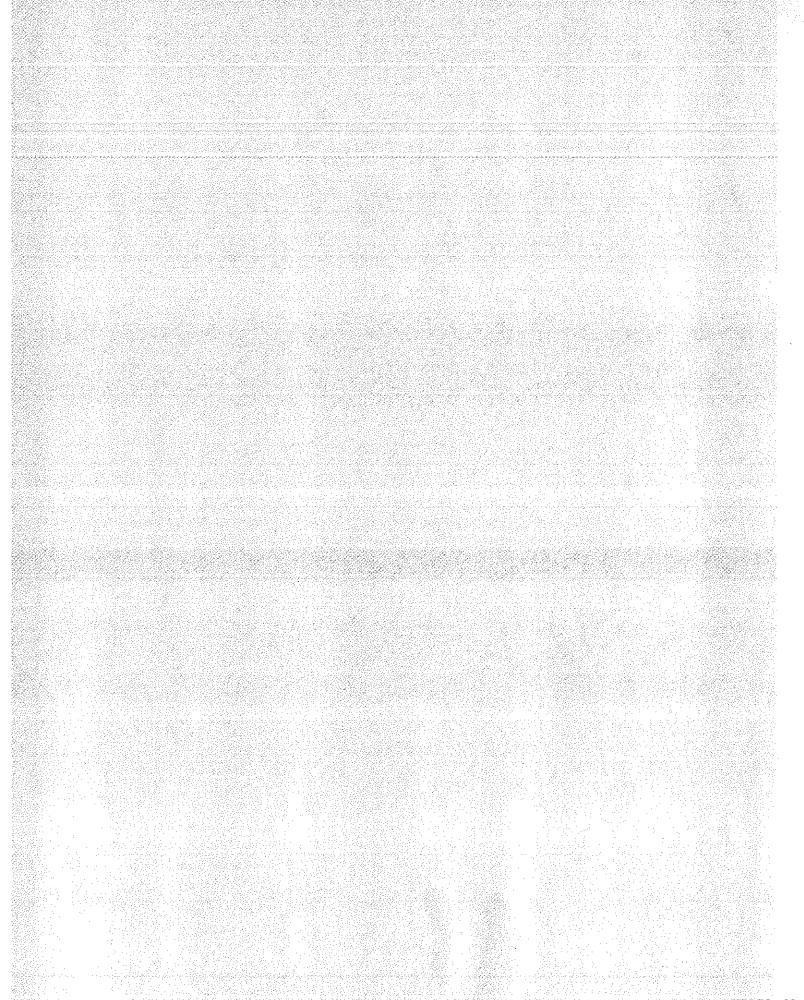
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzo | Data ed Qualifiers | XI.C |
|---|---------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|-----------------|--|------|
| Sample ID: IOG0535-01 (Outfal Reporting Units: mg/l | ll 012 - Water) - c | ont. | | | Samj | pled: 07/ | 08/05 | | 237 117 | ČC |
| Ammonia-N (Distilled) | EPA 350.2 | 5G12072 | 0.30 | 0.50 | ND | 1 | 07/12/05 | 07/12/05 | * | |
| Biochemical Oxygen Demand | EPA 405.1 | 5G08111 | 0.59 | 2.0 | ND | 1 | 07/08/05 | | i l | |
| Oil & Grease | EPA 413.1 | 5G13079 | 0.94 | 5.0 | ND | 1 | 07/13/05 | 07/13/05 | | |
| Total Dissolved Solids | SM2540C | 5G13109 | 10 | 10 | 300 | 1 | 07/13/05 | 07/13/05 | *** | |
| Total Suspended Solids | EPA 160.2 | 5G13095 | 10 | 10 | ND | 1 | 07/13/05 | 07/13/05 | | |
| Sample ID: IOG0535-01 (Outfal Reporting Units: ml/l/hr | l 012 - Water) | | | | Samj | oled: 07/ | 08/05 | | | |
| Total Settleable Solids | EPA 160.5 | 5G09040 | 0.10 | 0.10 | ND | 1 | 07/09/05 | 07/09/05 | | |
| Sample ID: IOG0535-01 (Outfal Reporting Units: NTU | l 012 - Water) | | | | Samp | oled: 07/ | 08/05 | | - Longitude and the second sec | |
| Turbidity | EPA 180.1 | 5G09041 | 0.080 | 2.0 | 40 | 2 | 07/09/05 | 07/09/05 | 1000 | |
| Sample ID: IOG0535-01 (Outfall Reporting Units: ug/l | l 012 - Water) | | | | Samp | oled: 07/0 | 08/05 | · | | |
| Perchlorate | EPA 314.0 | 5G15056 | 0.80 | 4.0 | ND | 1 | 07/15/05 | 07/15/05 | UT R | • |

* analysis not validated

AMEC VALIDATED

LEVEL IV

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LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

Project: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 07/08/05 Received: 07/08/05

Issued: 07/20/05 15:16

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED: No

No analyses were subcontracted to an outside laboratory.

LABORATORY ID

CLIENT ID

MATRIX

IOG0535-01

Outfall 012

Water

IOG0535-02

Trip Blank

Water

Reviewed By:

Del Mar Analytical, Irvine Michele Harper

Michell Harper

Project Manager



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

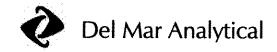
Sampled: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOG0535

Received: 07/08/05

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Pilution | Date Extracted | Date Analyzed | Data Qualifiers | |
|--|-----------|---------|--------------|--------------------|------------------|----------|-------------------|------------------|--------------------|--|
| Sample ID: IOG0535-01 (Outfall 012 - Water) | | | | Sampled: 07/08/05 | | | | | | |
| Reporting Units: mg/l Total Recoverable Hydrocarbons | EPA 418.1 | 5G12075 | 0.31 | 1.0 | 5.3 | 1 | 07/12/05 | 07/12/05 | i | |



MWH-Pasadena/Boeing

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOG0535

Sampled: 07/08/05

Attention: Bronwyn Kelly

Received: 07/08/05

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | Data Qualifiers |
|--|----------------|---------|--------------|--------------------|---------------------|------------|-------------------|------------------|--------------------|
| Sample ID: IOG0535-01 (Outfall 012 - V | Water) - cont. | | | | Samp | led: 07/08 | 3/05 | | |
| EFH (C13 - C22) Surrogate: n-Octacosane (40-125%) | EPA 8015B | 5G11072 | 0.082 | 0.50 | 0.16 80 % | 0.98 | 07/11/05 | 07/12/05 | J |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | |
|---|---------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|
| Sample ID: IOG0535-01 (Outfall 012 - Water) - cont. | | | | Sampled: 07/08/05 | | | | | | |
| Reporting Units: mg/l GRO (C4 - C12) Surrogate: 4-BFB (F1D) (65-140%) | EPA 8015 Mod. | 5G14031 | 0.050 | 0.10 | ND 85 % | 1 | 07/14/05 | 07/14/05 | | |
| Sample ID: IOG0535-02 (Trip Blank - Water) Reporting Units: mg/l | | | | | Samp | led: 07/08 | 3/05 | | | |
| GRO (C4 - C12) Surrogate: 4-BFB (F1D) (65-140%) | EPA 8015 Mod. | 5G14031 | 0.050 | 0.10 | ND 76 % | 1 | 07/14/05 | 07/14/05 | | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 07/08/05

Pasadena, CA 91101

Report Number: IOG0535

Received: 07/08/05

VOLATILE ORGANICS by GCMS SIM

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | |
|---|-----------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|
| Sample ID: IOG0535-01 (Outfall 012 - Water) | | | | Sampled: 07/08/05 | | | | | | |
| Reporting Units: ug/l | | | | | | | | | | |
| 1,4-Dioxane | EPA 8260B | 5G12007 | 1.0 | 2.0 | ND | 1 | 07/12/05 | 07/12/05 | | |
| Surrogate: Dibromofluoromethane (80-120%) | | | | | 112 % | | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

Attention: Bronwyn Kelly

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOG0535-01 (Outfall 012 - Water) - cont. | | | | | Samo | led: 07/0 | 8/05 | | |
| Reporting Units: ug/l | | | | | • | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5G13015 | 0.32 | 2.0 | ND | 1 | 07/13/05 | 07/13/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5G13015 | 0.32 | 5.0 | ND | 1 | 07/13/05 | 07/13/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5G13015 | 0.85 | 10 | ND | 1 | 07/13/05 | 07/13/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5G13015 | 0.25 | 5.0 | ND | 1 | 07/13/05 | 07/13/05 | |
| tert-Butanol (TBA) | EPA 624 | 5G13015 | 3.1 | 25 | ND | 1 | 07/13/05 | 07/13/05 | |
| Surrogate: Dibromofluoromethane (80-120%) | | | | 112% | | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 106 % | | | | |
| Surrogate: 4-Bromofluorobenzene (80-120%) | | | | | 109 % | | | | |
| Sample ID: IOG0535-02 (Trip Blank - Water) | | | | | Samo | led: 07/08 | 8/05 | | |
| Reporting Units: ug/l | | | | | F | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5G13007 | 0.32 | 2.0 | ND | 1 | 07/13/05 | 07/13/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5G13007 | 0.32 | 5.0 | ND | 1 | 07/13/05 | 07/13/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5G13007 | 0.85 | 10 | ND | 1 | 07/13/05 | 07/13/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5G13007 | 0.25 | 5.0 | ND | 1 | 07/13/05 | 07/13/05 | |
| tert-Butanol (TBA) | EPA 624 | 5G13007 | 3.1 | 25 | ND | 1 | 07/13/05 | 07/13/05 | |
| Surrogate: Dibromofluoromethane (80-120%) | | | | 100 % | | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | 98 % | | | | | |
| Surrogate: 4-Bromofluorobenzene (80-120%) | | | | 98 % | | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 07/08/05 Received: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOG0535

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|-------------------------------------|-------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOG0535-01 (Outfall 0) | 12 - Water) | | | | Samp | led: 07/0 | 8/05 | | |
| Reporting Units: ug/l | | | | | _ | | | | |
| Naphthalene | EPA 625 | 5G10018 | 4.5 | 10 | ND | 0.962 | 07/10/05 | 07/15/05 | |
| N-Nitrosodimethylamine | EPA 625 | 5G10018 | 3.7 | 20 | ND | 0.962 | 07/10/05 | 07/15/05 | |
| Surrogate: 2-Fluorophenol (30-1209 | %) | | | | 62 % | | | | |
| Surrogate: Phenol-d6 (35-120%) | | | | | 69 % | | | | |
| Surrogate: 2,4,6-Tribromophenol (4: | 5-120%) | | | | 78 % | | | | |
| Surrogate: Nitrobenzene-d5 (45-120) | %) | | | | 69 % | | | | |
| Surrogate: 2-Fluorobiphenyl (45-12) | 0%) | | | | 71% | | | | |
| Surrogate: Terphenyl-d14 (45-120%) |) | | | | 94 % | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOG0535

Received: 07/08/05

INORGANICS

| | | 4.1 | · OICO | CALTROD | | | | | |
|-----------------------------------|---------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: IOG0535-01 (Outfall 0 | 12 - Water) - cont. | | | | Samp | led: 07/0 | 8/05 | | |
| Reporting Units: mg/l | | | | | * | | | | |
| Ammonia-N (Distilled) | EPA 350.2 | 5G12072 | 0.30 | 0.50 | ND | 1 | 07/12/05 | 07/12/05 | |
| Biochemical Oxygen Demand | EPA 405.1 | 5G08111 | 0.59 | 2.0 | ND | 1 | 07/08/05 | 07/13/05 | |
| Oil & Grease | EPA 413.1 | 5G13079 | 0.94 | 5.0 | ND | 1 | 07/13/05 | 07/13/05 | |
| Total Dissolved Solids | SM2540C | 5G13109 | 10 | 10 | 300 | 1 | 07/13/05 | 07/13/05 | |
| Total Suspended Solids | EPA 160.2 | 5G13095 | 10 | 10 | ND | 1 | 07/13/05 | 07/13/05 | |
| Sample ID: IOG0535-01 (Outfall 0) | 12 - Water) | | | | Samp | led: 07/08 | 8/05 | | |
| Reporting Units: ml/l/hr | | | | | | | | | |
| Total Settleable Solids | EPA 160.5 | 5G09040 | 0.10 | 0.10 | ND | 1 | 07/09/05 | 07/09/05 | |
| Sample ID: IOG0535-01 (Outfall 0) | (2 - Water) | | | | Samp | led: 07/08 | 8/05 | | |
| Reporting Units: NTU | | | | | | | | | |
| Turbidity | EPA 180.1 | 5G09041 | 0.080 | 2.0 | 40 | 2 | 07/09/05 | 07/09/05 | |
| Sample ID: IOG0535-01 (Outfall 01 | 12 - Water) | | | | Samp | led: 07/08 | 8/05 | | |
| Reporting Units: ug/l | | | | | | | | | |
| Perchlorate | EPA 314.0 | 5G15056 | 0.80 | 4.0 | ND | 1 | 07/15/05 | 07/15/05 | |
| | | | | | | | | | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

SHORT HOLD TIME DETAIL REPORT

| Sample ID: Outfail 012 (IOG0535-01) - Wate | Hold Time (in days) | Date/Time Sampled | Date/Time Received | Date/Time Extracted | Date/Time Analyzed |
|--|------------------------|----------------------|-----------------------|------------------------|-----------------------|
| EPA 160.5 | 2 | 07/08/2005 13:31 | 07/08/2005 17:50 | 07/09/2005 13:00 | 07/09/2005 14:00 |
| EPA 180.1 | 2 | 07/08/2005 13:31 | 07/08/2005 17:50 | 07/09/2005 13:00 | 07/09/2005 14:30 |
| EPA 405.1 | 2 | 07/08/2005 13:31 | 07/08/2005 17:50 | 07/08/2005 20:00 | 07/13/2005 17:00 |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|----------|--------------------|------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 5G12075 Extracted: 07/12/05 | <u>L</u> | | | | | | | | | | |
| Blank Analyzed: 07/12/2005 (5G12075-B | LK1) | | • | | | | | | | | |
| Total Recoverable Hydrocarbons | ND | 1.0 | 0.31 | mg/l | | | | | | | |
| LCS Analyzed: 07/12/2005 (5G12075-BS | t) | | | | | | | | | | M-NR1 |
| Total Recoverable Hydrocarbons | 4.63 | 1.0 | 0.31 | mg/l | 5.00 | | 93 | 65-120 | | | |
| LCS Dup Analyzed: 07/12/2005 (5G1207: | 5-BSD1) | | | | | | | | | | |
| Total Recoverable Hydrocarbons | 4.87 | 1.0 | 0.31 | mg/I | 5.00 | | 97 | 65-120 | 5 | 20 | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|----------|--------------------|-------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 5G11072 Extracted: 07/11/05 | <u>-</u> | | | | | | | | | | |
| Blank Analyzed: 07/12/2005 (5G11072-B | LK1) | | | | | | | | | | |
| EFH (C13 - C22) | ND | 0.50 | 0.082 | mg/l | | | | | | | |
| EFH (C13 - C40) | ND | 0.50 | 0.082 | mg/l | | | | | | | |
| Surrogate: n-Octacosane | 0.161 | | | mg/l | 0.200 | | 80 | 40-125 | | | |
| LCS Analyzed: 07/12/2005 (5G11072-BS | l) | | | | | | | | | | M-NR1 |
| EFH (C13 - C40) | 0.598 | 0.50 | 0.082 | mg/l | 0.775 | | 77 | 40-120 | | | |
| Surrogate: n-Octacosane | 0.154 | | | mg/l | 0.200 | | 77 | 40-125 | | | |
| LCS Dup Analyzed: 07/12/2005 (5G11072 | 2-BSD1) | | | | | | | | | | |
| EFH (C13 - C40) | 0.552 | 0.50 | 0.082 | mg/l | 0.775 | | 71 | 40-120 | 8 | 25 | |
| Surrogate: n-Octacosane | 0.140 | | | mg/l | 0.200 | | 70 | 40-125 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Sampled: 07/08/05

Attention: Bronwyn Kelly

Report Number: IOG0535

Received: 07/08/05

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|------------------------------------|-----------------|-----------|-------|-------|--------|-----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5G14031 Extracted: 07/1 | 4/05 | | | | | | | | | | |
| Blank Analyzed: 07/14/2005 (5G140 | 31-BLK1) | | | | | | | | | | |
| GRO (C4 - C12) | ND | 0.10 | 0.050 | mg/l | | | | | | | |
| Surrogate: 4-BFB (FID) | 0.00889 | | | mg/l | 0.0100 | | 89 | 65-140 | | | |
| LCS Analyzed: 07/14/2005 (5G1403 | 1-BS1) | | | | | | | | | | |
| GRO (C4 - C12) | 0.837 | 0.10 | 0.050 | mg/l | 0.800 | | 105 | 65-140 | | | |
| Surrogate: 4-BFB (FID) | 0.0288 | | | mg/l | 0.0300 | | 96 | 65-140 | | | |
| Matrix Spike Analyzed: 07/14/2005 | (5G14031-MS1) | | | | Sou | rce: IOG | 0505-05 | | | | |
| GRO (C4 - C12) | 0.227 | 0.10 | 0.050 | mg/l | 0.220 | ND | 103 | 60-145 | | | |
| Surrogate: 4-BFB (FID) | 0.0125 | | | mg/l | 0.0100 | | 125 | 65-140 | | | |
| Matrix Spike Dup Analyzed: 07/14/2 | 2005 (5G14031-M | (SD1) | | | Sou | rce: IOG(| 0505-05 | | | | |
| GRO (C4 - C12) | 0.230 | 0.10 | 0.050 | mg/l | 0.220 | ND | 105 | 60-145 | 1 | 20 | |
| Surrogate: 4-BFB (FID) | 0.0128 | | | mg/l | 0.0100 | | 128 | 65-140 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GCMS SIM

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|-----|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 5G12007 Extracted: 07/12/05 | <u>.</u> | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 07/12/2005 (5G12007-B | LK1) | | | | | | | | | | |
| 1,4-Dioxane | ND | 2.0 | 1.0 | ug/i | | | | | | | |
| Surrogate: Dibromofluoromethane | 1.09 | | | ug/l | 1.00 | | 109 | 80-120 | | | |
| LCS Analyzed: 07/12/2005 (5G12007-BS | 1) | | | | | | | | | | |
| 1,4-Dioxane | 10.7 | 2.0 | 1.0 | ug/l | 10.0 | | 107 | 70-130 | | | |
| Surrogate: Dibromofluoromethane | 1.10 | | | ug/l | 1.00 | | 110 | 80-120 | | | |
| Matrix Spike Analyzed: 07/12/2005 (5G1 | 2007-MS1) | | | | Sou | rce: IOG(| 0535-01 | | | | |
| 1,4-Dioxane | 11.3 | 2.0 | 1.0 | ug/l | 10.0 | ND | 113 | 70-130 | | | |
| Surrogate: Dibromofluoromethane | 1.04 | | | ug/l | 1.00 | | 104 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 07/12/2005 | (5G12007-N | ISD1) | | | Sou | rce: IOG(|)535-01 | | | | |
| I,4-Dioxane | 10.8 | 2.0 | 1.0 | ug/l | 10.0 | ND | 108 | 70-130 | 5 | 30 | |
| Surrogate: Dibromofluoromethane | 1.03 | | | ug/l | 1.00 | | 103 | 80-120 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|---|-----------|--------------------|------|-------|----------------|------------------|--------|--------|-----|--------------|--------------------|
| Batch: 5G13007 Extracted: 07/13/05 | | | | | | | | | | | |
| Blank Analyzed: 07/13/2005 (5G13007-B | LK1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | 0.32 | սջ/l | | | | | | | |
| Methyl-tert-butyl Ether (MTBE) | ND | 5.0 | 0.32 | ug/l | | | | | | | |
| 1,2,3-Trichloropropane | ND | 10 | 0.85 | ug/l | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 5.0 | 0.25 | ug/l | | | | | | | |
| tert-Butanol (TBA) | ND | 25 | 3.1 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 24.8 | | | ug/l | 25.0 | | 99 | 80-120 | | | |
| Surrogate: Toluene-d8 | 24.5 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.4 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| LCS Analyzed: 07/13/2005 (5G13007-BS) | l) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 25.7 | 2.0 | 0.32 | ug/l | 25.0 | | 103 | 70-125 | | | |
| Methyl-tert-butyl Ether (MTBE) | 28.2 | 5.0 | 0.32 | ug/l | 25.0 | | 113 | 55-140 | | | |
| 1,2,3-Trichloropropane | 23.7 | 10 | 0.85 | ug/l | 25.0 | | 95 | 55-130 | | | |
| Di-isopropyl Ether (DIPE) | 26.7 | 5.0 | 0.25 | ug/l | 25.0 | | 107 | 60-135 | | | • • |
| tert-Butanol (TBA) | 135 | 25 | 3.1 | ug/l | 125 | | 108 | 65-135 | | | |
| Surrogate: Dibromofluoromethane | 24.9 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: Toluene-d8 | 24.8 | | | ug/l | 25.0 | | 99 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.4 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| Matrix Spike Analyzed: 07/13/2005 (5G1: | 8007-MS1) | | | | Sour | rce: IOG0 | 413-02 | | | | |
| 1,2-Dibromoethane (EDB) | 24.7 | 2.0 | 0.32 | ug/l | 25.0 | ND | 99 | 65-130 | | | |
| Methyl-tert-butyl Ether (MTBE) | 26.4 | 5.0 | 0.32 | ug/l | 25.0 | ND | 106 | 50-150 | | | |
| 1,2,3-Trichloropropane | 22.4 | 10 | 0.85 | ug/l | 25.0 | ND | 90 | 50-135 | | | |
| Di-isopropyl Ether (DIPE) | 26.1 | 5.0 | 0.25 | ug/l | 25.0 | ND | 104 | 60-140 | | | |
| tert-Butanol (TBA) | 155 | 25 | 3.1 | ug/l | 125 | ND | 124 | 60-145 | | | |
| Surrogate: Dibromofluoromethane | 25.5 | | | ug/l | 25.0 | | 102 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.0 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 25.2 | | | ug/ľ | 25.0 | | 101 | 80-120 | | | |



MWH-Pasadena/Boeing

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Pasadena, CA 91101

Attention: Bronwyn Kelly.

Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| | . 1 | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|---------------------------------------|----------|-----------|------|-------|-------|----------|------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Resuit | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5G13007 Extracted: 07/13/0 | <u>5</u> | | | | | | | | | | |
| | | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 07/13/2005 | - | • | | | | rce: IOG | | | | | |
| 1,2-Dibromoethane (EDB) | 26.5 | 2.0 | 0.32 | ug/l | 25.0 | ND | 106 | 65-130 | 7 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 29.1 | 5.0 | 0.32 | ug/l | 25.0 | ND | 116 | 50-150 | 10 | 25 | |
| 1,2,3-Trichloropropane | 25.6 | 10 | 0.85 | ug/l | 25.0 | ND | 102 | 50-135 | 13 | 30 | |
| Di-isopropyl Ether (DIPE) | 26.4 | 5.0 | 0.25 | ug/l | 25.0 | ND | 106 | 60-140 | 1 | 25 | |
| tert-Butanol (TBA) | 130 | 25 | 3.1 | ug/l | 125 | ND | 104 | 60-145 | 18 | 25 | |
| Surrogate: Dibromofluoromethane | 25.5 | | | ug/l | 25.0 | | 102 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.1 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 25.4 | | | ug/l | 25.0 | | 102 | 80-120 | | | |
| Batch: 5G13015 Extracted: 07/13/09 | <u>5</u> | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 07/13/2005 (5G13015-E | BLK1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | 0.32 | ug/l | | | | | | | |
| Methyl-tert-butyl Ether (MTBE) | ND | 5.0 | 0.32 | ug/l | | | | | | | ** |
| 1,2,3-Trichloropropane | ND | 10 | 0.85 | ug/l | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 5.0 | 0.25 | ug/l | | | | | | | |
| tert-Butanol (TBA) | ND | 25 | 3.1 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 24.1 | | | ug/l | 25.0 | | 96 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.8 | | | ug/l | 25.0 | | 99 | 80-120 | | | |
| LCS Analyzed: 07/13/2005 (5G13015-BS | 1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 27.0 | 2.0 | 0.32 | ug/l | 25.0 | | 108 | 70-125 | | | |
| Methyl-tert-butyl Ether (MTBE) | 26.2 | 5.0 | 0.32 | ug/I | 25.0 | | 105 | 55-140 | | | |
| 1,2,3-Trichloropropane | 25.6 | 10 | 0.85 | ug/l | 25.0 | | 102 | 55-130 | | | |
| Di-isopropyl Ether (DIPE) | 19.4 | 5.0 | 0.25 | ug/l | 25.0 | | 78 | 60-135 | | | |
| tert-Butanol (TBA) | 140 | 25 | 3.1 | ug/l | 125 | | 112 | 65-135 | | | |
| Surrogate: Dibromofluoromethane | 25.2 | | | ug/l | 25.0 | | 101 | 80-120 | | | |
| Surrogate: Toluene-d8 | 27.0 | | | ug/l | 25.0 | | 108 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 27.5 | | | ug/l | 25.0 | | 110 | 80-120 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 5G13015 Extracted: 07/13/0 | 5_ | | | | | | | | | | |
| Matrix Spike Analyzed: 07/13/2005 (5G | 13015-MS1) | | | | Sou | rce: IOG | 0535-01 | | | | |
| 1,2-Dibromoethane (EDB) | 28.2 | 2.0 | 0.32 | ug/l | 25.0 | ND | 113 | 65-130 | | | |
| Methyl-tert-butyl Ether (MTBE) | 27.2 | 5.0 | 0.32 | ug/l | 25.0 | ND | 109 | 50-150 | | | |
| 1,2,3-Trichloropropane | 25.5 | 10 | 0.85 | ug/l | 25.0 | ND | 102 | 50-135 | | | |
| Di-isopropyl Ether (DIPE) | 20.2 | 5.0 | 0.25 | ug/l | 25.0 | ND | 81 | 60-140 | | | |
| tert-Butanol (TBA) | 169 | 25 | 3.1 | ug/l | 125 | ND | 135 | 60-145 | | | |
| Surrogate: Dibromofluoromethane | 26.6 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.9 | | | ug/l | 25.0 | | 108 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 28.7 | | | ug/l | 25.0 | | 115 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 07/13/2005 | (5G13015-M | ISD1) | | | Sou | rce: IOG(| 0535-01 | | | | |
| 1,2-Dibromoethane (EDB) | 25.6 | 2.0 | 0.32 | ug/l | 25.0 | ND | 102 | 65-130 | 10 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 23.8 | 5.0 | 0.32 | ug/l | 25.0 | ND | 95 | 50-150 | 13 | 25 | |
| 1,2,3-Trichloropropane | 22.4 | 10 | 0.85 | ug/l | 25.0 | ND | 90 | 50-135 | 13 | 30 | |
| Di-isopropyl Ether (DIPE) | 18.7 | 5.0 | 0.25 | ug/l | 25.0 | ND | 75 | 60-140 | 8 | 25 | The state of |
| tert-Butanol (TBA) | 160 | 25 | 3.1 | ug/l | 125 | ND | 128 | 60-145 | 5 | 25 | |
| Surrogate: Dibromofluoromethane | 26.9 | | | ug/l | 25.0 | | 108 | 80-120 | | | |
| Surrogate: Toluene-d8 | 27.4 | | | ug/l | 25.0 | | 110 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 29.2 | | | ug/l | 25.0 | | 117 | 80-120 | | | |



MWH-Pasadena/Boeing

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300 North Lake Avenue, Suite 1200

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|-------------------------------------|------------|--------------------|------|-------|----------------|------------------|-----------|--------|-----|--------------|--------------------|
| Batch: 5G10018 Extracted: 07/10 | <u>/05</u> | | | | | | | | | | |
| Blank Analyzed: 07/14/2005 (5G10018 | B-BLK1) | | | | | | | | | | |
| Naphthalene | ND | 10 | 4.5 | ug/l | | | | | | | |
| N-Nitrosodimethylamine | ND | 20 | 3.7 | ug/l | | | | | | | |
| Surrogate: 2-Fluorophenol | 113 | | | ug/l | 200 | | 56 | 30-120 | | | |
| Surrogate: Phenol-d6 | 117 | | | ug/l | 200 | | 58 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 138 | | | ug/l | 200 | | 69 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 66.8 | | | ug/l | 100 | | 67 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 74.2 | | | ug/l | 100 | | 74 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 88.7 | | | ug/l | 100 | | 89 | 45-120 | | | |
| LCS Analyzed: 07/14/2005 (5G10018-1 | BS1) | | | | | | | | | | M-NR1 |
| Naphthalene | 77.2 | 10 | 4.5 | ug/l | 100 | | 77 | 50-120 | | | |
| N-Nitrosodimethylamine | 66.0 | 20 | 3.7 | ug/l | 100 | | 66 | 40-120 | | | |
| Surrogate: 2-Fluorophenol | 126 | 1 | 'ag' | ug/l | 200 | | 63 | 30-120 | | | |
| Surrogate: Phenol-d6 | 136 | | | ug/l | 200 | | 68 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 148 | | | ug/l | 200 | | 74 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 74.9 | | | ug/l | 100 | | <i>75</i> | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 79.0 | | | ug/l | 100 | | 79 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 88.5 | | | ug/l | 100 | | 88 | 45-120 | | | |
| LCS Dup Analyzed: 07/14/2005 (5G10 | 018-BSD1) | | | | | | | | | | |
| Naphthalene | 83.6 | 10 | 4.5 | ug/i | 100 | | 84 | 50-120 | 8 | 20 | |
| N-Nitrosodimethylamine | 69.4 | 20 | 3.7 | ug/l | 100 | | 69 | 40-120 | 5 | 20 | |
| Surrogate: 2-Fluorophenol | 129 | | | ug/l | 200 | | 64 | 30-120 | | | |
| Surrogate: Phenol-d6 | 142 | | | ug/l | 200 | | 71 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 157 | | | ug/l | 200 | | <i>78</i> | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 80.3 | | | ug/l | 100 | | 80 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 82.2 | | | ug/l | 100 | | 82 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 87.7 | | | ug/l | 100 | | 88 | 45-120 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source | %REC | %REC | RPD | RPD Limit | Data Oualifiers |
|---|------------|--------------------|-------|-------|----------------|----------|--------|----------|-----|--------------|--------------------|
| • | | Limit | MILT | Units | LCVCI | Kesuit | PREC | THIIITS. | KFD | Limit | Упаниет» |
| Batch: 5G08111 Extracted: 07/08/05 | <u> </u> | | | | | | | | | | |
| Blank Analyzed: 07/13/2005 (5G08111-B | LK1) | | | | | | | | | | |
| Biochemical Oxygen Demand | ND | 2.0 | 0.59 | mg/l | | | | | | | |
| LCS Analyzed: 07/13/2005 (5G08111-BS | 1) | | | | | | | | | | |
| Biochemical Oxygen Demand | 200 | 100 | 30 | mg/l | 198 | | 101 | 85-115 | | | |
| LCS Dup Analyzed: 07/13/2005 (5G0811 | 1-BSD1) | | | | | | | | | | |
| Biochemical Oxygen Demand | 197 | 100 | 30 | mg/l | 198 | | 99 | 85-115 | 2 | 20 | |
| Batch: 5G09041 Extracted: 07/09/05 | | | | | | | | | | | |
| Blank Analyzed: 07/09/2005 (5G09041-B | LK1) | | | | | | | | | | |
| Turbidity | 0.0600 | 1.0 | 0.040 | NTU | | | | | | | J |
| Duplicate Analyzed: 07/09/2005 (5G0904 | 1-DUP1) | | | | Sour | ce: IOG0 | 535-01 | | | | |
| Turbidity | 40.4 | 2.0 | 0.080 | NTU | | 40 | | | 1 | 20 | |
| Batch: 5G12072 Extracted: 07/12/05 | • | | | | | | | | | | |
| Blank Analyzed: 07/12/2005 (5G12072-B) | LK1) | | | | | | | | | | |
| Ammonia-N (Distilled) | ND | 0.50 | 0.30 | mg/l | | | | | | | |
| LCS Analyzed: 07/12/2005 (5G12072-BS1 | () | | | | | | | | | | |
| Ammonia-N (Distilled) | 10.9 | 0.50 | 0.30 | mg/l | 10.0 | | 109 | 80-115 | | | |
| Matrix Spike Analyzed: 07/12/2005 (5G12 | 2072-MS1) | | | | Sour | ce: IOG0 | 413-01 | | | | |
| Ammonia-N (Distilled) | 10.9 | 0.50 | 0.30 | mg/l | 10.0 | ND | 109 | 70-120 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05 Received: 07/08/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|---|---|--------------------|------|-------|----------------|------------------|---------|--------|-----|--------------|---|
| Batch: 5G12072 Extracted: 07/12/05 | - | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 07/12/2005 | (5G12072-MS | D1) | | | Sou | rce: IOG | 0413-01 | | | | |
| Ammonia-N (Distilled) | 10.6 | 0.50 | 0.30 | mg/l | 10.0 | ND | 106 | 70-120 | 3 | 15 | |
| Batch: 5G13079 Extracted: 07/13/05 | - | | | | | | | | | | |
| Blank Analyzed: 07/13/2005 (5G13079-Bl | LK1) | | | | | | | | | | |
| Oil & Grease | ND | 5.0 | 0.94 | mg/l | | | | | | | |
| LCS Analyzed: 07/13/2005 (5G13079-BS1 |) | | | | | | | | | | M-NR1 |
| Oil & Grease | 16.0 | 5.0 | 0.94 | mg/l | 20.0 | | 80 | 65-120 | | | |
| LCS Dup Analyzed: 07/13/2005 (5G13079 | P-BSD1) | | | | | | | | | | |
| Oil & Grease | 16.4 | 5.0 | 0.94 | mg/l | 20.0 | | 82 | 65-120 | 2 | 20 | |
| Batch: 5G13095 Extracted: 07/13/05 | • | 2. | | | | | | | | | |
| Blank Analyzed: 07/13/2005 (5G13095-BI | K 1) | | 4. 4 | | | | • | | · | | 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |
| Total Suspended Solids | ND | 10 | 10 | mg/l | | | | | | | |
| LCS Analyzed: 07/13/2005 (5G13095-BS1 |) | | | | | | | | | | |
| Total Suspended Solids | 985 | 10 | 10 | mg/l | 1000 | | 98 | 85-115 | | | |
| Duplicate Analyzed: 07/13/2005 (5G13095 | -DUP1) | | | | Sour | ce: IOG0 | 647-01 | | | | |
| Total Suspended Solids | ND | 10 | 10 | mg/l | | ND | | | | 10 | |
| Batch: 5G13109 Extracted: 07/13/05 | | | | | | | | | | | |
| Blank Analyzed: 07/13/2005 (5G13109-BL | K1) | | | | | | | | | | |
| Total Dissolved Solids | ND | 10 | 10 | mg/l | | | | | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOG0535

Sampled: 07/08/05

Received: 07/08/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|-----------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 5G13109 Extracted: 07/13/05 | _ | | | | | | | | | | |
| LCS Analyzed: 07/13/2005 (5G13109-BS | 1) | | | | | | | | | | |
| Total Dissolved Solids | 996 | 10 | 10 | mg/l | 1000 | | 100 | 90-110 | | | |
| Duplicate Analyzed: 07/13/2005 (5G1310 | 9-DUP1) | | | | Sour | rce: IOG(| 0314-01 | | | | |
| Total Dissolved Solids | 1550 | 10 | 10 | mg/l | | 1500 | | | 3 | 10 | |
| Batch: 5G15056 Extracted: 07/15/05 | - | | | | | | | | | | |
| Blank Analyzed: 07/15/2005 (5G15056-B | LK1) | | | | | | | | | | |
| Perchlorate | ND | 4.0 | 0.80 | ug/l | | | | | | | |
| LCS Analyzed: 07/15/2005 (5G15056-BS) | l) | | | | | | | | | | |
| Perchlorate | 45.8 | 4.0 | 0.80 | ug/l | 50.0 | | 92 | 85-115 | | | |
| Matrix Spike Analyzed: 07/15/2005 (5G1: | 5056-MS1) | | : | | Sour | ce: IOG0 | 356-05 | | | | |
| Perchlorate | 51.6 | 4.0 | 0.80 | ug/l | 50,0 | 6.4 | 90 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 07/15/2005 (| 5G15056-M | SD1) | | | Sour | ce: IOG0 | 356-05 | | | | |
| Perchlorate | 51.3 | 4.0 | 0.80 | ug/l | 50.0 | 6.4 | 90 | 80-120 | 1 | 20 | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOG0535

Received: 07/08/05

DATA QUALIFIERS AND DEFINITIONS

J Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

M-NRI There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO):

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 07/08/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOG0535

Received: 07/08/05

Certification Summary

Del Mar Analytical, Irvine

| Method | Matrix | Nelac | California |
|---------------|--------|-------|------------|
| EPA 160.2 | Water | x | х |
| EPA 160.5 | Water | X | X |
| EPA 180.1 | Water | X | X |
| EPA 314.0 | Water | N/A | X |
| EPA 350.2 | Water | | X |
| EPA 405.1 | Water | X | X |
| EPA 413.1 | Water | X | X |
| EPA 418.1 | Water | X | X |
| EPA 624 | Water | X | X |
| EPA 625 | Water | X | X |
| EPA 8015 Mod. | Water | X | x |
| EPA 8015B | Water | X | X |
| EPA 8260B | Water | X | X |
| SM2540C | Water | X | X |

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

CHAIN OF CUSTODY FORM Del Mar Analytical version 02/17/05

0 0 Page 1 of Comments Temp = 81.5 イン、し = Hd Field readings: 10 Days Semple integrity: (Check) intect On Ice Turn around Time: (check) 24 Hours 5 Days Perchlorate Only 72 Hours Metals Only 72 Hours Settleable Solids 72 Hours 48 Hours **SST**, 20T, VibidiuT × ANALYSIS REQUIRED Perchlorate × tsib \w × Ammonia-N, Titr. (350.2) eisylens AMGN+ × × 625 Naphthalene BOD5(20 degrees C) × 624 (EDB, 1,2,3-TCP, MTBE, DPE, TBA) × × × Petroleum Hydrocarbons × × TRPH,=Total Rec. 80928-ensxoiQ-4, f × × Date/Time Date/Time leuf tejleseib-2108 × × × seg-2108 × × Oil & Grease (EPA 413.1) × 12A, 12B, 12C, 12D, 12E, 12F Bottle # 4B, 4C 6B, 6C 2B, 2C 11A ≨ 4 \$ S 4 \$ ۲ 줎 8 8 ₹ 8 Š 8 During Test -- Outfall 012 Received By Preservative Received By Boeing-SSFL NPDES H2S04 None None None No. None Soz $\vec{\Sigma}$ 호 $\bar{\Sigma}$ 오 오 꿏 Ξ 오 오 18: 31 HC 호 Alfa Test Stand 626) 568-6515 Phone Number (626) 568-6691 Fax Number: Sampling Date/Time Date/Time: 022 ਹੁੰ **ਵ** ਹੈ **ਵ** භ N N Project Manager: Bronwyn Kelly 300 North Lake Avenue, Suite 1200 500ml Poly Container 1L Amber 1L Amber 1L. Amber 1L Amber 1L Amber 1t. Amber 1L Amber 1L Amber 11. Poly 1L Poly 1L Poly VOAs VOAs VOAs VOA\$ VOAs VOAs VOAs Client Name/Address Sample Matrix MWH-Pasadena Pasadena, CA 91101 ≥ ₹ ₹ ₹ ≥ ₹ ₹ ≥ ₹ \$ ₹ š ₹ ₹ ₹ ₹ ₹ ₹ ≥ Relinquished By Relinguished By Sample Description Outfall 012 Sampler: Outfall 012 Outfall 012 Outfall 012 Outfall 012 Outfall 012 Trip Blank Outfall 012 Outfall 012 Outfall 012 Outfall 012 Outfall 012 duplicate duplicate duplicate dublicate duplicate duplicate duplicate

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711SV66 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1394 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: September 20, 2005 Reviewer M. Pokorny Reviewer's Signature Analysis/Method Semivolatiles **ACTION ITEMS*** Case Narrative **Deficiencies** 2. Out of Scope Analyses **Analyses Not Conducted** Missing Hardcopy **Deliverables** Incorrect Hardcopy **Deliverables Deviations from Analysis** Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field OC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS* Acceptable as reviewed. ^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| + | False positive – reported compound was not present. Not applicable. | |
| * | False negative - compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| *# | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|------------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| U J | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOH1394

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES IOH1394

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

Project Manager:

IOH1394 P. Costa

Matrix:

Water

Analysis:

Semivolatiles

QC Level:

Level IV

No. of Samples:

0

No. of Reanalyses/Dilutions: Reviewer:

M. Pokorny

Date of Review:

September 20, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: SDG: Analysis:

NPDES IOHI 394 SVOC

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOH1394-01 | water | 625 |

NPDES IOH1394 Analysis:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 2°C. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the sample was analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibration associated with this sample was dated 08/18/05. The average RRFs were ≥0.05 and the %RSDs were ≤35% for both target compounds listed on the sample summary form. The continuing calibration associated with the sample analysis was analyzed 08/23/05. The RRFs for both target compounds were ≥0.05, and the %Ds were ≤20%. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (5H21017-BLK1) was extracted and analyzed with this SDG. No target compounds were reported in the method blank. Review of the raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (5H21017-BS1/BSD1) was extracted and analyzed with this SDG. The percent recoveries for target compounds n-nitrosodimethylamine and

NPDES IOH1394 nalysis:

naphthalene were within the respective laboratory QC limits and the RPDs were ≤20%. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample surrogate recoveries were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for naphthalene and n-nitrosodimethylamine by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

Analysis:

NPDES IOH1394

SVOC

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. Compound quantitation was verified by recalculating a representative number of sample detects, blank spike, and surrogate recoveries. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDL. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOH1394

Sampled: 08/16/05

Received: 08/17/05

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyz | ed Quali | |
|---|--------------|---------|--------------|--------------------|------------------|-------|-------------------|----------------|----------|------|
| Sample ID: IOH1394-01 (Outfall Reporting Units: ug/l | 012 - Water) | | | | | | | | REV | CODE |
| Naphthalene | EPA 625 | 5H21017 | 4.5 | 10 | 27 | 0.952 | 08/21/05 | 08/24/05 | | |
| N-Nitrosodimethylamine | EPA 625 | 5H21017 | 3.7 | 20 | ND | 0.952 | 08/21/05 | 08/24/05 | 11 | |
| Surrogate: 2-Fluorophenol (30-12) | 0%) | | | | 66 % | | | | 0 | |
| Surrogate: Phenol-d6 (35-120%) | • | | | | 72 % | | | | ı | |
| Surrogate: 2,4,6-Tribromophenol (| (45-120%) | | | | 86 % | | | | | |
| Surrogate: Nitrobenzene-d5 (45-12 | ?0%) | | | | 83 % | | | | | |
| Surrogate: 2-Fluorobiphenyl (45-1 | 20%) | | | | 75 % | | | | | |
| Surrogate: Terphenyl-d14 (45-120) | %) | | | | 88 % | | | | | |

AMEC VALIDATED



| | PLIANCE SCREENING FORM FOR HARDCOPY DATA |
|-------------------------------|--|
| AMEC Earth & Environmental | |
| 355 South Teller Street | Task Order <u>313150010</u> |
| Suite 300 | SDG No. <u>IOH1394</u> |
| Lakewood, CO 80226 | No. of Analyses 1 |
| Laboratory Del Mar | |
| Reviewer K. Shade | |
| Analysis/Method TPH-Ext | ractable Shallad (H) |
| | |
| ACTION ITEMS* | |
| 1. Case Narrative | |
| Deficiencies | |
| | |
| 2. Out of Scope | |
| Analyses | |
| | |
| | |
| 3. Analyses Not Conducted | |
| | |
| | |
| 4. Missing Hardcopy | |
| Deliverables | |
| | |
| | |
| 5. Incorrect Hardcopy | |
| Deliverables | |
| 6. Deviations from Analysis | |
| GC/MS Tune/Inst. Perform | |
| Calibrations | |
| Blanks | |
| Surrogates | |
| Matrix Spike/Dup LCS | |
| Field QC | |
| Internal Standard Performance | |
| Compound Identification and | |
| Quantitation | |
| System Performance | |
| COMMENTS* | Acceptable as reviewed |

* Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| υ | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| IJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Γ | Presumed contamination from trip blank. | Not applicable. |
| + | False positive - reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| 7 | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| : | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Extractable

SAMPLE DELIVERY GROUP: IOH1394

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Analysis:

NPDES IOH1394 TPH

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOH1394

Project Manager:

P. Costa Water

Matrix: Analysis:

TPH-Extractable

OC Level:

Level IV

No. of Samples:

1

No. of Reanalyses/Dilutions: Reviewer:

K. Shadowlight

Date of Review:

September 21, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015B, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

NPDES IOH1394 TPH

DATA VALIDATION REPORT

Project: SDG: Analysis:

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method | |
|-------------|-------------|------------|--------|--------|--|
| Outfall 012 | Outfall 012 | IOH1394-01 | water | 8015B | |

Analysis

NPDES IOH1394

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical laboratory on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the sample containers were received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel, and accounted for the analysis presented in this SDG. As the site sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The sample was extracted within seven days of sample collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 CALIBRATION

The initial calibration associated with the sample analysis was analyzed on 08/08/05. The %RSD was within the QC limit of ≤20%. The %Ds for the initial calibration verification (ICV) and continuing calibrations associated with the sample analysis were ≤15%. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.4 METHOD BLANKS

One method blank (5H19053-BLK1) was extracted and analyzed with the sample in this SDG. EFH (C13-C22) was not present above the MDL in the method blank or in the instrument blank analyzed at the beginning of the analytical sequence. Review of the chromatograms showed no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One method blank spike/blank spike duplicate pair (5H19053-BS1/BSD1) was extracted and analyzed with the sample in this SDG. The laboratory reported recoveries of alkane range C13-C28 from spiked diesel. The recoveries were within the laboratory-established QC limits of 40-120%, and the RPD was within the QC limit of ≤25%. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

SDG: Analysis:

TPH

2.6 SURROGATE RECOVERY

The sample was fortified with the surrogate compound n-octacosane. The sample surrogate recovery was within the laboratory-established QC limits of 40-125%. The recovery was calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses associated with the sample of this SDG. Evaluation of method accuracy was based on the blank spike. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples associated with the site sample in this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for EFH n-alkane range C13-C22 by EPA SW-846 Method 8015B. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for this SDG. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detect, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. Results were reported in mg/L (ppm). No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

Attention: Bronwyn Kelly

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

MDL Reporting Sample Dilution Date Date

Data Method Batch Limit Analyzed Qualifiers Limit Result FactorExtracted

Sample ID: IOH1394-01 (Outfall 012 - Water) - cont.

Reporting Units: mg/l

Surrogate: n-Octacosane (40-125%)

Analyte

EFH (C13 - C22)

EPA 8015B 5H19053 0.085 0.50

0.952 08/19/05 08/19/05

74%

AMEC VALIDATED

LEVEL

Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711TF87 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1394 Lakewood, CO 80226 No. of Analyses 2 Laboratory Del Mar Analytical Date September 21, 2005 Reviewer K. Shadowlight Reviewer's Signature Analysis/Method TPH-Purgeable

| AC | TION ITEMS' | |
|---|---|---|
| 1. | Case Narrative | |
| | Deficiencies | |
| 2. | O-4-50 | |
| ۷. | Out of Scope | |
| | Analyses | |
| | | |
| 3. | Analyses Not Conducted | |
| ٥. | Amaryses 140t Conducted | |
| | | |
| 4. | Missing Hardcopy | |
| •• | Deliverables | |
| | | |
| | | |
| 5. | Incorrect Hardcopy | |
| | Deliverables | |
| 6. | Deviations from Analysis | |
| | GC/MS Tune/Inst. Perform | |
| | Calibrations | |
| | Blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | |
| | System Performance | |
| COM | AMENTS* | Acceptable as reviewed |
| *************************************** | | |
| | | |
| * 6'41 | Scorphaged analytical laborators in and | meeting contract and/or method requirements. |
| b Dif | ferences in protocol have been adonted | meeting contract and/or method requirements. by the laboratory but no action against the laboratory is required. |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| : : | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| 4 | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| Л | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| | Presumed contamination from trip blank. | Not applicable. |
| • | False positive – reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
| | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ . | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOH1394

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Analysis:

NPDES IOH1394

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOH1394

Project Manager:

P Costa

Matrix:

Water

0

Analysis:

TPH-Purgeable

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

K. Shadowlight

Date of Review:

September 21, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015M, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: <u>Analysis:</u> NPDES IOH1394

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method | |
|-------------|-------------|------------|--------|-----------|--|
| Outfall 012 | Outfall 012 | IOH1394-01 | water | 8015M/GRO | |
| Trip Blank | Trip Blank | IOH1394-02 | water | 8015M/GRO | |

NPDES IOH1394

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at Del Mar Analytical on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the samples were received intact, and the COC indicated the samples were properly preserved. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

2.2 CALIBRATION

Two gasoline standard initial calibrations dated 03/28/05 and 07/22/05 were associated with the sample analyses. The %RSDs for GRO (C4-C12) were within the QC limit of ≤20%. An initial calibration verification (ICV) was analyzed for the initial calibration dated 03/28/05; however, an ICV was not provided by the laboratory for the initial calibration dated 07/22/05. The %Ds for the ICV and all CCVs bracketing the sample analyses were within the Method QC limit of ≤15%. The %RSDs and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.4 METHOD BLANKS

Two water method blanks (5H22032-BLK1 and 5H23031-BLK1) were associated with the sample analyses. GRO (C4-C12) was not detected above the MDL in either of the method blanks. Review of the raw data indicated no false negative results. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two water method blank spikes (5H22032-BS1 and 5H23031-BS1) were associated with the sample analyses. GRO (C4-C12) was recovered within the laboratory-established QC limits of 65-140%. The recoveries were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

Project: SDG:

NPDES IOH1394

DATA VALIDATION REPORT

Analysis:

2.6 SURROGATE RECOVERY

The samples were fortified with the surrogate compound 4-bromofluorobenzene (BFB). Surrogate recoveries were within the laboratory-established QC limits of 65-140%. Recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the site sample in this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

2.8.1 Trip Blanks, Field Blanks, and Equipment Rinsates

Sample Trip Blank was the trip blank associated with site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. Review of the raw data indicated no false negative result. There were no field blank or equipment rinsate samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples in this SDG.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for GRO (C4-C12) by Method 8015M. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the samples in this SDG. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detects, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. The results were reported in mg/L (ppm). No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | Data Qualifiers |
|--|-------------------|---------|--------------|--------------------|------------------|---|-------------------|------------------|--------------------|
| Sample ID: IOH1394-01 (Outfall Reporting Units: mg/l | 012 - Water) - co | nt. | | | | | | Per | al Qua |
| GRO (C4 - C12) | EPA 8015 Mod. | 5H23031 | 0.050 | 0.10 | 0.30 | 1 | 08/23/05 | 08/24/05 | |
| Surrogate: 4-BFB (FID) (65-140%) |) | | | | 100 % | | | | |
| Sample ID: IOH1394-02 (Trip Bla Reporting Units: mg/l | ank - Water) | | | • | | | | | |
| GRO (C4 - C12) | EPA 8015 Mod. | 5H22032 | 0.050 | 0.10 | ND | 1 | 08/22/05 | 08/22/05 | a + b |
| Surrogate: 4-BFB (FID) (65-140%) |) | | | | 112 % | | | | 4/ |
| | · | | | | | | | | |
| · · · · · · · · · · · · · · · · · · · | | | | | | | | | f |



CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

| | IEC Earth & Environmental | Package ID |
|----------------|---|---|
| 355 | South Teller Street | Task Order 313150010 |
| Suit | te 300 | SDG No. IOH1394 |
| Lak | ewood, CO 80226 | No. of Analyses 1 |
| | Laboratory Del Mar | Analytical Date September 19, 2005 |
| | Reviewer K. Shado | |
| | Analysis/Method Volatiles | |
| | | 1 Daniel De la Contraction de |
| ACT | TION ITEMS* | |
| 1. | Case Narrative | |
| | Deficiencies | |
| | | |
| 2. | Out of Scope | |
| | Analyses | |
| | ranalyses | |
| | | |
| 3. | Analyses Not Conducted | |
| .J. | Analyses 110t Conducted | |
| | | |
| 4. | Missing Hardcopy | |
| 7. | Deliverables | |
| | Deliver Apres | |
| | | |
| 5. | Incorrect Hardcopy | |
| | Deliverables | |
| | Deviations from Analysis | |
| | GC/MS Tune/Inst, Perform | |
| | Calibrations | |
| | Blanks | |
| | | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | |
| ACCOUNT OF THE | System Performance | |
| COM | IMENTS ^b | Acceptable as reviewed. |
| | | |
| | | |
| | | |
| * Such | contracted analytical laboratory is not r | pecting contract and/or method requirements |

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| Е | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| + | False positive – reported compound was not present. Not applicable. | |
| *** | False negative - compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| *# | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier Organics | | Inorganics |
|--------------------|---|--|
| υ | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOH1394

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Project:

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1394

VOC

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOH1394

Project Manager:

P. Costa

Water

Matrix: Analysis:

Volatiles (1,4-dioxane)

QC Level:

Level IV

No. of Samples:

1 0

No. of Reanalyses/Dilutions:

Reviewer:

K. Shadowlight

Date of Review:

September 19, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method SW-846 8260B and the National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project:

NPDES

SDG No.:

IOH1394 VOC

Analysis:

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Lab No. | Matrix | Method |
|-------------|-------------|-------------|-------------|--------|--------|
| | | Del Mar, CA | Del Mar, AZ | | |
| Outfall 012 | Outfall 012 | IOH1394-01 | POH0570-01 | water | 8260B |

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1394 VOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the Del Mar Analytical within the temperature limits of 4°C ±2°C, at 2°C. The sample was subcontracted to Del Mar (Phoenix) for 1,4-dioxane analysis, and the sample was received within the temperature limits of 4°C ±2°C. The COC and transfer COC noted that the sample was received intact and properly preserved; however, information regarding absence of headspace was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were signed by the appropriate field and laboratory personnel. As the sample was couriered directly to the laboratory from the field, custody seals were not required. According to the transfer COC, custody seals were present on the cooler received by Del Mar Analytical in Arizona. No qualifications were required.

2.1.3 Holding Times

The sample was analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows were consistent with those specified in EPA Method 8260B. All ion abundances were within the established windows, and the sample was analyzed within 12 hours of the BFB injection time. No qualifications were required.

2.3 CALIBRATION

One initial calibration, dated 08/22/05, was associated with this SDG. The average RRF for 1,4dioxane was ≥ 0.05 and the and the r^2 value was ≥ 0.995 . The laboratory reported the continuing calibration and the blank spike (P5H2528-BS1) from the same analysis. As the analysis cannot be reported as both a CCV and a blank spike, the reviewer evaluated P5H2528-BS1 as the continuing calibration. The RRF for 1,4-dioxane was ≥0.05; and, the %D was ≤20%. The r² value and average RRF for 1,4-dioxane in the initial calibration, and the %D and RRF for 1,4-dioxane in the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. No qualifications were required.

Project:

SDG No.:

NPDES IOH1394

Analysis:

VOC

2.4 BLANKS

DATA VALIDATION REPORT

One water method blank (P5H2528-BLK1) was associated with this SDG. Target compound 1,4-dioxane was not detected above the MDL in the method blank. The method blank raw data showed no evidence of a false negative. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed a blank spike/blank spike duplicate pair (P5H2528-BS1/BS1D) with this SDG; however, P5H2528-BS1 was reported as the CCV (see section 2.3); therefore, P5H2528-BS1D was evaluated as a single blank spike. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample and QC were fortified with dibromofluoromethane. The surrogate was recovered within the laboratory QC limits of 70-130%. The surrogate recovery for the sample was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were performed for this SDG. Evaluation of method accuracy was based on the blank spike result. No qualifications were required.

2.8 FIELD OC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

The sample in this SDG had no associated trip blank. No qualifications were required.

2.8.1.1 Field Blanks and Equipment Rinsates

The site sample in this SDG had no associated field QC samples. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

Project:

SDG No.:

NPDES IOH1394

Analysis:

VOC

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standard: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. Internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

DATA VALIDATION REPORT

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for 1,4-dioxane by Method 8260B/SIM. Chromatograms, retention times, and spectra for the sample and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

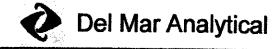
Compound quantification is verified at a Level IV data validation. The reporting limit was supported by the lowest concentration of the initial calibration standards and by the undated MDL supplied by the laboratory. As there were no sample detects, compound quantitation was verified by recalculating blank spike and surrogate recoveries from the raw data. No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs are not typically reported for SIM methods.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Cheespeeks Dr., Suite 805, Sen Diego, CA 92129 (858) 505-8598 FAX (858) 505-9699 9630 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0651 2520 E. Surset Rd. #3, Las Vegas, NV 89120 (702) 788-3620 FAX (702) 798-3621

Del Mar Analytical - Irvine 17461 Derian Ave. Suite 100

Attention: Michele Harper

Project ID: IOH1394

Irvine, CA 92614

Report Number: POH0570

Sampled: 08/16/05

Received: 08/19/05

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | <i>α</i> . |
|--|-----------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|------------|
| Sample ID: POH0570-01 (IOH1394-01 Reporting Units: ug/l 1,4-Dioxane Surrogate: Dibromoftworomethane (70-) | EPA 8260B | P5H2528 | 0.49 | 2.0 | ND 85 % | 1 | 08/26/05 | 08/26/05 | Rev Phal | Esse |

AMEC VALIDATED



Del Mar Analytical - Phoenix Karen Maxwell Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711VO126 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1394 Lakewood, CO 80226 No. of Analyses 2 Laboratory Del Mar Analytical Date: September 20, 2005 Reviewer M. Pokorny Reviewer's Signature Analysis/Method Volatiles **ACTION ITEMS*** Case Narrative **Deficiencies** 2. Out of Scope Analyses **Analyses Not Conducted** Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy Deliverables **Deviations from Analysis** Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS^b Acceptable as reviewed.

^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOH1394

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Analysis:

NPDES IOH1394

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOH1394

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles by 624

OC Level:

Level IV

No. of Samples:

2

No. of Reanalyses/Dilutions:

0 Reviewer: M. Pokorny

Date of Review:

September 20, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method 624, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the summary forms as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis:

NPDES IOH1394 VOC

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method | |
|-------------|-------------|------------|--------|--------|--|
| Outfall 012 | Outfall 012 | IOH1394-01 | water | 624 | |
| Trip Blank | Trip Blank | IOH1394-02 | water | 624 | |

Analysis:

NPDES IOH1394

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at the laboratory above the temperature limits of 4°C ±2°C, at 2°C. The site sample was properly preserved. The trip blank was not preserved. The COC noted that the samples were received intact; however, information regarding absence of headspace was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analyses presented in this SDG. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The samples were analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows shown on the quantitation reports were consistent with those specified in EPA Method 624, and all ion abundances were within the established windows. The samples and associated QC were analyzed within 12 hours of the BFB injection time. The BFB summary report was verified from the raw data and no discrepancies between the summary report and the raw data were noted. No qualifications were required.

2.3 CALIBRATION

Two initial calibrations dated 08/17/05 and 08/18/05 were associated with this SDG. The average RRFs were ≥0.05 for the target compounds listed on the sample result summaries. The %RSDs were ≤35% for all applicable target compounds. Two continuing calibrations dated 08/22/05 (08:06 and 16:49) were associated with the sample analyses in this SDG. The %Ds were ≤20% and the RRFs were ≥0.05 for the target compounds listed on the sample result summaries. A representative number of %RSDs and average RRFs from the initial calibrations, and %Ds and RRFs from the continuing calibrations were recalculated from the raw data, and no calculation or transcription errors were found. No qualifications were required.

NPDES IOH1394 VOC

2.4 BLANKS

Two water method blanks (5H22002-BLK1 and 5H22013-BLK1) were associated with the sample analyses. There were no detects above the MDLs for the target compounds listed on the sample result summaries. The method blank raw data showed no evidence of false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two water blank spikes (5H22002-BS1 and 5H22013-BS1) were associated with the sample analyses. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The surrogates were recovered within the QC limits of 80-120% in the samples and associated QC samples. A representative number of surrogate recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with this SDG. There were no target compounds detected above the MDLs in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.3 Field Duplicates

There were no field duplicate samples associated with this SDG.

Analysis

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the samples in this SDG were within the control limits established by the continuing calibration standards: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. A representative number of internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for five volatile target compounds by EPA Method 624. Chromatograms, retention times, and spectra for the samples and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

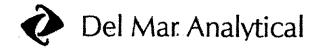
Compound quantification is verified at a Level IV data validation. The reporting limits were supported by the lowest concentrations of the initial calibration standard and by the MDL study. As there were no sample detects in this SDG, compound quantitation was verified by recalculating a representative number of blank spike and surrogate recoveries from the raw data. Results were reported in µg/L (ppb). No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

The laboratory did not provide TICs for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOH1394

Sampled: 08/16/05

Received: 08/17/05

PURGEABLES BY GC/MS (EPA 624)

Project ID: Alfa Outfall 012 - During Test

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyz | ed Quali | |
|---|--------------|---------|--------------|--------------------|------------------|---|-------------------|----------------|----------|------|
| Sample ID: IOH1394-01 (Outfall 6 Reporting Units: ug/l | 112 - Water) | | | | | | | | QUAL | C40E |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H22013 | 0.32 | 2.0 | ND | 1 | 08/22/05 | 08/23/05 | U | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H22013 | 0.32 | 5.0 | ND | 1 | 08/22/05 | 08/23/05 | - | |
| 1,2,3-Trichloropropane | EPA 624 | 5H22013 | 0.85 | 10 | ND | 1 | 08/22/05 | 08/23/05 | 1 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H22013 | 0.25 | 5.0 | ND | 1 | 08/22/05 | 08/23/05 | | |
| tert-Butanol (TBA) | EPA 624 | 5H22013 | 3.1 | 25 | ND | 1 | 08/22/05 | 08/23/05 | 11.0 | |
| Surrogate: Dibromofluoromethane (| 80-120%) | | | | 109% | | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 103 % | | | | | |
| Surrogate: 4-Bromofluorobenzene (8 | 30-120%) | | | | 97% | • | | | | |
| Sample ID: IOH1394-02 (Trip Blan Reporting Units: ug/l | nk - Water) | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H22002 | 0.32 | 2.0 | ND | 1 | 08/22/05 | 08/22/05 | U I | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H22002 | 0.32 | 5.0 | ND | 1 | 08/22/05 | 08/22/05 | ī | |
| 1,2,3-Trichloropropane | EPA 624 | 5H22002 | 0.85 | 10 | ND | 1 | 08/22/05 | 08/22/05 | | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H22002 | 0.25 | 5.0 | ND | 1 | 08/22/05 | 08/22/05 | | - |
| tert-Butanol (TBA) | EPA 624 | 5H22002 | 3.1 | 25 | ND | 1 | | 08/22/05 | V | |
| Surrogate: Dibromofluoromethane (80-120%) | | | | | 98 % | | | | 1 | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 105 % | | | | l | |
| Surrogate: 4-Bromofluorobenzene (8 | 0-120%) | | | | 96 % | | | | | |

AMEC VALIDATED

LEVEL IV

Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC172 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1394 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: 09/29/05 Reviewer L. Jarusewic viewer's Signature Analysis/Method General Minerals **ACTION ITEMS** Case Narrative **Deficiencies Out of Scope** Analyses 3. Analyses Not Conducted 4. Missing Hardcopy **Deliverables** Incorrect Hardcopy **Deliverables Deviations from** Analysis Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Performance Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS^b Acceptable as reviewed.

Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| j | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifi | er Organics | Inorganics |
|---------|--|--|
| H | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within controllimits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was no within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| + | False positive – reported compound was not present. Not applicable. | |
| | False negative – compound was present but not reported. | Not applicable. |
| 7 | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ı | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IOH1394

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES

SDG No.: Analysis: IOH1394 General Minerals

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

DATA VALIDATION REPORT

IOH1394

Project Manager:

P. Costa

Matrix:

Water

Analysis:

General Minerals

QC Level:

Level IV

No. of Samples:

1

Reviewer:

L. Jarusewic

Date of Review:

September 29, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 418.1, 350.2, 405.1, 413.1, 160.2, 160.5, and 180.1, Standard Methods for the Examination of Water and Wastewater Method SM2540C, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

NPDES

SDG No.: Analysis: IOH1394 General Minerals

Table 1. Sample identification

| Client ID | EPA ID | Laboratory ID | Matrix | COC Method |
|-------------|-------------|---------------|--------|------------------|
| Outfall 012 | Outfall 012 | IOH1394-01 | Water | General Minerals |

DATA VALIDATION REPORT

NPDES IOH1394

Analysis:

General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. No preservation problems were noted by the laboratory. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and all analyses presented in this SDG. No sample qualifications were required.

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The 28-day analytical holding time for total recoverable petroleum hydrocarbons, ammonia, and oil and grease, the seven-day holding time for total suspended solids and total dissolved solids, and the 48-hour holding time for BOD, total settleable solids, and turbidity were met. No qualifications were required.

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 0.995. Initial and continuing calibration information was acceptable with recoveries within the control limits of 90-110%. For ammonia, no information regarding the standardization of the titrant was provided. The ammonia LCS recovery exceeded the CCV control limits of 90-100% at 112%; however, as ammonia was not detected in Outfall 012, no qualifications were required. For BOD, no information regarding the calibration of the oxygen meter was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required. Calibration is not applicable to the total dissolved solid, oil and grease, total suspended solids, and total settleable solids analyses. No qualifications were required.

2.3 BLANKS

The method blank and CCB results reported on the summary forms and in the raw data for blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample and laboratory control sample duplicate (BOD, total recoverable petroleum hydrocarbons, and oil and grease only) recoveries were within the laboratory-established control

Project: SDG No.: NPDES

Analysis:

IOH1394 General Minerals

DATA VALIDATION REPORT

limits. The ammonia LCS recovery was within the control limits of 80-115%. The LCS is not applicable to turbidity or total settleable solids. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analyses presented in this SDG.

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed for Outfall 012; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses performed for Outfall 012; therefore, no assessment was made with respect to this criterion. Method accuracy was based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analyses of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analyses presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

2.11 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

Project: SDG No.: **NPDES**

Analysis:

IOH1394 General Minerals

DATA VALIDATION REPORT

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | n Date Extracted | Date Analyze | Data ed Qualifiers |
|--|-------------|---------|--------------|--------------------|------------------|---|---------------------|-----------------|--------------------|
| Sample ID: IOH1394-01 (Outfall 01 Reporting Units: mg/l | 12 - Water) | | | | | | | (| aval Code |
| Total Recoverable Hydrocarbons | EPA 418.1 | 5H22070 | 0.31 | 1.0 | 3.6 | 1 | 08/22/05 | 08/22/05 | |

AMEC VALIDATED





MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | n Date Extracted | Date Analyze | Data ed Qualifiers |
|--|------------------|---------|--------------|--------------------|------------------|---|---------------------|-----------------|---|
| Sample ID: IOH1394-01 (Outfall Reporting Units: mg/l | 012 - Water) - c | ont. | | | | - | | (| Sual Co |
| Ammonia-N (Distilled) | EPA 350.2 | 5H18088 | 0.30 | 0.50 | ND | 1 | 08/18/05 | 08/18/05 | u |
| Biochemical Oxygen Demand | EPA 405.1 | 5H18070 | 0.59 | 2.0 | 3.0 | 1 | 08/18/05 | | |
| Oil & Grease | EPA 413.1 | 5H23069 | 0.94 | 5.0 | ND | 1 | 08/23/05 | 08/23/05 | u |
| Total Dissolved Solids | SM2540C | 5H19001 | 10 | 10 | 310 | 1 | 08/18/05 | | |
| Total Suspended Solids | EPA 160.2 | 5H22073 | 10 | 10 | 17 | 1 | 08/22/05 | 08/22/05 | |
| Sample ID: IOH1394-01 (Outfall Reporting Units: mi/l/hr | 012 - Water) | | | | | | | | |
| Total Settleable Solids | EPA 160.5 | 5H18003 | 0.10 | 0.10 | ND | 1 | 08/17/05 | 08/17/05 | u |
| Sample ID: IOH1394-01 (Outfall Reporting Units: NTU | 012 - Water) | | | | | | | | |
| Turbidity | EPA 180.1 | 5H18110 | 0.080 | 2.0 | 49 | 2 | 08/18/05 | 08/18/05 | *************************************** |
| Sample ID: IOH1394-01 (Outfall Reporting Units: ug/l | 012 - Water) | | | | | | | | The formation of the contract |
| Perchlorate | EPA 314.0 | 5H19051 | 0.80 | 4.0 | ND | 1 | 08/19/05 | 08/19/05 | * |

* analysis not validated

AMEC VALIDATED

LEVEL I

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC173 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1394 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: 09/29/05 Reviewer L. Jarusewic Reviewer's Signature Analysis/Method Perchlorate ause ACTION ITEMS **Case Narrative Deficiencies** 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy **Deliverables Deviations from** Analysis Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Performance Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS^b Acceptable as reviewed. ^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | quantity |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| И | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| K. | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards user for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within controlimits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| Į. | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Γ | Presumed contamination from trip blank. | Not applicable. |
| | False positive – reported compound was not present. Not applicable. | |
| | False negative – compound was present but not reported. | Not applicable. |
| | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
| | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: PERCHLORATE

SAMPLE DELIVERY GROUP: IOH1394

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

DATA VALIDATION REPORT

Project: SDG No.: Analysis:

NPDES IOH1394 Perchlorate

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOH1394

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Perchlorate

QC Level:

Level IV

No. of Samples:

Reviewer: L. Jarusewic

Date of Review:

September 29, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 314.0, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

1

SDG No.:

NPDES IOH1394 Perchlorate

Analysis:

Table 1. Sample identification

| Client ID | EPA ID | Laboratory ID | Matrix | COC Method |
|-------------|-------------|---------------|--------|-------------|
| Outfall 012 | Outfall 012 | IOH1394-01 | Water | Perchlorate |

DATA VALIDATION REPORT

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1394 Perchlorate

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. The analysis did not require preservation and no preservation was noted in the field. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel, and accounted for the sample and analysis presented in this SDG. No qualifications were required.

2.1.3 Holding Times

The holding time was assessed by comparing the date of collection with the date of analysis. The 28day analytical holding time for perchlorate was met, and no qualifications were required.

2.2 CALIBRATION

The initial calibration correlation coefficient was ≥0.995. The IPC-MA recovery was within the control limits of 80-120%. The ICV, CCV, IPC, and ICCS recoveries were within the control limits of 90-110%. No qualifications were required.

2.3 BLANKS

The method blank and CCB results reported on the summary form and in the raw data for the blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample associated with this SDG was recovered within the method control limits of 85-115%. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analysis presented in this SDG.

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1394 Perchlorate

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was assessed based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION OC

Furnace atomic absorption was not utilized for the analysis of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analysis presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample result reported on the Form I was verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

2.11 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

Attention: Bronwyn Kelly

INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor l | Date Extracted | Date Analyz | Data ed Qualifiers |
|--|--------------------|---------|--------------|--------------------|------------------|----------------------|-------------------|----------------|---|
| Sample ID: IOH1394-01 (Outfall | l 012 - Water) - c | ont. | | • | | | | | Qual Cas |
| Reporting Units: mg/l | | | | | | | | | V |
| Ammonia-N (Distilled) | EPA 350.2 | 5H18088 | 0.30 | 0.50 | ND | 1 | 08/18/05 | 08/18/05 | * |
| Biochemical Oxygen Demand | EPA 405.1 | 5H18070 | 0.59 | 2.0 | 3.0 | 1 | 08/18/05 | 08/23/05 | |
| Oil & Grease | EPA 413.1 | 5H23069 | 0.94 | 5.0 | ND | 1 | 08/23/05 | 08/23/05 | |
| Total Dissolved Solids | SM2540C | 5H19001 | 10 | 10 | 310 | 1 | 08/18/05 | 08/18/05 | |
| Total Suspended Solids | EPA 160.2 | 5H22073 | 10 | 10 | 17 | 1 | 08/22/05 | | eren eren eren eren eren eren eren eren |
| Sample ID: IOH1394-01 (Outfall Reporting Units: ml/l/hr | 012 - Water) | | | | | | * | | |
| Total Settleable Solids | EPA 160.5 | 5H18003 | 0.10 | 0.10 | ND | 1 | 08/17/05 | 08/17/05 | |
| Sample ID: IOH1394-01 (Outfall Reporting Units: NTU | 012 - Water) | | | | | | | | |
| Turbidity | EPA 180.1 | 5H18110 | 0.080 | 2.0 | 49 | 2 | 08/18/05 | 08/18/05 | a de la company |
| Sample ID: IOH1394-01 (Outfall Reporting Units: ug/l | 012 - Water) | | | | | ÷ | | | |
| Perchlorate | EPA 314.0 | 5H19051 | 0.80 | 4.0 | ND | 1 | 08/19/05 | 08/19/05 | u |
| • | | | | | | | | | |

* analysis not validated

AMEC VALIDATED



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LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

Project: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 08/16/05 Received: 08/17/05

Issued: 08/26/05 15:58

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID CLIENT ID MATRIX
IOH1394-01 Outfall 012 Water
IOH1394-02 Trip Blank Water

Reviewed By:

Del Mar Analytical, Irvine Michele Harper

Vichele Harper

Project Manager



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Pasadena, CA 91101

Report Number: IOH1394

Received: 08/17/05

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | | | |
|--|-----------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|--|--|
| Sample ID: IOH1394-01 (Outfall 012 - Water) | | | | | | | | | | | | |
| Reporting Units: mg/l Total Recoverable Hydrocarbons | EPA 418.1 | 5H22070 | 0.31 | 1.0 | 3.6 | 1 | 08/22/05 | 08/22/05 | | | | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Pasadena, CA 91101

Report Number: IOH1394

Received: 08/17/05

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|----------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOH1394-01 (Outfall 012 - W Reporting Units: mg/l | Vater) - cont. | | | | | | | | |
| EFH (C13 - C22) Surrogate: n-Octacosane (40-125%) | EPA 8015B | 5H19053 | 0.085 | 0.50 | 0.88 74 % | 0.952 | 08/19/05 | 08/19/05 | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1394

Received: 08/17/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|------------------------------------|------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOH1394-01 (Outfall 012 | - Water) - cont. | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | |
| GRO (C4 - C12) | EPA 8015 Mod. | 5H23031 | 0.050 | 0.10 | 0.30 | 1 | 08/23/05 | 08/24/05 | |
| Surrogate: 4-BFB (FID) (65-140%) | | | | | 100 % | | | | |
| Sample ID: IOH1394-02 (Trip Blank | - Water) | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | |
| GRO (C4 - C12) | EPA 8015 Mod. | 5H22032 | 0.050 | 0.10 | ND | 1 | 08/22/05 | 08/22/05 | |
| Surrogate: 4-BFB (FID) (65-140%) | | | | | 112 % | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

Report Number: 10/11394

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---------------------------------------|----------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOH1394-01 (Outfall 012 - | · Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H22013 | 0.32 | 2.0 | ND | 1 | 08/22/05 | 08/23/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H22013 | 0.32 | 5.0 | ND | 1 | 08/22/05 | 08/23/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5H22013 | 0.85 | 10 | ND | 1 | 08/22/05 | 08/23/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H22013 | 0.25 | 5.0 | ND | 1 | 08/22/05 | 08/23/05 | • |
| tert-Butanol (TBA) | EPA 624 | 5H22013 | 3.1 | 25 | ND | 1 | 08/22/05 | 08/23/05 | |
| Surrogate: Dibromofluoromethane (80- | 120%) | | | | 109 % | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 103 % | | | | |
| Surrogate: 4-Bromofluorobenzene (80-1 | (20%) | | | | 97 % | | | | |
| Sample ID: IOH1394-02 (Trip Blank - | Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H22002 | 0.32 | 2.0 | ND | 1 | 08/22/05 | 08/22/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H22002 | 0.32 | 5.0 | ND | 1 | 08/22/05 | 08/22/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5H22002 | 0.85 | 10 | ND | 1 | 08/22/05 | 08/22/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H22002 | 0.25 | 5.0 | ND | 1 | 08/22/05 | 08/22/05 | |
| tert-Butanol (TBA) | EPA 624 | 5H22002 | 3.1 | 25 | ND | I | 08/22/05 | 08/22/05 | |
| Surrogate: Dibromofluoromethane (80-) | 120%) | | | | 98 % | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 105 % | | | | |
| Surrogate: 4-Bromofluorobenzene (80-1 | 20%) | arts af | | | 96 % | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOH1394

Sampled: 08/16/05

Attention: Bronwyn Kelly

Pasadena, CA 91101

Received: 08/17/05

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---------------------------------------|----------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOH1394-01 (Outfall 012 | - Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| Naphthalene | EPA 625 | 5H21017 | 4.5 | 10 | 27 | 0.952 | 08/21/05 | 08/24/05 | |
| N-Nitrosodimethylamine | EPA 625 | 5H21017 | 3.7 | 20 | ND | 0.952 | 08/21/05 | 08/24/05 | |
| Surrogate: 2-Fluorophenol (30-120%) | | | | | 66 % | | | | |
| Surrogate: Phenol-d6 (35-120%) | | | | | 72 % | | | | |
| Surrogate: 2,4,6-Tribromophenol (45-1 | 120%) | | | | 86 % | | | | |
| Surrogate: Nitrobenzene-d5 (45-120%) |) | | | | 83 % | | | | |
| Surrogate: 2-Fluorobiphenyl (45-120% | 6) | | | | 75 % | | | | |
| Surrogate: Terphenyl-d14 (45-120%) | | | | | 88 % | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1394

Received: 08/17/05

INORGANICS MDL Reporting Sample Data Dilution Date Date Analyte Method Batch Limit Limit Qualifiers Result Factor Extracted Analyzed Sample ID: IOH1394-01 (Outfall 012 - Water) - cont. Reporting Units: mg/l Ammonia-N (Distilled) EPA 350.2 5H18088 0.30 0.50 ND 1 08/18/05 08/18/05 **Biochemical Oxygen Demand** EPA 405.1 5H18070 0.59 2.0 3.0 08/18/05 08/23/05 Oil & Grease EPA 413.1 5H23069 0.94 5.0 ND 08/23/05 1 08/23/05 **Total Dissolved Solids** SM2540C 5H19001 10 10 310 08/18/05 08/18/05 1 **Total Suspended Solids** EPA 160.2 5H22073 10 10 17 08/22/05 08/22/05 Sample ID: IOH1394-01 (Outfall 012 - Water) Reporting Units: ml/l/hr **Total Settleable Solids** EPA 160.5 5H18003 0.10 0.10 ND 08/17/05 08/17/05 Sample ID: IOH1394-01 (Outfall 012 - Water) Reporting Units: NTU Turbidity EPA 180.1 5H18110 0.080 2.0 49 08/18/05 08/18/05 Sample ID: IOH1394-01 (Outfall 012 - Water) Reporting Units: ug/l Perchlorate EPA 314.0 5H19051 0.80 4.0 ND 08/19/05 08/19/05



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05 Received: 08/17/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1394

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---------------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOH1394-01 (Outfall 012 - V Reporting Units: ug/l | Water) - cont. | | | | | | | | |
| 1,4-Dioxane Surrogate: Dibromofluoromethane (70-1) | EPA 82 60B 30%) | P5H2528 | 0.49 | 2.0 | ND 85 % | 1 | 08/26/05 | 08/26/05 | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Attention: Bronwyn Kelly

Pasadena, CA 91101

Report Number: IOH1394

Received: 08/17/05

SHORT HOLD TIME DETAIL REPORT

| Sample ID: Outfall 012 (IOH1394-01) - Wat | Hold Time (in days) er | Date/Time Sampled | Date/Time Received | Date/Time Extracted | Date/Time Analyzed |
|---|------------------------------|----------------------|-----------------------|------------------------|-----------------------|
| EPA 160.5 | 2 | 08/16/2005 11:42 | 08/17/2005 15:15 | 08/17/2005 21:20 | 08/17/2005 22:20 |
| EPA 180.1 | 2 | 08/16/2005 11:42 | 08/17/2005 15:15 | 08/18/2005 08:15 | 08/18/2005 09:15 |
| EPA 405.1 | 2 | 08/16/2005 11:42 | 08/17/2005 15:15 | 08/18/2005 11:30 | 08/23/2005 09:30 |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOH1394

Received: 08/17/05

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|---------------------------------------|----------|-----------|------|-------|-------|--------|------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H22070 Extracted: 08/22/05 | <u>5</u> | | | | | | | | | | |
| Blank Analyzed: 08/22/2005 (5H22070-B | LK1) | | | | | | | | | | |
| Total Recoverable Hydrocarbons | ND | 1.0 | 0.31 | mg/l | | | | | | | |
| LCS Analyzed: 08/22/2005 (5H22070-BS | 1) | | | | | | | | | | M-NR1 |
| Total Recoverable Hydrocarbons | 4.89 | 1.0 | 0.31 | mg/l | 5.00 | | 98 | 65-120 | | | |
| LCS Dup Analyzed: 08/22/2005 (5H2207 | 0-BSD1) | | | | | | | | | | |
| Total Recoverable Hydrocarbons | 5.35 | 1.0 | 0.31 | mg/l | 5.00 | | 107 | 65-120 | 9 | 20 | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1394

Sampled: 08/16/05

Received: 08/17/05

METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|------------|--------------------|-------|-------|----------------|------------------|-----------|----------------|-----|--------------|--------------------|
| Batch: 5H19053 Extracted: 08/19/05 | <u>5</u> _ | | | • | | | | | | | |
| Blank Analyzed: 08/19/2005 (5H19053-E | LK1) | | | | | | | | | | |
| EFH (C13 - C22) | ND | 0.50 | 0.085 | mg/l | | | | | | | |
| Surrogate: n-Octacosane | 0.160 | | | mg/l | 0.200 | | 80 | 40-125 | | | |
| LCS Analyzed: 08/19/2005 (5H19053-BS | 1) | | | | | | | | | | M-NR1 |
| EFH (C13 - C40) | 0.546 | 0.50 | 0.085 | mg/l | 0.775 | | 70 | 40-120 | | | |
| Surrogate: n-Octacosane | 0.158 | | | mg/l | 0.200 | | <i>79</i> | 40-125 | | | |
| LCS Dup Analyzed: 08/19/2005 (5H1905 | 3-BSD1) | | | | | | | | | | |
| EFH (C13 - C40) | 0.532 | 0.50 | 0.085 | mg/l | 0.775 | | 69 | 40-120 | 3 | 25 | |
| Surrogate: n-Octacosane | 0.150 | | | mg/l | 0.200 | | 75 | 40-125 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOH1394

Sampled: 08/16/05

Received: 08/17/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

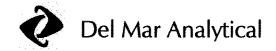
METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|---|-------------|-----------|-------|-------|--------|-----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H22032 Extracted: 08/22/05 | <u>.</u> | | | | | | | | | | |
| Blank Analyzed: 08/22/2005 (5H22032-B | LK1) | | | | | | | | | | |
| GRO (C4 - C12) | ND | 0.10 | 0.050 | mg/l | | | | | | | |
| Surrogate: 4-BFB (FID) | 0.0112 | | | mg/l | 0.0100 | | 112 | 65-140 | | | |
| LCS Analyzed: 08/22/2005 (5H22032-BS | 1) | | | | | | | | | | |
| GRO (C4 - C12) | 0.903 | 0.10 | 0.050 | mg/l | 0.800 | | 113 | 65-140 | | | |
| Surrogate: 4-BFB (FID) | 0.0309 | | | mg/l | 0.0300 | | 103 | 65-140 | | | |
| Matrix Spike Analyzed: 08/22/2005 (5H2 | 2032-MS1) | | | | Sour | rce: IOH1 | 1055-01 | | | | |
| GRO (C4 - C12) | 0.246 | 0.10 | 0.050 | mg/l | 0.220 | ND | 112 | 60-145 | | | |
| Surrogate: 4-BFB (FID) | 0.0119 | | | mg/l | 0.0100 | | 119 | 65-140 | | | |
| Matrix Spike Dup Analyzed: 08/22/2005 | (5H22032-MS | D1) | | | Sour | ce: IOH1 | 055-01 | | | | |
| GRO (C4 - C12) | 0.259 | 0.10 | 0.050 | mg/l | 0.220 | ND | 118 | 60-145 | 5 | 20 | |
| Surrogate: 4-BFB (FID) | 0.0119 | | | mg/l | 0.0100 | | 119 | 65-140 | | | • |
| Batch: 5H23031 Extracted: 08/23/05 | | , . | | | | | | | | | |
| Blank Analyzed: 08/23/2005 (5H23031-Bl | LK1) | | | | | | | | | | |
| GRO (C4 - C12) | ND | 0.10 | 0.050 | mg/l | | | | | | | |
| Surrogate: 4-BFB (FID) | 0.00989 | | | mg/l | 0.0100 | | 99 | 65-140 | | | |
| LCS Analyzed: 08/23/2005 (5H23031-BS1 | l) | | | | | | | | | | |
| GRO (C4 - C12) | 0.826 | 0.10 | 0.050 | mg/l | 0.800 | | 103 | 65-140 | | | |
| Surrogate: 4-BFB (FID) | 0.0328 | | | mg/l | 0.0300 | | 109 | 65-140 | | | |
| Matrix Spike Analyzed: 08/23/2005 (5H23 | 3031-MS1) | | | | Sour | ce: IOH1 | 303-29 | | | | |
| GRO (C4 - C12) | 0.223 | 0.10 | 0.050 | mg/l | 0.220 | ND | 101 | 60-145 | | | |
| Surrogate: 4-BFB (FID) | 0.00955 | | | mg/l | 0.0100 | | 96 | 65-140 | | | |

Del Mar Analytical, Irvine Michele Harper

Project Manager



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

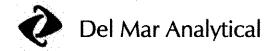
Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1394

Received: 08/17/05

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--------------------------------|---------------------|-----------|-------|-------|--------|----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H23031 Extracted: | 08/23/05 | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 08/ | /23/2005 (5H23031-M | (SD1) | | | Sou | rce: IOH | 1303-29 | | | | |
| GRO (C4 - C12) | 0.217 | 0.10 | 0.050 | mg/l | 0.220 | ND | 99 | 60-145 | 3 | 20 | |
| Surrogate: 4-BFB (FID) | 0.00968 | | | mg/l | 0.0100 | | 97 | 65-140 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOH1394

Sampled: 08/16/05

Received: 08/17/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|---|-----------|--------------------|------|-------|----------------|---|--------|------------|-----|--------------|--------------------|
| Batch: 5H22002 Extracted: 08/22/05 | | | | | | *************************************** | | 2,71111110 | | | V |
| Blank Analyzed: 08/22/2005 (5H22002-B | LK1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | 0.32 | ug/l | | | | | | | |
| Methyl-tert-butyl Ether (MTBE) | ND | 5.0 | 0.32 | ug/l | | | | | | | |
| 1,2,3-Trichloropropane | ND | 10 | 0.85 | ug/l | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 5.0 | 0.25 | ug/l | | | | | | | |
| tert-Butanol (TBA) | ND | 25 | 3.1 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 23.8 | | | ug/l | 25.0 | | 95 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.2 | | | ug/l | 25.0 | | 105 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 23.7 | | | ug/l | 25.0 | | 95 | 80-120 | | | |
| LCS Analyzed: 08/22/2005 (5H22002-BS) | 1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 23.6 | 2.0 | 0.32 | ug/l | 25.0 | | 94 | 70-125 | | | |
| Methyl-tert-butyl Ether (MTBE) | 22.4 | 5.0 | 0.32 | ug/l | 25.0 | | 90 | 55-140 | | | |
| 1,2,3-Trichloropropane | 21.5 | 10 | 0.85 | ug/i | 25.0 | | 86 | 55-130 | | | |
| Di-isopropyl Ether (DIPE) | 22.3 | 5.0 | 0.25 | ug/l | 25.0 | | 89 | 60-135 | | | |
| tert-Butanol (TBA) | 117 | 25 | 3.1 | ug/l | 125 | | 94 | 65-135 | | | |
| Surrogate: Dibromofluoromethane | 24.2 | | | ug/l | 25.0 | | 97 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.8 | | | ug/l | 25.0 | | 103 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Matrix Spike Analyzed: 08/22/2005 (5H22 | 2002-MS1) | | | | Sour | rce: IOH1 | 532-03 | | | | |
| 1,2-Dibromoethane (EDB) | 25.2 | 2.0 | 0.32 | ug/I | 25.0 | ND | 101 | 65-130 | | | |
| Methyl-tert-butyl Ether (MTBE) | 25.2 | 5.0 | 0.32 | ug/l | 25.0 | ND | 101 | 50-150 | | | |
| 1,2,3-Trichloropropane | 22.4 | 10 | 0.85 | ug/l | 25.0 | ND | 90 | 50-135 | | | |
| Di-isopropyl Ether (DIPE) | 26.4 | 5.0 | 0.25 | ug/l | 25.0 | ND | 106 | 60-140 | | | |
| tert-Butanol (TBA) | 148 | 25 | 3.1 | ug/l | 125 | ND | 118 | 60-145 | | | |
| Surrogate: Dibromofluoromethane | 25.2 | | | ug/l | 25.0 | | 101 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.4 | | | ug/i | 25.0 | | 106 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 27.9 | | | ug/l | 25.0 | | 112 | 80-120 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|---------------------------------------|-------------|-----------|------|-------|-------|----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H22002 Extracted: 08/22/05 | ; | | | | | | | | | | |
| | | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 08/22/2005 | (5H22002-M | SD1) | | | Sou | rce: IOH | 1532-03 | | | | |
| 1,2-Dibromoethane (EDB) | 26.7 | 2.0 | 0.32 | ug/l | 25.0 | ND | 107 | 65-130 | 6 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 26.9 | 5.0 | 0.32 | ug/l | 25.0 | ND | 108 | 50-150 | 7 | 25 | |
| 1,2,3-Trichloropropane | 24.1 | 10 | 0.85 | ug/l | 25.0 | ND | 96 | 50-135 | 7 | 30 | |
| Di-isopropyl Ether (DIPE) | 27.0 | 5.0 | 0.25 | ug/l | 25.0 | ND | 108 | 60-140 | 2 | 25 | |
| tert-Butanol (TBA) | 143 | 25 | 3.1 | ug/l | 125 | ND | 114 | 60-145 | 3 | 25 | |
| Surrogate: Dibromofluoromethane | 25.8 | | | ug/l | 25.0 | | 103 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.4 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 28.0 | | | ug/l | 25.0 | | 112 | 80-120 | | | |
| Batch: 5H22013 Extracted: 08/22/05 | } | | | | | | | | | | |
| | = | | | | | | | | | | |
| Blank Analyzed: 08/22/2005 (5H22013-B | LK1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | 0.32 | ug/l | | | | | | | 1.4 |
| Methyl-tert-butyl Ether (MTBE) | ND | 5.0 | 0.32 | ug/l | | | | | | • | *** |
| 1,2,3-Trichloropropane | ND | 10 | 0.85 | ug/l | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 5.0 | 0.25 | ug/l | | | | | | | |
| tert-Butanol (TBA) | ND | 25 | 3.1 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 25.3 | | | ug/l | 25.0 | | 101 | 80-120 | | | |
| Surrogate: Toluene-d8 | <i>25.8</i> | | | ug/l | 25.0 | | 103 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.5 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| LCS Analyzed: 08/22/2005 (5H22013-BS) | l) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 25.5 | 2.0 | 0.32 | ug/l | 25.0 | | 102 | 70-125 | | | |
| Methyl-tert-butyl Ether (MTBE) | 26.6 | 5.0 | 0.32 | ug/l | 25.0 | | 106 | 55-140 | | | |
| 1,2,3-Trichloropropane | 24.3 | 10 | 0.85 | ug/l | 25.0 | | 97 | 55-130 | | | |
| Di-isopropyl Ether (DIPE) | 29.0 | 5.0 | 0.25 | ug/i | 25.0 | | 116 | 60-135 | | | |
| tert-Butanol (TBA) | 137 | 25 | 3.1 | ug/I | 125 | | 110 | 65-135 | | | |
| Surrogate: Dibromofluoromethane | 25.2 | | | ug/l | 25.0 | | 101 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.1 | | | ug/l | 25.0 | | 104 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 25.6 | | | ug/l | 25.0 | | 102 | 80-120 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 5H22013 Extracted: 08/22/0 | <u>5</u> _ | | | | | | | | | | |
| Matrix Spike Analyzed: 08/22/2005 (5H2 | 22013-MS1) | | | | Sou | rce: IOH | 1236-03 | | | | |
| 1,2-Dibromoethane (EDB) | 32.3 | 2.0 | 0.32 | ug/l | 25.0 | ND | 129 | 65-130 | | | |
| Methyl-tert-butyl Ether (MTBE) | 35.1 | 5.0 | 0.32 | ug/l | 25.0 | ND | 140 | 50-150 | | | |
| 1,2,3-Trichloropropane | 33.9 | 10 | 0.85 | ug/i | 25.0 | ND | 136 | 50-135 | | | MI |
| Di-isopropyl Ether (DIPE) | 32.2 | 5.0 | 0.25 | ug/l | 25.0 | ND | 129 | 60-140 | | | |
| tert-Butanol (TBA) | 129 | 25 | 3.1 | ug/l | 125 | ND | 103 | 60-145 | | | |
| Surrogate: Dibromofluoromethane | 26.8 | | | ug/l | 25.0 | | 107 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.2 | | | ug/l | 25.0 | | 105 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 25.7 | | | ug/l | 25.0 | | 103 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 08/22/2005 | (5H22013-M | SD1) | | | Sou | rce: IOH1 | 236-03 | | | | |
| 1,2-Dibromoethane (EDB) | 26.2 | 2.0 | 0.32 | ug/l | 25.0 | ND | 105 | 65-130 | 21 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 27.0 | 5.0 | 0.32 | ug/l | 25.0 | ND | 108 | 50-150 | 26 | 25 | R |
| 1,2,3-Trichloropropane | 24.6 | 10 | 0.85 | ug/l | 25.0 | ND | 98 | 50-135 | 32 | 30 | R-3 |
| Di-isopropyl Ether (DIPE) | 28.9 | 5.0 | 0.25 | ug/l | 25.0 | ND | 116 | 60-140 | 11 | 25 | |
| tert-Butanoi (TBA) | 139 | 25 | 3.1 | ug/l | 125 | ND | 111 | 60-145 | 7 | 25 | |
| Surrogate: Dibromofluoromethane | 25.4 | | | ug/l | 25.0 | | 102 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.6 | | | ug/l | 25.0 | | 102 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 25.1 | | | ug/l | 25.0 | | 100 | 80-120 | | | |

MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--------------------------------------|------------|-----------|---------------|-------|-------|--------|-----------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H21017 Extracted: 08/21/0 | <u> 15</u> | | | | | | | | | | |
| Blank Analyzed: 08/23/2005 (5H21017- | BLK1) | | | | | | | | | | |
| Naphthalene | ND | 10 | 4.5 | ug/l | | | | | | | |
| N-Nitrosodimethylamine | ND | 20 | 3.7 | ug/l | | | | | | | |
| Surrogate: 2-Fluorophenol | 108 | | | ug/l | 200 | | 54 | 30-120 | | | |
| Surrogate: Phenol-d6 | 117 | | | ug/l | 200 | | 58 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 127 | | | ug/l | 200 | | 64 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 57.4 | | | ug/l | 100 | | 57 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 54.3 | | | ug/l | 100 | | 54 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 63.5 | | | ug/l | 100 | | 64 | 45-120 | | | |
| LCS Analyzed: 08/23/2005 (5H21017-B | S1) | | | | | | | | | | M-NR1 |
| Naphthalene | 68.3 | 10 | 4.5 | ug/l | 100 | | 68 | 50-120 | | | |
| N-Nitrosodimethylamine | 77.9 | 20 | 3.7 | ug/l | 100 | | 78 | 40-120 | | | |
| Surrogate: 2-Fluorophenol | <i>131</i> | | , ,,, ,, , | ug/l | 200 | | 66 | 30-120 | 4. | | |
| Surrogate: Phenol-d6 | 143 | 113 | | ug/l | 200 | • | 72 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 167 | | | ug/l | 200 | | 84 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 78.0 | | | ug/l | 100 | | <i>78</i> | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 71.1 | | | ug/l | 100 | | 71 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 80.5 | | | ug/l | 100 | | 80 | 45-120 | | | |
| LCS Dup Analyzed: 08/23/2005 (5H210) | (7-BSD1) | | | | | | | | | | |
| Naphthalene | 70.0 | 10 | 4.5 | ug/l | 100 | | 70 | 50-120 | 2 | 20 | |
| N-Nitrosodimethylamine | 74.6 | 20 | 3.7 | ug/l | 100 | | 75 | 40-120 | 4 | 20 | |
| Surrogate: 2-Fluorophenol | 123 | | | ug/l | 200 | | 62 | 30-120 | | | |
| Surrogate: Phenol-d6 | 144 | | | ug/l | 200 | | 72 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 163 | | | ug/l | 200 | | 82 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 76.9 | | | ug/l | 100 | | 77 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 71.0 | | | ug/l | 100 | | 71 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 81.5 | | | ug/l | 100 | | 82 | 45-120 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|-------------|--------------------|-------|-------|----------------|------------------|--------|----------------|-----|--------------|--------------------|
| Batch: 5H18070 Extracted: 08/18/05 | - | | | | | | | | | | |
| Blank Analyzed: 08/23/2005 (5H18070-B) | LK1) | | | | | | | | | | |
| Biochemical Oxygen Demand | ND | 2.0 | 0.59 | mg/l | | | | | | | |
| LCS Analyzed: 08/23/2005 (5H18070-BS) | 1) | | | | | | | | | | |
| Biochemical Oxygen Demand | 191 | 100 | 30 | mg/l | 198 | | 96 | 85-115 | | | |
| LCS Dup Analyzed: 08/23/2005 (5H18070 | -BSD1) | | | | | | | | | | |
| Biochemical Oxygen Demand | 193 | 100 | 30 | mg/l | 198 | | 97 | 85-115 | 1 | 20 | |
| Batch: 5H18088 Extracted: 08/18/05 | | | | | | | | | | | |
| Blank Analyzed: 08/18/2005 (5H18088-BI | LK1) | | | | | | | | | | |
| Ammonia-N (Distilled) | ND | 0.50 | 0.30 | mg/l | | | | | | | |
| LCS Analyzed: 08/18/2005 (5H18088-BS1 |) | | | | | | | | | | |
| Ammonia-N (Distilled) | 11.2 | 0.50 | 0.30 | mg/l | 10.0 | | 112 | 80-115 | | | |
| Matrix Spike Analyzed: 08/18/2005 (5H18 | 088-MS1) | | | | Sour | ce: IOH0 | 980-01 | | | | |
| Ammonia-N (Distilled) | 11.5 | 0.50 | 0.30 | mg/l | 10.0 | 0.56 | 109 | 70-120 | | | |
| Matrix Spike Dup Analyzed: 08/18/2005 (| 5H18088-MSI |) 1) | | | Sour | ce: IOH0 | 980-01 | | | | |
| Ammonia-N (Distilled) | 11.2 | 0.50 | 0.30 | mg/l | 10.0 | 0.56 | 106 | 70-120 | 3 | 15 | |
| Batch: 5H18110 Extracted: 08/18/05 | | | | | | | | | | | |
| Blank Analyzed: 08/18/2005 (5H18110-BL | K1) | | | | | | | | | | |
| Turbidity | ND | 1.0 | 0.040 | NTU | | | | | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|------------|--------------------|-------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 5H18110 Extracted: 08/18/05 | <u>.</u> | | | | | | | | | | |
| Duplicate Analyzed: 08/18/2005 (5H1811 | 0-DUP1) | | | | Sou | rce: IOH | 1305-01 | | | | |
| Turbidity | 1.84 | 1.0 | 0.040 | NTU | | 1.8 | | | 2 | 20 | |
| Batch: 5H19001 Extracted: 08/18/05 | , | | | | | | | | | | |
| Blank Analyzed: 08/18/2005 (5H19001-B | LK1) | | | | | | | | | | |
| Total Dissolved Solids | ND | 10 | 10 | mg/l | | | | | | | |
| LCS Analyzed: 08/18/2005 (5H19001-BS | 1) | | | | | | | | | | |
| Total Dissolved Solids | 932 | 10 | 10 | mg/l | 1000 | | 93 | 90-110 | | | |
| Duplicate Analyzed: 08/18/2005 (5H1900 | 1-DUP1) | | | | Sour | rce: IOH1 | 166-01 | | | | |
| Total Dissolved Solids | 900 | 10 | 10 | mg/l | | 910 | | | 1 | 10 | |
| Batch: 5H19051 Extracted: 08/19/05 | ÷ | - | | | | | | | | | |
| Blank Analyzed: 08/19/2005 (5H19051-Bl | EK1) | | | | | | | | | | s Williams |
| Perchlorate | ND | 4.0 | 0.80 | ug/l | | | | | | | |
| LCS Analyzed: 08/19/2005 (5H19051-BS) | 1) | | | | | | | | | | |
| Perchlorate | 46.6 | 4.0 | 0.80 | ug/l | 50.0 | | 93 | 85-115 | | | |
| Matrix Spike Analyzed: 08/19/2005 (5H1 | 9051-MS1) | | | | Sour | ce: IOH1 | 513-01 | | | | |
| Perchlorate | 52.6 | 4.0 | 0.80 | ug/l | 50.0 | 3.4 | 98 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 08/19/2005 (| 5H19051-MS | SD1) | | | Sour | ce: IOH1 | 513-01 | | | | |
| Perchlorate | 53.1 | 4.0 | 0.80 | ug/l | 50.0 | 3.4 | 99 | 80-120 | 1 | 20 | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|----------|--------------------|------|-------|----------------|------------------|--------|----------------|-----|--------------|--------------------|
| Batch: 5H22073 Extracted: 08/22/05 | <u>5</u> | | | | | | | | | | |
| Blank Analyzed: 08/22/2005 (5H22073-B | LKI) | | | | | | | | | | |
| Total Suspended Solids | ND | 10 | 10 | mg/l | | | | | | | |
| LCS Analyzed: 08/22/2005 (5H22073-BS | 1) | | | | | | | | | | |
| Total Suspended Solids | 1020 | 10 | 10 | mg/l | 1000 | | 102 | 85-115 | | | |
| Duplicate Analyzed: 08/22/2005 (5H2207 | 3-DUP1) | | | | Sou | rce: IOH | 246-01 | | | | |
| Total Suspended Solids | 206 | 10 | 10 | mg/l | | 220 | | | 7 | 10 | |
| Batch: 5H23069 Extracted: 08/23/05 | <u>.</u> | | | | | | | | | | |
| Blank Analyzed: 08/23/2005 (5H23069-B | LK1) | | | | | | | | | | |
| Oil & Grease | ND | 5.0 | 0.94 | mg/l | | | | | | | |
| LCS Analyzed: 08/23/2005 (5H23069-BS | 1) | | | | | | | | | | M-NR1 |
| Oil & Grease | 16.7 | 5.0 | 0.94 | mg/l | 20,0 | | 84 | 65-120 | | | |
| LCS Dup Analyzed: 08/23/2005 (5H2306) | 9-BSD1) | | | | | | | | | | |
| Oil & Grease | 18.3 | 5.0 | 0.94 | mg/l | 20.0 | | 92 | 65-120 | 9 | 20 | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1394

Sampled: 08/16/05 Received: 08/17/05

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--|------------|-----------|------|-------|-------|----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: P5H2528 Extracted: 08/26/0 | <u>)5</u> | | | | | | | | | | |
| Blank Analyzed: 08/26/2005 (P5H2528- | BLK1) | | | | | | | | | | |
| 1,4-Dioxane | ND | 2.0 | 0.49 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 0.910 | | | ug/l | 1.00 | | 91 | 70-130 | | | |
| LCS Analyzed: 08/26/2005 (P5H2528-B | S1) | | | | | | | | | | |
| 1,4-Dioxane | 9.87 | 2.0 | 0.49 | ug/l | 10.0 | | 99 | 70-130 | | | |
| Surrogate: Dibromofluoromethane | 0.860 | | | ug/l | 1.00 | | 86 | 70-130 | | | |
| LCS Dup Analyzed: 08/26/2005 (P5H25 | 28-BSD1) | | | | | | | | | | |
| 1,4-Dioxane | 9.39 | 2.0 | 0.49 | ug/l | 10.0 | | 94 | 70-130 | 5 | 20 | |
| Surrogate: Dibromofluoromethane | 0.890 | | | ug/l | 1.00 | | 89 | 70-130 | | | |
| Matrix Spike Analyzed: 08/26/2005 (P5) | H2528-MS1) | | | | Sou | rce: POH | 0476-04 | | | | |
| 1,4-Dioxane | 47.8 | 2.0 | 0.49 | ug/l | 10.0 | 39 | 88 | 65-125 | | | |
| Surrogate: Dibromofluoromethane | 0.870 | | | ug/l | 1.00 | | 87 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 08/26/2005 | (P5H2528-M | SD1) | | | Sour | rce: POH | 0476-04 | | | | |
| 1,4-Dioxane | 46.1 | 2.0 | 0.49 | ug/l | 10.0 | 39 | 71 | 65-125 | 4 | 20 | |
| Surrogate: Dibromofluoromethane | 0.860 | | | ug/l | 1.00 | | 86 | 70-130 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1394

Received: 08/17/05

DATA QUALIFIERS AND DEFINITIONS

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
 M-NR1 There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike

Duplicate.

R The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.

R-3 The RPD exceeded the method control limit due to sample matrix effects.

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO):

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/16/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1394

Received: 08/17/05

Certification Summary

Del Mar Analytical, Irvine

| Method | Matrix | Nelac | California |
|---------------|--------|-------|------------|
| EPA 160.2 | Water | x | x |
| EPA 160.5 | Water | X | X |
| EPA 180.1 | Water | X | X |
| EPA 314.0 | Water | N/A | X |
| EPA 350.2 | Water | | X |
| EPA 405.1 | Water | X | X |
| EPA 413.1 | Water | X | X |
| EPA 418.1 | Water | X | X |
| EPA 624 | Water | X | X |
| EPA 625 | Water | X | X |
| EPA 8015 Mod. | Water | X | X |
| EPA 8015B | Water | X | X |
| EPA 8260B-SIM | Water | | |
| Level 4 | Water | | |
| SM2540C | Water | X | X |

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Subcontracted Laboratories

Del Mar Analytical - Phoenix NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907 9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed:

EPA 8260B

Samples: IOH1394-01



17461 Derlan Ave. Suite 100, Irvine, CA 92614 1014 E. Cooley Dr., Suite A. Collon, CA 92324

eske Drive, Suite 805, San Diego, CA 92123 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044

Ph (619) 505-9586 Ph (480) 785-0043 Ph (702) 708-3620

Ph (949) 261-1022

Fex (619) 505-9689 Fax (450) 785-0851

Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IOH1394

SENDING LABORATORY:

Del Mar Analytical, Irvine

17461 Derian Avenue, Suite 100

Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228

Analysis

Project Manager: Michele Harper

RECEIVING LABORATORY:

Del Mar Analytical - Phoenix

9830 S. 51st Street, Suite B-120

Phoenix, AZ 85044 Phone: (480) 785-0043 Fax: (480) 785-0851

Expiration Due Sample ID: IOH1394-01 Water

Sampled: 08/16/05 11:42

Comments

8260B-SIM 1,4-Dioxane Level 4 Data Package - Out 08/30/05 11:42 09/13/05 11:42

08/24/05 12:00 08/24/05 12:00 Boeing-permit, J flags

Boeing

POHO570-01

Containers Supplied:

40 ml VOA w/HCL (IOH1394-01M) 40 ml VOA w/HCL (IOH1394-01N) 40 ml VOA w/HCL (IOH1394-010)

SAMPLE INTEGRITY: □ No All containers intact: Sample labels/COC agree: Yes No Samples Received On Ice:: Custody Scals Present □ No Samples Preserved Properly: Samples Received at (temp): Released By Time 09:35 Released By Time Time

Page 1 of Temp= 77.○ Comments Field readings: Normal Sample Integrity (Check) Intact On Ice 10 Days 24 Hours 5 Days Perchlorate Only 72 Hours Metals Only 72 Hours Settleable Solids 48 Hours 72 Hours SST , SQT, VIIbid1uT ANALYSIS REQUIRED × tsib \w × (\$.03E) Titr (350.2) +MDMA analysis × × 625 Naphthalene × BOD5(20 degrees C) 624 (EDB, 1,2,3-TCP, MTBE, DPE, TBA) × × × (F.814 A93) Petroleum Hydrocarbons × × TRPH,=Total Rec. × × 80628-enexoiG-4,1 SPLIS **CHAIN OF CUSTODY FORM** Date/Time × 19015-dieseljet fuel × × se6-9108 × Oil & Gresse (EPA × 12A, 12B, 12C, 12D, 12E, 12F Bottle # 28, 2C 48, 4C 68, 6C 114 40 8 8 88 8 20 贸 \$ \$ ā న 8 ≨ During Test - Outfall 012 Received By Received By Preservative Received B Boeing-SSFL NPDES H2S04 None Š None ê Ç None **8**02 None 오 꽂 棄 호 끚 쟞 오 뀾 豆 쟞 (626) 568-6691 Fax Number: (626) 568-6515 Alfa Test Stand Phone Number Date/Time: 8-16-05 Sampling Date/Time ふろ 18:23 Project Del Mar Analytical version 02/17/05 Date/Time: * of Conf. œ N Sampler PAT POllock Sampler RICK BANAGA Project Manager: Bronwyn Kelly 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Container 500ml Poly 1L Amber 1L Amber 1L Amber 1L Amber Type 1L Amber 1L Amber 1L Amber 1L Amber 11. Poly 11. Poly 1L Poly VOAs VOAs VOAs VOAs **S**YOY VOAs VOAs Client Name/Address: Sample Matrix flundly 28. Relinquished By MWH-Pasadena ₹ ≥ ₹ ≥ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ≥ Relinquished By Relipedighed By Sample Description Outfall 012 Trip Blank Outfall 012 duplicate duplicate duplicate duplicate duplicate duplicate duplicate

NPDES - 193

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711SV65 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1713 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: September 19, 2005 Reviewer M. Pokorny Reviewer' Signature Analysis/Method Semivolatiles **ACTION ITEMS** Case Narrative **Deficiencies** 2. Out of Scope Analyses **Analyses Not Conducted** Missing Hardcopy Deliverables Incorrect Hardcopy **Deliverables** 6. Deviations from Analysis Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS^b Acceptable as reviewed.

Subcontracted analytical laboratory is not meeting contract and/or method requirements.

b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOH1713

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES IOH1713 Analysis SVOC

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOH1713

Project Manager:

P. Costa

Matrix:

Water

0

Analysis:

Semivolatiles

QC Level:

Reviewer:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

M. Pokorny

Date of Review:

September 19, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

NPDES IOH1713 SVOC

DATA VALIDATION REPORT

Project: SDG: Analysis:

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOH1713-01 | water | 625 |

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 3°C. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the sample was analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibration associated with this sample was dated 08/22/05. The average RRFs were ≥0.05 and the %RSDs were ≤35% for both target compounds listed on the sample summary form. The continuing calibration associated with the sample analysis was analyzed 08/26/05. The RRFs for both target compounds were ≥0.05, and the %Ds were ≤20%. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (5H24052-BLK1) was extracted and analyzed with this SDG. No target compounds were reported in the method blank. Review of the raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (5H24052-BS1/BSD1) was extracted and analyzed with this SDG. The percent recoveries for target compounds n-nitrosodimethylamine and

NPDES IOH1713

naphthalene were within the respective laboratory QC limits and the RPDs were ≤20%. representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample surrogate recoveries were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ± 30 seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for naphthalene and n-nitrosodimethylamine by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

SDG: Analysis:

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

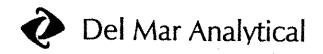
Compound quantification is verified at a Level IV data validation. Compound quantitation was verified by recalculating a representative number of sample detects, blank spike, and surrogate recoveries. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDL. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Project ID: Alfa Outfall 012 - During Test

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyz | Da ed Qual | |
|---|--------------|--------------------|--------------|--------------------|---|--------------------|----------------------|----------------------|---------------|------|
| Sample ID: IOH1713-01 (Outfall 0) Reporting Units: ug/i | 12 - Water) | | | | | | | | REV QUAL | CODE |
| Naphthalene N-Nitrosodimethylamine Surrogate: 2-Fluorophenol (30-120% Surrogate: Phenol-d6 (35-120%) Surrogate: 2,4,6-Tribromophenol (45 Surrogate: Nitrobenzene-d5 (45-120% Surrogate: 2-Fluorobiphenyl (45-120%) Surrogate: Terphenyl-d14 (45-120%) | -120%) %) | 5H24052 5H24052 | 4.5 3.7 | 10 20 | 30 ND 55 % 62 % 66 % 68 % 73 % 108 % | | 08/24/05 08/24/05 | 08/27/05 08/27/05 | U | |

AMEC VALIDATED

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

| AN | IEC Earth & Environmental | | Package ID | T711TF84 |
|-----|---------------------------|---|--|--------------------|
| 355 | 5 South Teller Street | | Task Order | 313150010 |
| Sui | te 300 | | SDG No. | IOH1713 |
| Lal | kewood, CO 80226 | • | No. of Analyses | 2 |
| | Laboratory Del Mar A | unalytical | Date Septemi | per 21, 2005 |
| | Reviewer K. Shadov | vlight | Reviewer's S | |
| | Analysis/Method TPH-Purge | able | 1 1 1/2 | drift |
| | | | | \mathcal{Q} |
| AC | TION ITEMS! | Name of the Control of the Control | | BORGOOD BROKE SEEL |
| 1. | Case Narrative | | | |
| | Deficiencies | | | |
| | | | | |
| 2. | Out of Scope | | | |
| | Analyses | | | |
| | • | | | |
| | • | | | |
| 3. | Analyses Not Conducted | | | |
| | • | *************************************** | | |
| | • | | | |
| 4. | Missing Hardcopy | *********** | ······································ | |
| | Deliverables | | | |
| | • | <u> </u> | | |
| | • | | | |
| 5. | Incorrect Hardcopy | | | |
| | Deliverables | | | |
| 6. | Deviations from Analysis | | | |
| | GC/MS Tune/Inst. Perform | | | |
| | Calibrations | | | |
| | Blanks | | | |
| | Surrogates | | | |
| | Matrix Spike/Dup LCS | | | |
| | Field QC | | | |

Subcontracted analytical laboratory is not meeting contract and/or method requirements.

Acceptable as reviewed

Internal Standard Performance Compound Identification and

Quantitation
System Performance
COMMENTS^b

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| И | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|--------------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within contro limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Γ | Presumed contamination from trip blank. | Not applicable. |
| l | False positive - reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| î | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| } | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOH1713

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES 10H1713 Analysis: TPH

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOH1713

Project Manager:

P Costa

Matrix:

Water

Analysis:

TPH-Purgeable

OC Level:

Level IV

No. of Samples:

2 0

No. of Reanalyses/Dilutions:

Reviewer:

K. Shadowlight

Date of Review:

September 21, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015M, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis:

NPDES IOH1713 TPH

DATA VALIDATION REPORT

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|-----------|
| Outfall 012 | Outfall 012 | IOH1713-01 | water | 8015M/GRO |
| Trip Blank | Trip Blank | IOH1713-02 | water | 8015M/GRO |

Analysis

NPDES IOH1713

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at Del Mar Analytical on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the samples were received intact, and the COC indicated the samples were properly preserved. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The EFH analysis (rather than the GRO analysis) was requested in error on the COC for the Trip Blank sample. The sample was analyzed correctly. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

2.2 CALIBRATION

One gasoline standard initial calibration dated 03/28/05 was associated with the sample analyses. The %RSD for GRO (C4-C12) was within the QC limit of ≤20%. An initial calibration verification (ICV) was analyzed after the initial calibration but prior to the analysis of samples. The %Ds for the ICV and all CCVs bracketing the sample analyses were within the Method QC limit of The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.4 METHOD BLANKS

One water method blank (5H28016-BLK1) was associated with the sample analyses. GRO (C4-C12) was not detected above the MDL in the method blank. Review of the raw data indicated no false negative result. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One water method blank spike (5H28016-BS1) was associated with the sample analyses. GRO (C4-C12) was recovered within the laboratory-established QC limits of 65-140%. The recovery was checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

NPDES IOH1713 Analysis: TPH

2.6 SURROGATE RECOVERY

The samples were fortified with the surrogate compound 4-bromofluorobenzene (BFB). Surrogate recoveries were within the laboratory-established QC limits of 65-140%. Recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the site sample in this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

2.8.1 Trip Blanks, Field Blanks, and Equipment Rinsates

Sample Trip Blank was the trip blank associated with site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. Review of the raw data indicated no false negative result. There were no field blank or equipment rinsate samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples in this SDG.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for GRO (C4-C12) by Method 8015M. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the samples in this SDG. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detects, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. The results were reported in mg/L (ppm). No qualifications were required.



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Projec

Project ID: Alfa Outfall 012 - During Test

Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOH1713

Received: 08/19/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | | Data Blifiers, | 2 |
|---|--------------------|---------|--------------|--------------------|---------------------|---|-------------------|------------------|--------------|-------------------|---|
| Sample ID: IOH1713-01 (Outfail (Reporting Units: mg/l | 012 - Water) - coa | nt. | | | | | | | <u>, e l</u> | | t |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%) | EPA 8015 Mod. | 5H28016 | 0.050 | 0.10 | 0.18 <i>94</i> % | 1 | 08/28/05 | 08/29/05 | | | |
| Sample ID: IOH1713-02 (Trip Bla Reporting Units: mg/i | nk - Water) | | | | | | | | | | |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%) | | 5H28016 | 0.050 | 0.10 | ND 95 % | 1 | 08/28/05 | 08/29/05 | - | P1 <i>PI</i> | |
| | | | | | | | | | | - | |



CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

| AMEC Earth & Environmental | Package ID T711TF85 |
|---------------------------------|-------------------------|
| 355 South Teller Street | Task Order 313150010 |
| Suite 300 | SDG No. IOH1713 |
| Lakewood, CO 80226 | No. of Analyses 1 |
| Laboratory Del Mar Analytical | Date September 21, 2005 |
| Reviewer K. Shadowlight | Reviewer's Signature |
| Analysis/Method TPH-Extractable | K Stradowiellt |
| | |

| A(| CTION ITEMS* | |
|---------------------------------------|--|---|
| 1. | Case Narrative | |
| | Deficiencies | |
| | | |
| 2. | Out of Scope | |
| | Analyses | |
| | | |
| | | |
| 3. | Analyses Not Conducted | |
| | | |
| | | |
| 4. | Missing Hardcopy | |
| | Deliverables | |
| | | |
| | | |
| 5. | Incorrect Hardcopy | |
| | Deliverables | |
| 6. | Deviations from Analysis | |
| | GC/MS Tune/Inst. Perform | |
| • | Calibrations | |
| | Blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | |
| | System Performance | |
| CO | MMENTS ⁹ | Acceptable as reviewed |
| | | |
| · · · · · · · · · · · · · · · · · · · | | |
| | | |
| * Su | bcontracted analytical laboratory is not | meeting contract and/or method requirements. |
| U | uciciones in protocol have been adopted | by the laboratory but no action against the laboratory is required. |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| l | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| ŊJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| W | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards us for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within contributes. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was n within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| Į. | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not with control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Γ | Presumed contamination from trip blank. | Not applicable. |
| + | False positive - reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| ŗ | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| | Reported result or other information was incorrect. | Reported result or other information wa |
| | TIC identity or reported retention time has been changed. | Not applicable. |
| | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was no within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

*#

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Extractable

SAMPLE DELIVERY GROUP: IOH1713

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

SDG: **Analysis**

NPDES IOH1713 TPH

1. INTRODUCTION

Task Order Title: NPDES Monitoring

Contract Task Order #: 313150010

> SDG#: IOH1713

Project Manager: P. Costa

Matrix: Water

Analysis: **TPH-Extractable**

Level IV QC Level:

No. of Samples:

No. of Reanalyses/Dilutions: 0

> Reviewer: K. Shadowlight

1

Date of Review: September 21, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015B, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

NPDES IOHI713 TPH

DATA VALIDATION REPORT

Project: SDG: Analysis:

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOH1713-01 | water | 8015B |

NPDFS IOH1713 Analysis TPH

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical laboratory on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the sample containers were received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel, and accounted for the analysis presented in this SDG. The EFH analysis (rather than the GRO analysis) was requested in error on the COC for the Trip Blank sample. The sample was analyzed correctly. As the site sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The sample was extracted within seven days of sample collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 CALIBRATION

The initial calibration associated with the sample analysis was analyzed on 07/11/05. The %RSD was within the QC limit of ≤20%. The %Ds for the initial calibration verification (ICV) and continuing calibrations associated with the sample analysis were ≤15%. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. qualifications were required

2.4 METHOD BLANKS

One method blank (5H23040-BLK1) was extracted and analyzed with the sample in this SDG. EFH (C13-C22) was not present above the MDL in the method blank or in the instrument blank analyzed at the beginning of the analytical sequence. Review of the chromatograms showed no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One method blank spike/blank spike duplicate pair (5H23040-BS1/BSD1) was extracted and analyzed with the sample in this SDG. The laboratory reported recoveries of alkane range C13-C28 from spiked diesel. The recoveries were within the laboratory-established QC limits of 40-120%,

NPDES IOH1713 Analysis: TPH

and the RPD was within the QC limit of ≤25%. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample was fortified with the surrogate compound n-octacosane. The sample surrogate recovery was within the laboratory-established QC limits of 40-125%. The recovery was calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses associated with the sample of this SDG. Evaluation of method accuracy was based on the blank spike. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples associated with the site sample in this SDG. No qualifications were required.

2.8.2 Field Duplicates

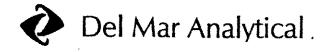
There were no field duplicate samples associated with this SDG.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for EFH n-alkane range C13-C22 by EPA SW-846 Method 8015B. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for this SDG. qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detect, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. Results were reported in mg/L (ppm). Any detect reported between the MDL and the reporting limit was qualified as estimated, "J," by the laboratory. No further qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | ı Date Extracted | | Data Qualifiers | |
|--|------------------|---------|--------------|--------------------|------------------|-------|---------------------|----------|--------------------|--|
| Sample ID: IOH1713-01 (Outfall 0: Reporting Units: mg/l | 12 - Water) - co | ont. | | | | | | Revel | Qual Lake | |
| EFH (C13 - C22) Surrogate: n-Octacosane (40-125%) | EPA 8015B | 5H23040 | 0.085 | 0.50 | 0.47 69 % | 0.962 | 08/23/05 | 08/24/05 | DNQ | |





Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID 7711VO123 355 South Teller Street Task Order 313150010 Suite 300 IOH1713

| 355 South Teller Street | Task Order 313150010 |
|---|-------------------------|
| Suite 300 | SDG No. IOH1713 |
| Lakewood, CO 80226 | No. of Analyses 1 |
| Laboratory Del Mar Analytical | Date September 19, 2005 |
| Reviewer K. Shadowlight | Reviewer's Signature |
| Analysis/Method Volatiles (1,4-dioxane) | = Kadult |
| Analysis/Method Volatiles (1,4-dioxane) | Reviewer's Signature |

| ***************** | | |
|-------------------|---|--|
| AC | TION ITEMS* | 「「「「「「」」」。 「「「「」」 「「「」」 「「」 「「」 「」 「」 「「」 「 |
| 1. | Case Narrative | |
| | Deficiencies | |
| | | |
| 2. | Out of Scope | |
| | Analyses | |
| | | |
| | | |
| 3. | Analyses Not Conducted | |
| | | |
| | | |
| 4. | Missing Hardcopy | |
| | Deliverables | |
| | | |
| 5. | * | |
| 3. | Incorrect Hardcopy Deliverables | |
| 6. | Deviations from Analysis | |
| 0. | GC/MS Tune/Inst. Perform | |
| | Calibrations | |
| * | Blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | |
| | System Performance | |
| COM | MMENTS ^b to the color of the | Acceptable as reviewed. |
| | | |
| | | |
| | | |
| | | neeting contract and/or method requirements. |

Qualification Code Reference Table

| Qualifie | r Organics | Inorganics |
|----------|--|---|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards us for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is < 0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within cont limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparati (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was a within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not with control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Γ | Presumed contamination from trip blank. | Not applicable. |
| + | False positive – reported compound was not present. Not applicable. | en e |
| | False negative - compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| 5 | Reported result or other information was incorrect. | Reported result or other information wincorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be use because another more technically soun analysis is available. |
| • | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| ONQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, considered an estimated value. |
| # | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Dat Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOH1713

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Project:

NPDES

SDG No.: Analysis: IOH1713 VOC

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

DATA VALIDATION REPORT

313150010

Sample Delivery Group #:

IOH1713

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles (1,4-dioxane)

OC Level:

Level IV

No. of Samples:

TCACLT

140. Or Samples.

1

No. of Reanalyses/Dilutions:

v

Reviewer:

K. Shadowlight

Date of Review:

September 19, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method SW-846 8260B and the National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project:

NPDES

SDG No.: Analysis: IOH1713 VOC

Table 1. Sample identification

| - | Client ID | EPA ID | Lab No. | Lab No. | Matrix | Method |
|---|-------------|-------------|-------------|-------------|---|--------|
| | | | Del Mar, CA | Del Mar, AZ | *************************************** | |
| | Outfall 012 | Outfall 012 | IOH1713-01 | POH0629-01 | water | 8260B |

DATA VALIDATION REPORT

Analysis:

SDG No.:

NPDES IOH1713

VOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the Del Mar Analytical within the temperature limits of 4°C ±2°C, at 3°C. The sample was subcontracted to Del Mar (Phoenix) for 1,4-dioxane analysis, and the sample was received within the temperature limits of 4°C ±2°C. The COC and transfer COC noted that the sample was received intact and properly preserved; however, information regarding absence of headspace was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were signed by the appropriate field and laboratory personnel. As the sample was couriered directly to the laboratory from the field, custody seals were not required. According to the transfer COC, custody seals were present on the cooler received by Del Mar Analytical in Arizona. No qualifications were required.

2.1.3 Holding Times

The sample was analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows were consistent with those specified in EPA Method 8260B. All ion abundances were within the established windows, and the sample was analyzed within 12 hours of the BFB injection time. No qualifications were required.

2.3 CALIBRATION

One initial calibration, dated 08/29/05, was associated with this SDG. The average RRF for 1,4dioxane was ≥0.05 and the %RSD was ≤15%. The laboratory reported the continuing calibration and the blank spike (P5H3004-BS1) from the same analysis. As the analysis cannot be reported as both a CCV and a blank spike, the reviewer evaluated P5H3004-BS1 as the continuing calibration. The RRF for 1,4-dioxane was ≥0.05; and, the %D was ≤20%. The %RSD and average RRF for 1,4-dioxane in the initial calibration, and the %D and RRF for 1,4-dioxane in the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. No qualifications were required.

Project:

NPDES

SDG No.: Analysis: IOH1713

DATA VALIDATION REPORT

VOC

2.4 BLANKS

One water method blank (P5H3004-BLK1) was associated with this SDG. Target compound 1,4-dioxane was not detected above the MDL in the method blank. The method blank raw data showed no evidence of a false negative. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed a blank spike/blank spike duplicate pair (P5H3004-BS1/BS1D) with this SDG; however, P5H3004-BS1 was reported as the CCV (see section 2.3); therefore, P5H3004-BS1D was evaluated as a single blank spike. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample and QC were fortified with dibromofluoromethane. The surrogate was recovered within the laboratory QC limits of 70-130%. The surrogate recovery for the sample was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were performed for this SDG. Evaluation of method accuracy was based on the blank spike result. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

The sample in this SDG had no associated trip blank. No qualifications were required.

2.8.1.1 Field Blanks and Equipment Rinsates

The site sample in this SDG had no associated field QC samples. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

Project:

NPDES

SDG No.: Analysis: IOH1713 VOC

DATA VALIDATION REPORT

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standard: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. Internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for 1,4-dioxane by Method 8260B/SIM. Chromatograms, retention times, and spectra for the sample and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. The reporting limit was supported by the lowest concentration of the initial calibration standards and by the undated MDL supplied by the laboratory. As there were no sample detects, compound quantitation was verified by recalculating blank spike and surrogate recoveries from the raw data. No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs are not typically reported for SIM methods.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Derien Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesepesite Dr., Suite 805, Sen Diego, CA 92123 (856) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Les Veges, NV 89120 (702) 798-3620 FAX (702) 798-3621

Del Mar Analytical - Irvine

17461 Derian Ave. Suite 100 Irvine, CA 92614

Attention: Michele Harper

Project ID: IOH1713

Report Number: POH0629

Sampled: 08/19/05 Received: 08/23/05

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | | 100-1 |
|--|----------------------|---------|--------------|--------------------|------------------|---|-------------------|------------------|----------|-------|
| Sample ID: POH0629-01 (IOH1713- Reporting Units: ug/i | 01 - Water) | | | | | | | | Rai Ruci | code |
| 1,4-Dioxane Surrogaie: Dibromofluoromethane (70 | EPA 8260B 9-130%) | P5H3004 | 0.49 | 1.0 | ND 120 % | I | 08/30/05 | 08/30/05 | u | |



Del Mar Analytical - Phoenix Karen Maxwell Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

POH0629 < Page 2 of 5>

NPDES 234

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711VO124 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1713 Lakewood, CO 80226 No. of Analyses 2 Laboratory Del Mar Analytical Date: September 20, 2005 Reviewer M. Pokorny Reviewer's Signature Analysis/Method Volatiles **ACTION ITEMS*** Case Narrative **Deficiencies** 2. Out of Scope Analyses **Analyses Not Conducted** Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy **Deliverables Deviations from Analysis** Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Perform Calibrations **Blanks** Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS* Acceptable as reviewed.

* Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOH1713

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

SDG: Analysis:

NPDES IOH1713

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOH1713

Project Manager:

P. Costa Water

Matrix: Analysis:

Volatiles by 624

QC Level:

Level IV

No. of Samples: No. of Reanalyses/Dilutions:

0

Reviewer:

M. Pokorny

Date of Review:

September 20, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method 624, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the summary forms as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: SDG: Analysis:

NPDES IOH1713 VOC

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOH1713-01 | water | 624 |
| Trip Blank | Trip Blank | IOH1713-02 | water | 624 |

NPDES IOH1713

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at the laboratory above the temperature limits of 4°C ±2°C, at 3°C. The site sample was properly preserved. The trip blank was not preserved. The COC noted that the samples were received intact; however, information regarding absence of headspace was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analyses presented in this SDG. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The samples were analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows shown on the quantitation reports were consistent with those specified in EPA Method 624, and all ion abundances were within the established windows. The samples and associated QC were analyzed within 12 hours of the BFB injection time. The BFB summary report was verified from the raw data and no discrepancies between the summary report and the raw data were noted. No qualifications were required.

2.3 CALIBRATION

Two initial calibrations dated 08/20/05 and 08/22/05 were associated with this SDG. The average RRFs were ≥0.05 for the target compounds listed on the sample result summaries. The %RSDs were ≤35% for all applicable target compounds. Two continuing calibrations dated 08/28/05 and 08/29/05 were associated with the sample analyses in this SDG. The %Ds were ≤20% and the RRFs were ≥0.05 for the target compounds listed on the sample result summaries. A representative number of %RSDs and average RRFs from the initial calibrations, and %Ds and RRFs from the continuing calibrations were recalculated from the raw data, and no calculation or transcription errors were found. No qualifications were required.

SDG: Analysis: IOH1713

2.4 BLANKS

Two water method blanks (5H28008-BLK1 and 5H29003-BLK1) were associated with the sample analyses. There were no detects above the MDLs for the target compounds listed on the sample result summaries. The method blank raw data showed no evidence of false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two water blank spikes (5H28008-BS1 and 5H29003-BS1) were associated with the sample analyses. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The surrogates were recovered within the QC limits of 80-120% in the samples and associated QC. A representative number of surrogate recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with this SDG. There were no target compounds detected above the MDLs in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.3 Field Duplicates

There were no field duplicate samples associated with this SDG.

SDG: Analysis:

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the samples in this SDG were within the control limits established by the continuing calibration standards: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. A representative number of internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for five volatile target compounds by EPA Method 624. Chromatograms, retention times, and spectra for the samples and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. The reporting limits were supported by the lowest concentrations of the initial calibration standard and by the MDL study. As there were no sample detects in this SDG, compound quantitation was verified by recalculating a representative number of blank spike and surrogate recoveries from the raw data. Results were reported in μ g/L (ppb). No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

The laboratory did not provide TICs for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05 Received: 08/19/05

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyz | Data ed Qualifiers |
|--|--------------|---------|--------------|--------------------|------------------|-----|-------------------|----------------|-----------------------|
| Sample ID: IOH1713-01 (Outfall Reporting Units: ug/l | 012 - Water) | | | | | | | _ | REV QUAL QUAL CODE |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H29003 | 0.32 | 2.0 | ND | 1 | 08/29/05 | 08/29/05 | /> |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H29003 | 0.32 | 5.0 | ND | 1 | 08/29/05 | 08/29/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5H29003 | 0.85 | 10 | ND | 1 | 08/29/05 | | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H29003 | 0.25 | 5.0 | ND | 1 | 08/29/05 | 08/29/05 | |
| tert-Butanol (TBA) | EPA 624 | 5H29003 | 3.1 | 25 | ND | ī | | 08/29/05 | |
| Surrogate: Dibromofluoromethane (| (80-120%) | | | | 106 % | | 44,25,44 | 00.20 | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 101 % | | | | - |
| Surrogate: 4-Bromofluorobenzene (| 80-120%) | | | | 95 % | | | | |
| Sample ID: IOH1713-02 (Trip Bla Reporting Units: ug/l | nk - Water) | | | | | | | | P1 |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H28008 | 0.32 | 2.0 | ND | 1 | 08/28/05 | 08/28/05 | ונו |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H28008 | 0.32 | 5.0 | ND | 1 | 08/28/05 | 08/28/05 | T |
| 1,2,3-Trichloropropane | EPA 624 | 5H28008 | 0.85 | 10 | ND | 1 | 08/28/05 | 08/28/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H28008 | 0.25 | 5.0 | ND | 1 | 08/28/05 | | |
| tert-Butanol (TBA) | EPA 624 | 5H28008 | 3.1 | 25 | ND | 1 | 08/28/05 | | |
| Surrogate: Dibromofluoromethane (| 80-120%) | | | | 100 % | . • | 00/20/05 | 00/20/00 | V |
| Surrogate: Toluene-d8 (80-120%) | • | | | | 100 % | | | | |
| Surrogate: 4-Bromofluorobenzene (8 | 80-120%) | | | , | 98% | | | | |

AMEC VALIDATED

LEVEL IV

Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC170 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1713 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: 09/29/05 Reviewer L. Jarusewic Reviewer's Signature Analysis/Method General Minerals misse ACTION ITEMS* Case Narrative **Deficiencies** 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy **Deliverables Deviations from** Analysis Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Performance Calibrations **Blanks** Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS^b Acceptable as reviewed. * Subcontracted analytical laboratory is not meeting contract and/or method requirements. b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ . | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within controllimits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparatio (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was no within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| | Not applicable. | Duplicates showed poor agreement. |
| | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| X | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| 1 | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| | Presumed contamination from trip blank. | Not applicable. |
| | False positive - reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
| | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| ΝQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IOH1713

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOH1713

Project Manager:

P. Costa

Water

Matrix:

General Minerals

Analysis: QC Level:

Level IV

No. of Samples:

1 Reviewer: L. Jarusewic

Date of Review:

September 29, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 418.1, 350.2, 405.1, 413.1, 160.2, 160.5, and 180.1, Standard Methods for the Examination of Water and Wastewater Method SM2540C, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project:

NPDES

SDG No.:

IOH1713

Analysis:

General Minerals

Table 1. Sample identification

| Client ID | EPA ID | Laboratory ID | Matrix | COC Method |
|-------------|-------------|---------------|--------|------------------|
| Outfall 012 | Outfall 012 | IOH1713-01 | Water | General Minerals |

DATA VALIDATION REPORT

Project: SDG No.: Analysis:

IOH1713 General Minerals

NPDES

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. No preservation problems were noted by the laboratory. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and all analyses presented in this SDG. No sample qualifications were required.

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The 28-day analytical holding time for total recoverable petroleum hydrocarbons, ammonia, and oil and grease, the seven-day holding time for total suspended solids and total dissolved solids, and the 48-hour holding time for BOD, total settleable solids, and turbidity were met. No qualifications were required.

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 0.995. Initial and continuing calibration information was acceptable with recoveries within the control limits of 90-110%. For ammonia, no information regarding the standardization of the titrant was provided. The ammonia LCS recovery exceeded the CCV control limits of 90-100% at 115%; however, as ammonia was not detected in Outfall 012, no qualifications were required. For BOD, no information regarding the calibration of the oxygen meter was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required. Calibration is not applicable to the total dissolved solid, oil and grease, total suspended solids, and total settleable solids analyses. No qualifications were required.

2.3 BLANKS

Turbidity was detected in a bracketing CCB at 0.040 NTU; however, the turbidity CCB result was insufficient to qualify the turbidity result. The remaining method blank and CCB results reported on the summary forms and in the raw data for blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

Project:

NPDES

SDG No.: Analysis: IOH1713 General Minerals

DATA VALIDATION REPORT

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample and laboratory control sample duplicate (BOD, total recoverable petroleum hydrocarbons, and oil and grease only) recoveries were within the laboratory-established control limits. The ammonia LCS recovery was within the control limits of 80-115%. The LCS is not applicable to turbidity or total settleable solids. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analyses presented in this SDG.

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed for Outfall 012; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses performed for Outfall 012; therefore, no assessment was made with respect to this criterion. Method accuracy was based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION OC

Furnace atomic absorption was not utilized for the analyses of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analyses presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

Project:

SDG No.:

NPDES

Analysis:

IOH1713 General Minerals

2.11 FIELD QC SAMPLES

DATA VALIDATION REPORT

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

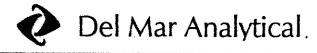
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Date Factor Extracted | |
|---|-------------|---------|--------------|--------------------|------------------|-----------------------------------|------------|
| Sample ID: IOH1713-01 (Outfall 0) Reporting Units: mg/l | 12 - Water) | | | | | | Estat Esta |
| Total Recoverable Hydrocarbons | EPA 418.1 | 5H22070 | 0.31 | 1.0 | 1.6 | 0.962 08/22/05 | 08/22/05 |





Del Mar Analytical, Irvine Michele Harper Project Manager



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | | Data ed Qualifier |
|--|------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------|--|
| Sample ID: IOH1713-01 (Outfall Reporting Units: mg/l | 012 - Water) - c | ont. | | | | | | Ç <u>î</u> | Nia C |
| Ammonia-N (Distilled) | EPA 350.2 | 5H22061 | 0.30 | 0.50 | ND | 1 | 08/22/05 | 08/22/05 | u |
| Biochemical Oxygen Demand | EPA 405.1 | 5H20031 | 0.59 | 2.0 | 2.3 | 1 | 08/20/05 | | |
| Oil & Grease | EPA 413.1 | 5H25051 | 0.94 | 5.0 | ND | 1 | 08/25/05 | 08/25/05 | $u \perp$ |
| Total Dissolved Solids | SM2540C | 5H24138 | 10 | 10 | 310 | 1 | 08/24/05 | | |
| Total Suspended Solids | EPA 160.2 | 5H24106 | 10 | 10 | 10 | 1 | 08/24/05 | 08/24/05 | |
| Sample ID: IOH1713-01 (Outfall Reporting Units: ml/l/br | 012 - Water) | | | | | | | | |
| Total Settleable Solids | EPA 160.5 | 5H19083 | 0.10 | 0.10 | ND | 1 | 08/19/05 | 08/19/05 | u |
| Sample ID: IOH1713-01 (Outfall Reporting Units: NTU | 012 - Water) | | | | | | | | and the second s |
| Turbidity | EPA 180.1 | 5H20051 | 0.040 | 1.0 | 18 | 1 | 08/20/05 | 08/20/05 | 1 |
| Sample ID: IOH1713-01 (Outfall Reporting Units: ug/l | 012 - Water) | | | | | | | | |
| Perchlorate | EPA 314.0 | 5H22047 | 0.80 | 4.0 | ND | 1 | 08/22/05 | 08/22/05 | * |

* analysis not validated





Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC171 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOH1713 Lakewood, CO 80226 No. of Analyses Laboratory Del Mar Analytical Date: 09/29/05 Reviewer L. Jarusewic Reviewey's Signature Analysis/Method Perchlorate **ACTION ITEMS*** Case Narrative **Deficiencies** Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy **Deliverables Deviations from** Analysis Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Performance Calibrations **Blanks** Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS^b Acceptable as reviewed. ^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^h Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| j | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| .a3 | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| Ą | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Γ | Presumed contamination from trip blank. | Not applicable. |
| | False positive - reported compound was not present. Not applicable. | |
| • | False negative - compound was present but not reported. | Not applicable. |
| • | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
| | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: PERCHLORATE

SAMPLE DELIVERY GROUP: IOH1713

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1713 Perchlorate

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOH1713

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Perchlorate

QC Level:

Level IV

No. of Samples:

Reviewer:

L. Jarusewic

Date of Review:

September 29, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 314.0, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1713 Perchlorate

Table 1. Sample identification

| Client ID | EPA ID | Laboratory ID | Matrix | COC Method |
|-------------|-------------|---------------|--------|-------------|
| Outfall 012 | Outfall 012 | IOH1713-01 | Water | Perchlorate |

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1713 Perchlorate

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. The analysis did not require preservation and no preservation was noted in the field. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel, and accounted for the sample and analysis presented in this SDG. No qualifications were required.

2.1.3 Holding Times

The holding time was assessed by comparing the date of collection with the date of analysis. The 28day analytical holding time for perchlorate was met, and no qualifications were required.

2.2 CALIBRATION

The initial calibration correlation coefficient was ≥0.995. The IPC-MA recovery was within the control limits of 80-120%. The ICV, CCV, IPC, and ICCS recoveries were within the control limits of 90-110%. No qualifications were required.

2.3 BLANKS

The method blank and CCB results reported on the summary form and in the raw data for the blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample associated with this SDG was recovered within the method control limits of 85-115%. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analysis presented in this SDG.

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOH1713 Perchlorate

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was assessed based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analysis of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analysis presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample result reported on the Form I was verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

2.11 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | | Data ed Qualifi |
|---|--------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|----------|--------------------|
| Sample ID: IOH1713-01 (Outfal Reporting Units: mg/l | l 012 - Water) - c | ont. | 5 | | | | | 9 | Strail |
| Ammonia-N (Distilled) | EPA 350.2 | 5H22061 | 0.30 | 0.50 | ND | 1 | 08/22/05 | 08/22/05 | X- |
| Biochemical Oxygen Demand | EPA 405.1 | 5H20031 | 0.59 | 2.0 | 2.3 | 1 | 08/20/05 | 08/25/05 | |
| Oil & Grease | EPA 413.1 | 5H25051 | 0.94 | 5.0 | ND | 1 | 08/25/05 | 08/25/05 | |
| Total Dissolved Solids | SM2540C | 5H24138 | 10 | 10 | 310 | 1 | 08/24/05 | 08/24/05 | |
| Total Suspended Solids | EPA 160.2 | 5H24106 | 10 | 10 | 10 | 1 | 08/24/05 | 08/24/05 | |
| Sample ID: IOH1713-01 (Outfal Reporting Units: ml/l/hr | l 012 - Water) | • | | | | | | | |
| Total Settleable Solids | EPA 160.5 | 5H19083 | 0.10 | 0.10 | ND | 1 | 08/19/05 | 08/19/05 | |
| Sample ID: IOH1713-01 (Outfall Reporting Units: NTU | l 012 - Water) | | | | | | | | |
| Turbidity | EPA 180.1 | 5H20051 | 0.040 | 1.0 | 18 | 1 | 08/20/05 | 08/20/05 | |
| Sample ID: IOH1713-01 (Outfall Reporting Units: ug/l | l 012 - Water) | | | | | | | | |
| Perchlorate | EPA 314.0 | 5H22047 | 0.80 | 4.0 | ND | 1 | 08/22/05 | 08/22/05 | u |

& analysis not validated



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LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

Project: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 08/19/05

Received: 08/19/05

Issued: 09/14/05 18:50

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED:

Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID

CLIENT ID

MATRIX

IOH1713-01

Outfall 012

Water

IOH1713-02

Trip Blank

Water

and the second second

Reviewed By:

Del Mar Analytical, Irvine

lichelle Harper

Michele Harper Project Manager



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOH1713

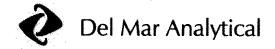
Sampled: 08/19/05

Attention: Bronwyn Kelly

Received: 08/19/05

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Method | Batch | Limit | Keporting Limit | Sample Result | | | Date Analyzed | Data Qualifiers |
|-----------|---------|-------|--------------------|--------------------------|---|--|--|--|
| ater) | | | | | | | | |
| | | | | | | | | |
| EPA 418.1 | 5H22070 | 0.31 | 1.0 | 1.6 | 0.962 | 08/22/05 | 08/22/05 | |
| , | ater) | ater) | ater) | Method Batch Limit Limit | Method Batch Limit Limit Result (ater) | Method Batch Limit Limit Result Factor (ater) | Method Batch Limit Limit Result Factor Extracted (ater) | Method Batch Limit Limit Result Factor Extracted Analyzed ater) |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOH1713

Sampled: 08/19/05 Received: 08/19/05

Attention: Bronwyn Kelly

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | Data Qualifiers |
|---|----------------|---------|--------------|--------------------|---------------------|-------|-------------------|------------------|--------------------|
| Sample ID: IOH1713-01 (Outfall 012 - V | Water) - cont. | | | | | | | | |
| Reporting Units: mg/l EFH (C13 - C22) Surrogate: n-Octacosane (40-125%) | EPA 8015B | 5H23040 | 0.085 | 0.50 | 0.47 69 % | 0.962 | 08/23/05 | 08/24/05 | J |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05 Received: 08/19/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|--|------------------|-----------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOH1713-01 (Outfall 012 | - Water) - cont. | | | | | | | | |
| Reporting Units: mg/l | TO LONG SE. I | ETTA001 (| 0.050 | 0.10 | 0.10 | | 00/00/05 | 00/00/05 | |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%) | EPA 8015 Mod. | 5H28016 | 0.050 | 0.10 | 0.18 94 % | i | 08/28/05 | 08/29/05 | |
| Sample ID: IOH1713-02 (Trip Blank | - Water) | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%) | EPA 8015 Mod. | 5H28016 | 0.050 | 0.10 | ND 95 % | 1 | 08/28/05 | 08/29/05 | P1 <i>P1</i> |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOH1713

Sampled: 08/19/05 Received: 08/19/05

Attention: Bronwyn Kelly

Pasadena, CA 91101

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|--|---|-------------------------|--|--------------------|--|--|--------------------|
| Sample ID: IOH1713-01 (Outfall 012 - | Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H29003 | 0.32 | 2.0 | ND | 1 | 08/29/05 | 08/29/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H29003 | 0.32 | 5.0 | ND | 1 | 08/29/05 | 08/29/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5H29003 | 0.85 | 10 | ND | 1 | 08/29/05 | 08/29/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H29003 | 0.25 | 5.0 | ND | *** | 08/29/05 | 08/29/05 | |
| tert-Butanol (TBA) | EPA 624 | 5H29003 | 3.1 | 25 | ND | 1 | 08/29/05 | 08/29/05 | |
| Surrogate: Dibromofluoromethane (80-120%) | | | | | 106 % | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 101 % | | | | |
| Surrogate: 4-Bromofluorobenzene (80-12 | 20%) | | | | 95 % | | | | |
| Sample ID: IOH1713-02 (Trip Blank - V | Water) | | | | | | | | P1 |
| Reporting Units: ug/l | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5H28008 | 0.32 | 2.0 | ND | 1 | 08/28/05 | 08/28/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5H28008 | 0.32 | 5.0 | ND | 1 | 08/28/05 | 08/28/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5H28008 | 0.85 | 10 | ND | 1 | 08/28/05 | 08/28/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5H28008 | 0.25 | 5.0 | ND | 1 | 08/28/05 | 08/28/05 | |
| tert-Butanol (TBA) | EPA 624 | 5H28008 | 3.1 | 25 | ND | 1 | 08/28/05 | 08/28/05 | |
| Surrogate: Dibromofluoromethane (80-120%) | | | | | 100 % | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 100 % | | | | |
| Surrogate: 4-Bromofluorobenzene (80-12 | ?0%) | | | | 98 % | • | | | |
| Di-isopropyl Ether (DIPE) tert-Butanol (TBA) Surrogate: Dibromofluoromethane (80-1 Surrogate: Toluene-d8 (80-120%) Surrogate: 4-Bromofluorobenzene (80-12 Sample ID: IOH1713-02 (Trip Blank - V Reporting Units: ug/l 1,2-Dibromoethane (EDB) Methyl-tert-butyl Ether (MTBE) 1,2,3-Trichloropropane Di-isopropyl Ether (DIPE) tert-Butanol (TBA) Surrogate: Dibromofluoromethane (80-12 Surrogate: Toluene-d8 (80-120%) | EPA 624 EPA 624 20%) Water) EPA 624 EPA 624 EPA 624 EPA 624 EPA 624 | 5H29003 5H29003 5H28008 5H28008 5H28008 5H28008 | 0.25 3.1 0.32 0.32 0.85 0.25 | 2.0 5.0 10 5.0 | ND 106 % 101 % 95 % ND ND ND ND ND ND 100 % 100 % | 1 1 1 1 | 08/29/05 08/29/05 08/28/05 08/28/05 08/28/05 08/28/05 | 08/29/05 08/29/05 08/28/05 08/28/05 08/28/05 08/28/05 | P1 |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

Received: 08/19/05

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|-------------------------------------|------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOH1713-01 (Outfall 01 | 2 - Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| Naphthalene | EPA 625 | 5H24052 | 4.5 | 10 | 30 | 0.952 | 08/24/05 | 08/27/05 | |
| N-Nitrosodimethylamine | EPA 625 | 5H24052 | 3.7 | 20 | NĐ | 0.952 | 08/24/05 | 08/27/05 | |
| Surrogate: 2-Fluorophenol (30-120% | 6) | | | | 55 % | | | | |
| Surrogate: Phenol-d6 (35-120%) | | | | | 62 % | | | | |
| Surrogate: 2,4,6-Tribromophenol (45 | -120%) | | | | 66 % | | | | |
| Surrogate: Nitrobenzene-d5 (45-1209 | %) | | | | 68 % | | | | |
| Surrogate: 2-Fluorobiphenyl (45-120 | 1%) | | | | 73 % | | | | |
| Surrogate: Terphenyl-d14 (45-120%) | i e | | | | 108 % | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

Received: 08/19/05

| | INORGANICS | | | | | | | | | | | |
|---|------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|--|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | | | |
| Sample ID: IOH1713-01 (Outfall 012 - Water) - cont. | | | | | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | | | | |
| Ammonia-N (Distilled) | EPA 350.2 | 5H22061 | 0.30 | 0.50 | ND | 1 | 08/22/05 | 08/22/05 | | | | |
| Biochemical Oxygen Demand | EPA 405.1 | 5H20031 | 0.59 | 2.0 | 2.3 | 1 | 08/20/05 | 08/25/05 | | | | |
| Oil & Grease | EPA 413.1 | 5H25051 | 0.94 | 5.0 | ND | 1 | 08/25/05 | 08/25/05 | | | | |
| Total Dissolved Solids | SM2540C | 5H24138 | 10 | 10 | 310 | 1 | 08/24/05 | 08/24/05 | | | | |
| Total Suspended Solids | EPA 160.2 | 5H24106 | 10 | 10 | 10 | 1 | 08/24/05 | 08/24/05 | | | | |
| Sample ID: IOH1713-01 (Outfall 01 | 2 - Water) | | | | | | | | | | | |
| Reporting Units: ml/l/hr Total Settleable Solids | EPA 160.5 | 5H19083 | 0.10 | 0.10 | ND | 1 | 08/19/05 | 08/19/05 | | | | |
| Sample ID: IOH1713-01 (Outfall 01 Reporting Units: NTU | 2 - Water) | | | | | | | | | | | |
| Turbidity | EPA 180.1 | 5H20051 | 0.040 | 1.0 | 18 | 1 | 08/20/05 | 08/20/05 | | | | |
| Sample ID: IOH1713-01 (Outfall 012 - Water) | | | | | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | | | | |
| Perchlorate | EPA 314.0 | 5H22047 | 0.80 | 4.0 | ND | 1 | 08/22/05 | 08/22/05 | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

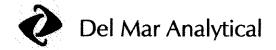
Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

Received: 08/19/05

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | Data Qualifiers |
|---|------------------|---------|--------------|--------------------|------------------|---|-------------------|------------------|--------------------|
| Sample ID: IOH1713-01 (Outfall 012 - Reporting Units: ug/l | - Water) - cont. | | | | | | | | |
| 1,4-Dioxane | EPA 8260B | P5H3004 | 0.49 | 1.0 | ND | 1 | 08/30/05 | 08/30/05 | |
| Surrogate: Dibromofluoromethane (70- | 130%) | | | | 120 % | | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05 Received: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

SHORT HOLD TIME DETAIL REPORT

| Sample ID: Outfall 012 (IOH1713-01) - Wate | Hold Time (in days) | Date/Time Sampled | Date/Time Received | Date/Time Extracted | Date/Time Analyzed |
|--|------------------------|----------------------|-----------------------|------------------------|-----------------------|
| EPA 160.5 | 2 | 08/19/2005 14:18 | 08/19/2005 20:20 | 08/19/2005 21:30 | 08/19/2005 22:30 |
| EPA 180.1 | 2 | 08/19/2005 14:18 | 08/19/2005 20:20 | 08/20/2005 17:00 | 08/20/2005 18:00 |
| EPA 405.1 | 2 | 08/19/2005 14:18 | 08/19/2005 20:20 | 08/20/2005 09:28 | 08/25/2005 10:00 |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|--------|--------------------|------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 5H22070 Extracted: 08/22/05 | • | | | | | | | | | | |
| Blank Analyzed: 08/22/2005 (5H22070-Bl | LK1) | | | | | | | | | | |
| Total Recoverable Hydrocarbons | ND | 1.0 | 0.31 | mg/l | | | | | | | |
| LCS Analyzed: 08/22/2005 (5H22070-BS) | .) | | | | | | | | | | M-NR1 |
| Total Recoverable Hydrocarbons | 4.89 | 1.0 | 0.31 | mg/l | 5.00 | | 98 | 65-120 | | | |
| LCS Dup Analyzed: 08/22/2005 (5H22070 | -BSD1) | | | | | | | | | | |
| Total Recoverable Hydrocarbons | 5.35 | 1.0 | 0.31 | mg/l | 5.00 | | 107 | 65-120 | 9 | 20 | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

Received: 08/19/05

METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|---------------------------------------|------------|-----------|-------|-------|-------|--------|------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H23040 Extracted: 08/23/05 | <u>5</u> _ | | | | | | | | | | |
| Blank Analyzed: 08/23/2005 (5H23040-E | LK1) | | | | | • | | | | | |
| EFH (C13 - C22) | ND | 0.50 | 0.085 | mg/l | | | | | | | |
| EFH (C13 - C40) | ND | 0.50 | 0.085 | mg/l | | | | | | | |
| Surrogate: n-Octacosane | 0.172 | | | mg/l | 0.200 | | 86 | 40-125 | | | |
| LCS Analyzed: 08/23/2005 (5H23040-BS | 1) | | | | | | | | | | M-NR1 |
| EFH (C13 - C40) | 0.669 | 0.50 | 0.085 | mg/l | 0.776 | | 86 | 40-120 | | | |
| Surrogate: n-Octacosane | 0.176 | | | mg/l | 0.200 | | 88 | 40-125 | | | |
| LCS Dup Analyzed: 08/23/2005 (5H2304 | 0-BSD1) | | | | | | | | | | |
| EFH (C13 - C40) | 0.674 | 0.50 | 0.085 | mg/l | 0.776 | | 87 | 40-120 | 1 | 25 | |
| Surrogate: n-Octacosane | 0.177 | | | mg/l | 0.200 | | 88 | 40-125 | | | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOH1713

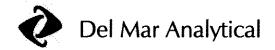
Sampled: 08/19/05

Received: 08/19/05

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--|-------------|-----------|-------|-------|--------|-----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H28016 Extracted: 08/28/05 | <u>5</u> _ | | | | | | | | | | |
| Blank Analyzed: 08/28/2005 (5H28016-E | BLK1) | | | | | | | | | | |
| GRO (C4 - C12) | ND | 0.10 | 0.050 | mg/l | | | | | | | |
| Surrogate: 4-BFB (FID) | 0.00908 | | | mg/l | 0.0100 | | 91 | 65-140 | | | |
| LCS Analyzed: 08/28/2005 (5H28016-BS | 51) | | | | | | | | | | |
| GRO (C4 - C12) | 0.826 | 0.10 | 0.050 | mg/l | 0.800 | | 103 | 65-140 | | | |
| Surrogate: 4-BFB (FID) | 0.0333 | | | mg/l | 0.0300 | | 111 | 65-140 | | | |
| Matrix Spike Analyzed: 08/29/2005 (5H2 | 28016-MS1) | | | | Soui | rce: IOHi | 1699-03 | | | | |
| GRO (C4 - C12) | 0.239 | 0.10 | 0.050 | mg/l | 0.220 | ND | 109 | 60-145 | | | |
| Surrogate: 4-BFB (FID) | 0.00861 | | | mg/l | 0.0100 | | 86 | 65-140 | | | |
| Matrix Spike Dup Analyzed: 08/29/2005 | (5H28016-MS | SD1) | | | Sour | rce: IOH1 | 699-03 | | | | |
| GRO (C4 - C12) | 0.234 | 0.10 | 0.050 | mg/i | 0.220 | ND | 106 | 60-145 | 2 | 20 | |
| Surrogate: 4-BFB (FID) | 0.0100 | | | mg/l | 0.0100 | | 100 | 65-140 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

Received: 08/19/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|-------------|--------------------|------|-------|----------------|------------------|--------|--------|-----|--------------|--------------------|
| Batch: 5H28008 Extracted: 08/28/0 | 5_ | | | | | | | | | | |
| Blank Analyzed: 08/28/2005 (5H28008-1 | BLK1) | | | | | | | | ÷ | | |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | 0.32 | ug/l | | | | | | | |
| Methyl-tert-butyl Ether (MTBE) | ND | 5.0 | 0.32 | ug/l | | | | | | | |
| 1,2,3-Trichloropropane | ND | 10 | 0.85 | ug/l | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 5.0 | 0.25 | ug/l | | | | | | | |
| tert-Butanol (TBA) | ND | 25 | 3.1 | ug/i | | | | | | | |
| Surrogate: Dibromofluoromethane | <i>25.3</i> | | | ug/l | 25.0 | | 101 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.0 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 23.9 | | | ug/l | 25.0 | | 96 | 80-120 | | | |
| LCS Analyzed: 08/28/2005 (5H28008-B5 | S1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 22.7 | 2.0 | 0.32 | ug/l | 25.0 | | 91 | 70-125 | | | |
| Methyl-tert-butyl Ether (MTBE) | 23.3 | 5.0 | 0.32 | ug/l | 25.0 | | 93 | 55-140 | | | |
| 1,2,3-Trichloropropane | 21.2 | 10 | 0.85 | ug/l | 25.0 | 134 | 85 | 55-130 | | | |
| Di-isopropyl Ether (DIPE) | 25.4 | 5.0 | 0.25 | ug/l | 25.0 | | 102 | 60-135 | | * | m for grien |
| tert-Butanol (TBA) | 134 | 25 | 3.1 | ug/l | 125 | | 107 | 65-135 | | | |
| Surrogate: Dibromofluoromethane | 24.6 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.1 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.3 | | | ug/l | 25.0 | | 97 | 80-120 | | | |
| Matrix Spike Analyzed: 08/28/2005 (5H | 28008-MS1) | | | | Sour | rce: IOH | 526-07 | | | | |
| 1,2-Dibromoethane (EDB) | 28.9 | 2.0 | 0.32 | ug/l | 25.0 | ND | 116 | 65-130 | | | |
| Methyl-tert-butyl Ether (MTBE) | 29.2 | 5.0 | 0.32 | ug/l | 25.0 | ND | 117 | 50-150 | | | |
| 1,2,3-Trichloropropane | 29.8 | 10 | 0.85 | ug/l | 25.0 | ND | 119 | 50-135 | | | |
| Di-isopropyl Ether (DIPE) | 27.4 | . 5.0 | 0.25 | ug/l | 25.0 | ND | 110 | 60-140 | | | |
| tert-Butanoi (TBA) | 133 | 25 | 3.1 | ug/l | 125 | ND | 106 | 60-145 | | | |
| Surrogate: Dibromofluoromethane | 25.4 | | | ug/l | 25.0 | | 102 | 80-120 | | | |
| Surrogate: Toluene-d8 | 24.9 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.6 | | | ug/l | 25.0 | | 98 | 80-120 | | | |

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| | | Reportin | g | | Spike | Source | | %REC | | RPD | Data |
|----------------------------------|-------------------|----------|------|--------|--------------------------|----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H28008 Extracted: 08 | 3/28/05 | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 08/2 | 8/2005 (5H28008-M | SD1) | | | Sou | rce: IOH | 1526-07 | | | | |
| 1,2-Dibromoethane (EDB) | 27.9 | 2.0 | 0.32 | ug/l | 25.0 | ND | 112 | 65-130 | 4 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 28.6 | 5.0 | 0.32 | ug/l | 25.0 | ND | 114 | 50-150 | 2 | 25 | |
| 1,2,3-Trichloropropane | 28.0 | 10 | 0.85 | ug/l | 25.0 | ND | 112 | 50-135 | 6 | 30 | |
| Di-isopropyl Ether (DIPE) | 27.0 | 5.0 | 0.25 | ug/l | 25.0 | ND | 108 | 60-140 | 1 | 25 | |
| tert-Butanol (TBA) | 132 | 25 | 3.1 | ug/l | 125 | ND | 106 | 60-145 | 1 | 25 | |
| Surrogate: Dibromofluoromethane | 25.7 | | | ug/l | 25.0 | | 103 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.1 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.5 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| Batch: 5H29003 Extracted: 08 | 2/29/05 | | | | | | | | | | |
| Blank Analyzed: 08/29/2005 (5H29 | 9003-BLK1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | 0.32 | ug/l | | | | | .* | | |
| Methyl-tert-butyl Ether (MTBE) | ND | 5.0 | 0.32 | ug/l | | | • | | | | |
| 1,2,3-Trichloropropane | ND | 10 | 0.85 | ug/l | | | | • | | | |
| Di-isopropyl Ether (DIPE) | ND | 5.0 | 0.25 | ug/i | | | | | | | |
| tert-Butanol (TBA) | ND | 25 | 3.1 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 26.1 | | | ug/l | 25.0 | | 104 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.I | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.9 | | | · ug/l | 25.0 | | 100 | 80-120 | | | |
| LCS Analyzed: 08/29/2005 (5H290 | 03-BS1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 28.6 | 2.0 | 0.32 | ug/l | 25.0 | | 114 | 70-125 | | | |
| Methyl-tert-butyl Ether (MTBE) | 28.1 | 5.0 | 0.32 | ug/l | 25.0 | | 112 | 55-140 | | | |
| 1,2,3-Trichloropropane | 31.7 | 10 | 0.85 | ug/l | 25.0 | | 127 | 55-130 | | | |
| Di-isopropyl Ether (DIPE) | 29.4 | 5.0 | 0.25 | ug/l | 25.0 | | 118 | 60-135 | | | |
| tert-Butanol (TBA) | 114 | 25 | 3.1 | ug/l | 125 | | 91 | 65-135 | | | |
| Surrogate: Dibromofluoromethane | 27.1 | | | ug/l | <i>25.0</i> [−] | | 108 | 80-120 | | | |
| Surrogate: Toluene-d8 | 24.9 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 26.1 | | | ug/l | 25.0 | | 104 | 80-120 | | | |

Del Mar Analytical, Irvine Michele Harper

Project Manager



MWH-Pasadena/Boeing

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOH1713

Sampled: 08/19/05

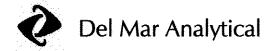
Attention: Bronwyn Kelly

Received: 08/19/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 5H29003 Extracted: 08/29/05 | <u> </u> | | | | | | | | | | |
| Matrix Spike Analyzed: 08/29/2005 (5H2 | 9003-MS1) | | | | Sou | rce: IOH | 1716-05 | | | | |
| 1,2-Dibromoethane (EDB) | 22.7 | 2.0 | 0.32 | ug/l | 25.0 | ND | 91 | 65-130 | | | |
| Methyl-tert-butyl Ether (MTBE) | 21.1 | 5.0 | 0.32 | ug/l | 25.0 | ND | 84 | 50-150 | | | |
| 1,2,3-Trichloropropane | 23.8 | 10 | 0.85 | ug/l | 25.0 | ND | 95 | 50-135 | | | |
| Di-isopropyl Ether (DIPE) | 26.4 | 5.0 | 0.25 | ug/l | 25.0 | ND | 106 | 60-140 | | | |
| tert-Butanol (TBA) | 205 | 25 | 3.1 | ug/l | 125 | 95 | 88 | 60-145 | | | |
| Surrogate: Dibromofluoromethane | 24.8 | | | ug/l | 25.0 | | 99 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.2 | | | ug/l | 25.0 | | 101 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 25.2 | | | ug/l | 25.0 | | 101 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 08/29/2005 | (5H29003-M | (SD1) | | | Sou | rce: IOH | 1716-05 | | | | |
| 1,2-Dibromoethane (EDB) | 25.1 | 2.0 | 0.32 | ug/l | 25.0 | ND | 100 | 65-130 | 10 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 23.8 | 5.0 | 0.32 | ug/l | 25.0 | ND | 95 | 50-150 | 12 | 25 | |
| 1,2,3-Trichloropropane | 27.8 | 10 | 0.85 | ug/l | 25.0 | ND | 111 | 50-135 | 16 | 30 | |
| Di-isopropyl Ether (DIPE) | 27.1 | 5.0 | 0.25 | ug/I | 25.0 | ND | 108 | 60-140 | 3 | 25 | |
| tert-Butanol (TBA) | 220 | 25 | 3.1 | ug/l | 125 | 95 | 100 | 60-145 | 7 | 25 | |
| Surrogate: Dibromofluoromethane | 24.2 | | | ug/l | 25.0 | | 97 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.0 | | | ug/l | 25.0 | | 100 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 24.6 | | | ug/l | 25.0 | | 98 | 80-120 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| A ma Frida | Result | Reporting Limit | MDL | Units | Spike Level | Source | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|--------------------------------------|-----------|--------------------|------|-------|----------------|--------|--------|--------|-----|--------------|--------------------|
| Analyte | | Limit | MIDL | Units | Levei | Result | 70 REC | Limits | KrD | Lant | Quanners |
| Batch: 5H24052 Extracted: 08/24/6 | <u>)5</u> | | | | | | | | | | |
| Blank Analyzed: 08/29/2005 (5H24052- | BLK1) | | | | | | | | | | |
| Naphthalene | ND | 10 | 4.5 | ug/l | | | | | | | |
| N-Nitrosodimethylamine | ND | 20 | 3.7 | ug/l | | | | | | | |
| Surrogate: 2-Fluorophenol | 137 | | | ug/l | 200 | | 68 | 30-120 | | | |
| Surrogate: Phenol-d6 | 151 | | | ug/l | 200 | | 76 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 182 | | | ug/l | 200 | | 91 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 86.3 | | | ug/l | 100 | | 86 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 84.1 | | | ug/l | 100 | | 84 | 45-120 | | | |
| Surrogate: Terphenyl-dl4 | 89.0 | | | ug/l | 100 | | 89 | 45-120 | | | |
| LCS Analyzed: 08/29/2005 (5H24052-B | S1) | | | | | | | | | | M-NR1 |
| Naphthalene | 68.0 | 10 | 4.5 | ug/l | 100 | | 68 | 50-120 | | | |
| N-Nitrosodimethylamine | 71.2 | 20 | 3.7 | ug/i | 100 | | 71 | 40-120 | | | |
| Surrogate: 2-Fluorophenol | 125 | | | ug/l | 200 | | 62 | 30-120 | | | |
| Surrogate: Phenol-d6 | 145 | | | ug/l | 200 | | 72 | 35-120 | | | **.** : |
| Surrogate: 2,4,6-Tribromophenol | 170 | | | ug/l | 200 | | 85 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 77.6 | | | ug/l | 100 | | 78 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 67.1 | | | ug/l | 100 | | 67 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 74.5 | | | ug/l | 100 | | 74 | 45-120 | | | |
| LCS Dup Analyzed: 08/29/2005 (5H240 | 52-BSD1) | | | | | | | | | | |
| Naphthalene | 83.3 | 10 | 4.5 | ug/i | 100 | | 83 | 50-120 | 20 | 20 | |
| N-Nitrosodimethylamine | 80.4 | 20 | 3.7 | ug/l | 100 | | 80 | 40-120 | 12 | 20 | |
| Surrogate: 2-Fluorophenol | 149 | | | ug/l | 200 | | 74 | 30-120 | | | |
| Surrogate: Phenol-d6 | 166 | | | ug/l | 200 | | 83 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 194 | | | ug/l | 200 | | 97 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 90.3 | | | ug/l | 100 | | 90 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 90.0 | | | ug/l | 100 | | 90 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 83.9 | | | ug/l | 100 | | 84 | 45-120 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05

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Received: 08/19/05

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

INORGANICS

| | . | Reporting | 2 472 7 | w | Spike | Source | A/700 | %REC | | RPD | Data |
|---|-----------|-----------|---------|-------|-------|----------|--------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H20031 Extracted: 08/20/05 | - | | | | | | | | | | |
| Blank Analyzed: 08/25/2005 (5H20031-Bl | LK1) | | | | | | | | | | |
| Biochemical Oxygen Demand | ND | 2.0 | 0.59 | mg/l | | | | | | | |
| LCS Analyzed: 08/25/2005 (5H20031-BS) | l) . | | | | | | | | | | |
| Biochemical Oxygen Demand | 181 | 100 | 30 | mg/l | 198 | | 91 | 85-115 | | | |
| LCS Dup Analyzed: 08/25/2005 (5H2003) | I-BSD1) | | | | | | | | | | |
| Biochemical Oxygen Demand | 178 | 100 | 30 | mg/l | 198 | | 90 | 85-115 | 2 | 20 | |
| Batch: 5H20051 Extracted: 08/20/05 | • | | | | | | | | | | |
| Blank Analyzed: 08/20/2005 (5H20051-Bl | LK1) | | | | | | | | | | |
| Turbidity | ND | 1.0 | 0.040 | NTU | | | | | | | |
| Duplicate Analyzed: 08/20/2005 (5H2005) | I-DUP1) | | | | Sour | ce: IOH1 | 658-01 | | | | |
| Turbidity | 37.6 | 1.0 | 0.040 | NTU | | 37 | | | 2 | 20 | |
| Batch: 5H22047 Extracted: 08/22/05 | • | | | | | | | | | | |
| Blank Analyzed: 08/22/2005 (5H22047-Bl | LK1) | | | | | | | | | | |
| Perchlorate | ND | 4.0 | 0.80 | ug/l | | | | | | | |
| LCS Analyzed: 08/22/2005 (5H22047-BS1 |) | | | | | | | | | | |
| Perchlorate | 51.9 | 4.0 | 0.80 | ug/l | 50.0 | | 104 | 85-115 | | | |
| Matrix Spike Analyzed: 08/22/2005 (5H22 | 2047-MS1) | | | | Sour | ce: IOH1 | 770-01 | | | | |
| Perchlorate | 52.4 | 4.0 | 0.80 | ug/I | 50.0 | ND | 105 | 80-120 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

Received: 08/19/05

METHOD BLANK/QC DATA

INORGANICS

| |] | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|---|--------------|-------------|------|-------|-------|-----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H22047 Extracted: 08/22/05 | - | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 08/22/2005 | (5H22047-MS) | D1) | | | Sou | rce: IOH | 1770-01 | | | | |
| Perchlorate | 52.1 | 4.0 | 0.80 | ug/l | 50.0 | ND | 104 | 80-120 | 1 | 20 | |
| Batch: 5H22061 Extracted: 08/22/05 | *** | | | | | | | | | | |
| Blank Analyzed: 08/22/2005 (5H22061-B | LK1) | | | | | | | | | | |
| Ammonia-N (Distilled) | ND | 0.50 | 0.30 | mg/l | | | | | | | |
| LCS Analyzed: 08/22/2005 (5H22061-BS) | l) | | | | | | | | | | |
| Ammonia-N (Distilled) | 11.5 | 0.50 | 0.30 | mg/l | 10.0 | | 115 | 80-115 | | | |
| Matrix Spike Analyzed: 08/22/2005 (5H2: | 2061-MS1) | | | | Soui | rce: IOH1 | 701-01 | | | | |
| Ammonia-N (Distilled) | 11.2 | 0.50 | 0.30 | mg/l | 10.0 | ND | 112 | 70-120 | | | |
| Matrix Spike Dup Analyzed: 08/22/2005 | (5H22061-MSI |) 1) | | | Sour | rce: IOH1 | 701-01 | | | · · | |
| Ammonia-N (Distilled) | 10.6 | 0.50 | 0.30 | mg/l | 10.0 | ND | 106 | 70-120 | 6 | 15 | |
| Batch: 5H24106 Extracted: 08/24/05 | • | | • | | | | | | | | |
| Blank Analyzed: 08/24/2005 (5H24106-Bl | LK1) | | | | | | | | | | |
| Total Suspended Solids | ND | 10 | 10 | mg/l | | | | | | | |
| LCS Analyzed: 08/24/2005 (5H24106-BS1 | .) | | | | | | | | | | |
| Total Suspended Solids | 955 | 10 | 10 | mg/l | 1000 | | 96 | 85-115 | | | |
| Duplicate Analyzed: 08/24/2005 (5H24100 | 5-DUP1) | | | | Sour | ce: IOH1 | 647-01 | | | | |
| Total Suspended Solids | 71.0 | 10 | 10 | mg/l | | 75 | | | 5 | 10 | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

METHOD BLANK/QC DATA

INORGANICS

| | R | eporting | | | Spike | Source | | %REC | | RPD | Data |
|--|--------|----------|------|-------|-------|----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5H24138 Extracted: 08/24/05 | | | | | | | | | | | |
| Blank Analyzed: 08/24/2005 (5H24138-BL | .K1) | | | | | | | | | | |
| Total Dissolved Solids | ND | 10 | 10 | mg/l | | | | | | | |
| LCS Analyzed: 08/24/2005 (5H24138-BS1 |) | | | | | | | | | | |
| Total Dissolved Solids | 970 | 10 | 10 | mg/l | 1000 | | 97 | 90-110 | | | |
| Duplicate Analyzed: 08/24/2005 (5H24138 | -DUP1) | | | | Soui | rce: IOH | 1568-04 | | | | |
| Total Dissolved Solids | 471 | 10 | 10 | mg/l | | 470 | | | 0 | 10 | |
| Batch: 5H25051 Extracted: 08/25/05 | | | | | | | | | | | |
| Blank Analyzed: 08/25/2005 (5H25051-BL | K1) | | | | | | | | | | |
| Oil & Grease | ND | 5.0 | 0.94 | mg/l | | | | | | | |
| LCS Analyzed: 08/25/2005 (5H25051-BS1) Oil & Grease | 15.5 | 5.0 | 0.94 | mg/l | 20.0 | | 78 | 65-120 | | | M-NRI |
| LCS Dup Analyzed: 08/25/2005 (5H25051 | -BSD1) | | | | | | | | | | |
| Oil & Grease | 13.2 | 5.0 | 0.94 | mg/l | 20.0 | | 66 | 65-120 | 16 | 20 | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOH1713

Sampled: 08/19/05

Received: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--|------------|-----------|------|-------|-------|----------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: P5H3004 Extracted: 08/30/0 | <u>5</u> | | | | | | | | | | |
| Blank Analyzed: 08/30/2005 (P5H3004-I | BLK1) | | | | | | | | | | |
| 1,4-Dioxane | ND | 1.0 | 0.49 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 1.03 | | | ug/l | 1.00 | | 103 | 70-130 | | | |
| LCS Analyzed: 08/30/2005 (P5H3004-BS | S1) | | | | | | | | | | |
| 1,4-Dioxane | 9.95 | 1.0 | 0.49 | ug/l | 10.0 | | 100 | 70-130 | | | |
| Surrogate: Dibromofluoromethane | 1.02 | | | ug/l | 1.00 | | 102 | 70-130 | | | |
| LCS Dup Analyzed: 08/30/2005 (P5H300 | 04-BSD1) | | | | | | | | | | |
| 1,4-Dioxane | 9.76 | 1.0 | 0.49 | ug/l | 10.0 | | 98 | 70-130 | 2 | 20 | |
| Surrogate: Dibromofluoromethane | 1.06 | | | ug/l | 1.00 | | 106 | 70-130 | | | |
| Matrix Spike Analyzed: 08/30/2005 (P5I | H3004-MS1) | | | | Sou | rce: POH | 0615-02 | | | | |
| 1,4-Dioxane | 10.3 | 1.0 | 0.49 | ug/l | 10.0 | 0.79 | 95 | 65-125 | | | |
| Surrogate: Dibromofluoromethane | 1.08 | at e | | ug/l | 1.00 | ٠. | 108 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 08/30/2005 | (P5H3004-M | ISD1) | | | Sou | rce: POH | 0615-02 | | | | |
| 1,4-Dioxane | 10.2 | 1.0 | 0.49 | ug/l | 10.0 | 0.79 | 94 | 65-125 | 1 | 20 | |
| Surrogate: Dibromofluoromethane | 1.14 | | | ug/l | 1.00 | | 114 | 70-130 | | | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05

Pasadena, CA 91101

Report Number: IOH1713

Received: 08/19/05

DATA QUALIFIERS AND DEFINITIONS

Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the

Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

M-NR1 There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike

P1 Sample received and analyzed without chemical preservation.

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO):

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 08/19/05

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IOH1713

Received: 08/19/05

Certification Summary

Del Mar Analytical, Irvine

| Method | Matrix | Nelac | California |
|---------------|--------|-------|------------|
| EPA 160.2 | Water | x | X |
| EPA 160.5 | Water | X | X |
| EPA 180.1 | Water | X | X |
| EPA 314.0 | Water | N/A | X |
| EPA 350.2 | Water | | X |
| EPA 405.1 | Water | X | X |
| EPA 413.1 | Water | X | X |
| EPA 418.1 | Water | X | X |
| EPA 624 | Water | X | X |
| EPA 625 | Water | X | X |
| EPA 8015 Mod. | Water | X | X |
| EPA 8015B | Water | X | X |
| EPA 8260B | Water | X | X |
| Level 4 | Water | | |
| SM2540C | Water | X | X |
| | | | |

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Subcontracted Laboratories

Del Mar Analytical - Phoenix NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907 9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed:

EPA 8260B

Samples: IOH1713-01



17461 Derien Ave. Suite 100, Irvine, CA 92614 1014 E. Cooley Dr., Sulte A, Collon, CA 92324

9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 9830 South 51st Street, Suite 8-120, Phoenix, AZ 85044

Fex (909) 370-1046 Fax (619) 505-9689 Fax (480) 785-0851

Fax (702) 796-3821

Ph (480) 785-0043

SUBCONTRACT ORDER - PROJECT # IOH1713

SENDING LABORATORY:

Del Mar Analytical, Irvine

17461 Derian Avenue. Suite 100

Irvine, CA 92614

Phone: (949) 261-1022 Fax: (949) 261-1228

Project Manager: Michele Harper

RECEIVING LABORATORY:

Del Mar Analytical - Phoenix

9830 S. 51st Street, Suite B-120

Phoenix, AZ 85044

Phone: (480) 785-0043

Fax: (480) 785-0851

| Analysis | Expiration | Due | Comments |
|----------------------------|----------------|------------------|--|
| Sample ID: IOH1713-01 Wa | ter Sampled | : 08/19/05 14:18 | |
| Dioxane-8260B-out | 09/02/05 14:18 | 08/31/05 12:00 | Boeing-permit, sub DMAP, J flags, ID=DMA+Outfall 012 |
| Level 4 Data Package - Out | 09/16/05 14:18 | 08/31/05 12:00 | Boeing |
| Containers Supplied: | | | |
| 40 ml VOA w/HCL (IOH171 | 3-01M) | | |
| 40 ml VOA w/HCL (IOH171 | 3-01N) | | POHO 629-01 |
| 40 ml VOA w/HCL (IOH171 | 3-010) | | |

| | | | SAMPLE | INTEGRI | TY: | | |
|------------------------|----------|--|-----------------------------|------------|--------|-----------------------------|-----------|
| All containers intact: | Yes | □ No | Sample labels/COC agree: | Yes. | □ No | Samples Received On Ice:: | PYes D No |
| Custody Seals Present: | Yes | □ No | Samples Preserved Properly: | Yes | □ No | Samples Received at (temp): | 4-0-0 |
| R | | | 8-22-05 1700 | | | 8-/23/0 | 2 |
| Released by | | 1 | | Received B | ř | Date | Time |
| <u> </u> | \ | (23) | 105 | 2 | \geq | e 8/23/05 | 09:35 |
| Released By | | ······································ | | Received B | , | Date | Time |

Received By

| Project Proj | Sudia 1200 During Test - Outfall 012 During Test - O | Project Proj | | adings: © 93.4 | 90 | Comments | | | | | | | | | The state of the s | | | | | | | | | 3 | ¥ | | 8 | mal | ************************************** | 1 20 |
|--|--|--|---------------|---|--|--------------|-----------|----|-----|--------|----------|----------|-----------|--------|--|---------------|-------------------|--------|------|----------|------|------------|-------|-----|---------------------------------|--------------------|-----------|--|--|-----------|
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| Figure Part | Boning-SSF NPDES Boning-SSF NPDES Boning-SSF NPDES | Project Proj | | at | oilo2 eldse | Sett | | | | 2 l | | | | | | | | | | _ | | | _ | × | | 1 mg | | 8 | 1 02 A | ntegrity, |
| Figure Part | Boning-SSF NPDES Boning-SSF NPDES Boning-SSF NPDES | Project Proj | $\overline{}$ | SST | , SOT, yfibi | φnT | | | | | | | | | | | | | | | | | × | | | um arou 4 Hours | 8 Hours | 2 Hours | Ostelel | ample II |
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| Project: Ducing SSFL NPDES Ducing Test - Outfall 012 | Decing SSFL NPDES Ducing Test - Outfall 012 Ducing SSFL NPDES Ducing SSFL NPDES Ducing Test - Outfall 012 Ducing SSFL Number Thinger T | Sutite 1200 | | tr. (350.2) | | | | | | | | | | | | | | | | | | × | | | | | | ************************************** | | |
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| Feet | Suite 1200 After Test Stand During SSFL NPDES | Project: Beroject: Beroj | 1 | ,42T-8 (A8 | (EDB, 1,2,3 IT ,390 ,3: | 4\$8 MTB | | | | | | | | | - | | × | × | | | | | | | × | | _ | א | | (|
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| ing Test - Outfall 012 Test Stand The Number: (b) 568-6691 Number: (c) 568-6691 Number: (d) 568-6691 Number: (e) 568-6691 Number: (e) 568-6691 Number: (f) 68-6691 Number: (f) 68 | Decing SSFL NPDES Decing SSFL NPDES | Boeing-SSFL NPDES Boeing-Time | | .ec. | R lstoT=,H | qqT | - | | | | | | J | | | | | | | | | | - | | | , | 2 | 1 | Ũ | - |
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| ing SSFL NPDES ing Test Couffail 012 I Test Stand In Test Stand In Externation I Test Stand I Stand | Suite 1200 | Project: | | ٧d | | | × | × | | | | | | · | | | | | | | | | | | | | Ø | 1 | • | |
| ing-SSFL NPDES ing Test - Outfall 012 I Test Stand Ine Number: (5) 568-6691 (Number: (6) 568-6515 Sampling Preservative HCI | Suite 1200 During Test - Dutfail 012 Boeing-SSFL NPDES During Test - Dutfail 012 Alfa Test Stand Container # of Sampling Preservative 1 Fax Number: 1 Container # of Sampling Preservative 1 Container # of Sampling Preservative 1 LAmber 1 HCI HCI 11 LAmber 1 HCI HCI 12 LAmber 1 HCI 13 LAmber 1 HCI 14 LAmber 1 HCI 15 Comit Poly 1 16 Comit Poly 1 17 Container 1 18 Container 1 19 Container 1 10 Container 1 11 LAmber 1 12 Container 1 13 Container 1 14 Container 1 15 Container 1 16 Container 1 17 Container 1 18 Container 1 19 Container 1 10 Container 1 11 Container 1 12 Container 1 13 Container 1 14 Container 1 15 Container 1 16 Container 1 17 Container 1 18 Container 1 18 Container 1 19 Container 1 10 Container 1 11 Container 1 12 Container 1 13 Container 1 14 Container 1 15 Container 1 16 Container 1 17 Container 1 18 Container | Project: Project: Boeing-SSFL NPDES Boeing-SSFL NPDES Boeing-SSFL NPDES During Test - Outfall 012 Alfa Test Stand Alfa Tes | | | | Bottle # | | 18 | * | 38, 2C | 9 | 8 | 44 | 4B, 4C | 5.4 | 5B | θA | 6B, 6C | 7A | 8A | 88 | 8 6 | 10A | 114 | 12A, 12B, 12C, 12D, 12E, 12F | 0/ | V Inchina | | A P | |
| Project: Boeing-SSFL P During Test During Test During Test During Test During Test During Test Alfa Test Stand Fax Number: (626) 568-669 Fax Number: (627) Fax Number: (627) Fax Number: (627) Fax Number: (627) Fax Number: | Suite 1200 Suite 1200 Shingle | 11. Poly 1. L. Poly 1. | | VPDES Outfall 012 | i- 10 | Preservative | 웃 | ğ | HCI | 2 | None | None | HG | 9 | ΡŢ | ᅙ | ΗÇ | HCI | None | None | None | H2S04 | None | | | 7 / | | The live |) Paragraph | ŧ |
| # # of # | Suite 1200 Suite 1200 Shingle | 11. Poly 1 1. Poly 1. | oject: | oeing-SSFL nuring Test – Ia Test Stand | 26) 568-669 ax Number: 36) 568-651 | Sampling | Uate/I me | | | | | | | | | | | | | | | | . a 1 | • 1 | | S-19-05 | | i | ŧ | |
| | Suite 1200 Onwyn Kelly A XA C N Ontainer Type 1L Amber 1L Poly 1L Poly | IL Amber 11. Poly 11. Poly 11. Poly 11. Poly 11. Poly 11. Poly 12. Poly 13. Poly 14. Amber 15. Amber 16. Amber 16. Amber 17. Amber 18. Amber 19. Amber 19. Amber 19. Amber 11. Poly 11. Poly 11. Poly 12. Poly 13. Amber 14. Amber 15. Amber 16. Amber 17. Amber 18. Amber 19. Amber 19. Amber 19. Amber 10. Amber 11. Poly 11. Poly 11. Poly 12. Amber 13. Amber 14. Amber 15. Amber 16. Amber 17. Amber 17. Amber 18. Amber 19. Amber 19. Amber 10. Amber 10. Amber 10. Amber 11. Amber 11. Amber 12. Amber 13. Amber 14. Amber 15. Amber 16. Amber 17. Amber 17. Amber 18. Amber 19. Amber 19. Amber 19. Amber 10. Amber 10. Amber 10. Amber 10. Amber 11. Amber 11. Amber 12. Amber 13. Amber 14. Amber 15. Amber 16. Amber 17. Amber 17. Amber 18. Amber 18. Amber 19. Amber 19. Amber 19. Amber 10. Amber 11. Amber 11. Amber 12. Amber 13. Amber 14. Amber 15. Amber 16. Amber 16. Amber 17. Amber 17. Amber 18. Amber 18. Amber 19. Amber 19. Amber 19. Amber 10. Amber 11. Amber 11. Amber 12. Amber 13. Amber 14. Amber 15. Amber 16. Amber 16. Amber 17. Amber 17. Amber 18. Amber 19. Amber 19. Amber 19. Amber 19. Amber 19. Amber 10. A | <u>a.</u> | <u> </u> | <u> </u> | ــنباب | | | - | Ø | | 1 | +- | 8 | 1 | · ** * | - | 2 | - | *** | 1 | 1 | | | | ate/Tim | 30 | ate/Tim | | |
| | S: Convain Convain Contain | Address: adena adena adena adena adena adena ager: Bronwyn K ager: Bronwyn K ager: Bronwyn K ager: Type w 1L Ambe w VOAs | | 9 | 30 4 | • | | | | | _ | . | | , | | <u> </u> | | | | <u> </u> | * | γ̈́ο | | | | ٥ | ic | | 6 | N. F. |

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental 355 South Teller Street Suite 300 Lakewood, CO 80226 Laboratory Del Mar Analytical Reviewer L. Calvin Analysis/Method Semivolatiles by Method 625 ACTION ITEMS* Package ID T711SV67 Task Order 313150010 SDG No. IOI1901 Date: October 17, 2005 Reviewer's Signature ACTION ITEMS*

| • | Case Narrative Deficiencies | |
|--------|---|-------------------------|
| 2. | Out of Scope | |
| | Analyses | |
| ······ | | |
| 3. | Analyses Not Conducted | |
| | | |
| 4. | Missing Hardcopy Deliverables | |
| | | |
| 5. | Incorrect Hardcopy | |
| | Deliverables | |
| | | |
| 6. | Deviations from Analysis | |
| | Protocol, e.g., | |
| | Holding Times | |
| | GC/MS Tune/Inst. Performance Calibration | |
| | Method blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification | |
| | Quantitation | |
| | System Performance | |
| ON | IMENTS [*] | Acceptable as reviewed. |
| | | |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| ŭ | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|--------------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparatio (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was no within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Т | Presumed contamination from trip blank. | Not applicable. |
| | False positive - reported compound was not present. Not applicable, | and the second of the second o |
| • | False negative – compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| • | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOI1901

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES 1011901 Analysis: SVOC

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010 IOI1901

SDG#:

Project Manager:

P. Costa Water

0

Matrix: Analysis:

Semivolatiles

OC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

L. Calvin

Date of Review:

October 17, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: SDG: Analysis:

NPDES IOI 1901 SVOC

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|---------|--------|--------|
| Outfall 012 | Outfall 012 | IOI1901 | water | 625 |

NPDES 1011901 SVOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 5°C. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

DATA VALIDATION REPORT

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the sample was analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibrations associated with this SDG were dated 09/14/05 and 10/03/05. The average RRFs were ≥0.05 and the %RSDs were ≤35% for both target compounds listed on the sample summary form. A representative number of average RRFs and %RSDs were checked from the raw data, and no calculation or transcription errors were noted. The continuing calibration associated with the sample analysis was analyzed 10/04/05. The RRFs for both target compounds were ≥0.05, and the %Ds were ≤20%. A representative number of average RRFs and %RSDs in the initial calibrations and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (5128052-BLK1) was extracted and analyzed with this SDG. No target compounds were reported in the method blank. Review of the raw data indicated no false negatives. No qualifications were required.

NPDES 1011901

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (5I28052-BS1/BSD1) was extracted and analyzed with this SDG. The percent recoveries for target compounds n-nitrosodimethylamine and naphthalene were within the respective laboratory QC limits and the RPDs were ≤20%. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

All sample surrogate recoveries were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times. The recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for naphthalene and n-nitrosodimethylamine by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

Project: **NPDES** SDG: IO11901

DATA VALIDATION REPORT

Analysis:

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDL. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA: 92614 (949) 261-1022 FAX (949) 260-329; 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9685 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

| A (| CID & BA | ASE/NEU | TRA | LS BY GO | C/MS (| EPA 62 | 25) | | |
|--|----------|---------|--------------|--------------------|------------------|--------|----------------|----------------------|----------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyze | Data d Qualifiels |
| Sample ID: IOI1901-01 (Outfall 012 Reporting Units: ug/i | - Water) | | | | | | | 14 | 77 |
| Naphthalene | EPA 625 | 5128052 | 4.5 | 10 | 39 | 0.952 | 09/28/05 | | 2 TUE- |
| N-Nitrosodimethylamine | EPA 625 | 5128052 | 3.7 | 20 | ND | 0.952 | 09/28/05 | 10/05/05 10/05/05 | ., |
| Surrogate: 2-Fluorophenol (30-120%) | | | | | 63 % | 0.552 | V2/20/03 | 10/03/03 | W |
| Surrogate: Phenol-d6 (35-120%) | | | | | 70 % | | | | |
| Surrogate: 2,4,6-Tribromophenol (45-1 | 20%) | | | | 76 % | | | | • |
| Surrogate: Nitrobenzene-d5 (45-120%) | • | | | | 79 % | | • | | |
| Surrogate: 2-Fluorobiphenyl (45-120% |) | | | | 81% | | | | |
| Surrogate: Terphenyl-d14 (45-120%) | • | | | | 79 % | | | | |

AMEC VALIDATED LEVEL IV

Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID <u>T711TF88</u> 355 South Teller Street Task Order _313150010 Suite 300 SDG No. IOI1901 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: October 17, 2005 Reviewer L. Calvin Reviewer's Signature Analysis/Method Extractable TFH by Method 8015B ACTION ITEMS Case Narrative **Deficiencies** 2. Out of Scope Analyses 3. Analyses Not Conducted **Missing Hardcopy** Deliverables 5. Incorrect Hardcopy **Deliverables** 6. Deviations from Analysis Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance COMMENTS^b Acceptable as reviewed.

Subcontracted analytical laboratory is not meeting contract and/or method requirements.

b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|------------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| C | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| + ; *** | False positive – reported compound was not present. Not applicable. | |
| | False negative – compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| *# | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Extractable

SAMPLE DELIVERY GROUP: IOI1901

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

<u>Analysis</u>

NPDES 1011901 TPH

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOI1901

Project Manager:

P. Costa

Matrix:

Water

1

0

Analysis:

TPH-Extractable

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

L. Calvin

Date of Review:

October 17, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015B, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis: NPDES IOI1901 TPH

DATA VALIDATION REPORT

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOI1901-01 | water | 8015B |

NPDES IO11901 __TPH

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical laboratory on ice within the temperature limits of 4° C $\pm 2^{\circ}$ C. The Del Mar Analytical case narrative noted that the sample containers were received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel, and accounted for the analysis presented in this SDG. As the site sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The sample was extracted within seven days of sample collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 CALIBRATION

The initial calibration associated with the sample analysis was analyzed on 09/20/05. The %RSD was within the QC limit of ≤20%. The %Ds for the initial calibration verification (ICV) and continuing calibrations associated with the sample analysis were ≤15%. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.4 METHOD BLANKS

One method blank (5I28087-BLK1) was extracted and analyzed with the sample in this SDG. EFH (C13-C22) was not present above the MDL in the method blank or in the instrument blank analyzed at the beginning of the analytical sequence. Review of the method blank and instrument blank chromatograms showed no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One method blank spike/blank spike duplicate pair (5I28087-BS1/BSD1) was extracted and analyzed with the sample in this SDG. The laboratory reported recoveries of alkane range C13-C28 from spiked diesel. The recoveries were within the laboratory-established QC limits of 40-120%, and the RPD was within the QC limit of ≤25%. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

SDG:

2.6 SURROGATE RECOVERY

The sample was fortified with the surrogate compound n-octacosane. The sample surrogate recovery was within the laboratory-established QC limits of 40-125%. The recovery was calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses associated with the sample of this SDG. Evaluation of method accuracy was based on the blank spike. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples associated with the site sample in this SDG. No qualifications were required.

2.8.2 Field Duplicates

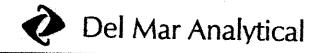
There were no field duplicate samples associated with this SDG.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for EFH n-alkane range C13-C22 by EPA SW-846 Method 8015B. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for this SDG. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detect, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. Results were reported in mg/L (ppm). No qualifications were required.



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MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Keily

Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

Date

Analyzed Qualifier

Data

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte Method

Sample ID: IOI1901-01 (Outfall 012 - Water) - cont. Reporting Units: mg/l

EFH (C13 - C22) Surrogate: n-Octacosane (40-125%)

EPA 8015B

5128087

0.045

0.50

Limit

1.0

Result Factor Extracted

09/28/05 09/29/05

76 %

MDL Reporting Sample Dilution Date



AMEC Earth & Environmental Package ID T711TF89 355 South Teller Street Task Order <u>313150010</u> Suite 300 SDG No. <u>IOI1901</u> Lakewood, CO 80226 No. of Analyses 2 Laboratory Del Mar Analytical Date: October 17, 2005 Reviewer L. Calvin Reviewer's Signature . Analysis/Method Purgeable TFH by Method 8015M **ACTION ITEMS** Case Narrative **Deficiencies** 2. Out of Scope Analyses **Analyses Not Conducted** 4. Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy **Deliverables Deviations from Analysis** Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance COMMENTS! Acceptable as reviewed.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Subcontracted analytical laboratory is not meeting contract and/or method requirements.

b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| 1 | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| Α | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| + | False positive – reported compound was not present. Not applicable. | |
| ** | False negative - compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| DNQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |
| *# | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). | Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits). |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| υ | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| ບນ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOI1901

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Analysis:

NPDES 1011901 TPH

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOI1901

Project Manager:

P Costa

Matrix:

Water

2

0

Analysis:

TPH-Purgeable

OC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

L. Calvin

Date of Review:

October 19, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015M, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: SDG: Analysis:

NPDES IO11901 TPH

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|-----------|
| Outfall 012 | Outfall 012 | IOI1901-01 | water | 8015M/GRO |
| Trip Blank | Trip Blank | IOI1901-02 | water | 8015M/GRO |

Project: SDG: Analysis:

NPDES 1011901 TPH

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at Del Mar Analytical on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the samples were received intact, and the COC indicated the samples were properly preserved. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

2.2 CALIBRATION

One gasoline standard initial calibrations dated 09/03/05 was associated with the sample analyses. The %RSD for GRO (C4-C12) was within the QC limit of ≤20%. An ICV was not provided by the laboratory for the initial calibration. The %Ds for the CCVs bracketing the sample analyses were within the Method QC limit of ≤15%. The %RSDs and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.4 METHOD BLANKS

One water method blank (5J05041-BLK1) was associated with the sample analyses. GRO (C4-C12) was not detected above the MDL in the method blank. Review of the raw data indicated no false negative result. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One water method blank spike (5J05041-BS1) was associated with the sample analyses. GRO (C4-C12) was recovered within the laboratory-established QC limits of 65-140%. The recovery was were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

1011901

2.6 SURROGATE RECOVERY

The samples were fortified with the surrogate compound 4-bromofluorobenzene (BFB). Surrogate recoveries were within the laboratory-established QC limits of 65-140%. Recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed site sample Outfall 012 in this SDG; however, as the GRO concentration in the unspiked parent sample exceeded four times the spike amount, MS/MSD recoveries were not evaluated. Evaluation of method accuracy was based on the blank spike result. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based on method blanks and laboratory QC samples for usability. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

2.8.1 Trip Blanks, Field Blanks, and Equipment Rinsates

Sample Trip Blank was the trip blank associated with site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. Review of the raw data indicated no false negative result. There were no field blank or equipment rinsate samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples in this SDG.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for GRO (C4-C12) by Method 8015M. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the samples in this SDG. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detects, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. The results were reported in mg/L (ppm). Sample Outfall 012 was analyzed at a 5× dilution due to a high concentration of GRO. The reporting limit was adjusted accordingly. No qualifications were required.



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MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05

Received: 09/27/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | Data Qualifiers |
|---|-------------------|---------|--------------|--------------------|------------------|---|-------------------|--|--------------------|
| Sample ID: IOI1901-01 (Outfall 0 Reporting Units: mg/l | 12 - Water) - con | t. | | | | | | yell | made |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%) | EPA 8015 Mod. | 5J05041 | 0.25 | 0.50 | 2.3 114 % | 5 | 10/05/05 | Contraction of the Contraction o | MI |
| Sample ID: IOI1901-02 (Trip Blan Reporting Units: mg/l | ak - Water) | | | | | | | | |
| GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%) | EPA 8015 Mod. | 5J05041 | 0.050 | 0.10 | ND 106 % | 1 | 10/05/05 | 10/05/05 U | |



Del Mar Analytical, Irvine Michele Harper Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711VO127 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOI1901 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Laboratories Date October 14, 2005 Reviewer K. Shadowlight Reviewer's Signature Analysis/Method 1,4-Dioxane by 8260 **ACTION ITEMS* Case Narrative Deficiencies**

| 2. | Out of Scope | |
|-----|---------------------------------|---|
| | Analyses | |
| | | |
| | | - |
| 3. | Analyses Not Conducted | |
| | | |
| | A Pt - J IT I | |
| 4. | Missing Hardcopy | |
| | Deliverables | |
| | | |
| 5. | Incorport Wandson. | |
| Э. | Incorrect Hardcopy Deliverables | |
| , | | |
| 6. | Deviations from Analysis | |
| | GC/MS Tune/Inst. Perform | |
| | Calibrations | |
| | Blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC | |
| | Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | *************************************** |
| | System Performance | *************************************** |
| CON | AMENTS ¹ | |
| | ***** | |
| | ptable as reviewed. | |

b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics | |
|-----------|--|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. | |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect | |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. | |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. | |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparatio (method) or calibration blank. | |
| L . | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. | |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. | |
| E | Not applicable. | Duplicates showed poor agreement. | |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. | |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. | |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. | |
| T | Presumed contamination from trip blank. | Not applicable. | |
| + | False positive – reported compound was not present. Not applicable. | TT The parties of the second of | |
| • | False negative - compound was present but not reported. | Not applicable. | |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. | |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. | |
| ? | TIC identity or reported retention time has been changed. | Not applicable. | |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. | |
| • | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. | |
| ONQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOI1901

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Project:

NPDES

SDG No.: Analysis: IOI1901 VOC

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOI1901

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles (1,4-dioxane)

OC Level:

Level IV

No. of Samples:

1

No. of Reanalyses/Dilutions: Reviewer:

K. Shadowlight

Date of Review:

October 14, 2005

The sample listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method SW-846 8260B and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project:

SDG No.: IOI1901

NPDES

Analysis:

VOC

Table 1. Sample identification

| Client ID | Lab No. | Lab No. | Matrix | Method |
|-------------|-------------|-------------|--------|--------|
| | Del Mar, CA | Del Mar, AZ | | |
| Outfall 012 | IOI1901-01 | POI0799-01 | water | 8260B |

DATA VALIDATION REPORT

NPDES 1011901

VOC

Analysis:

SDG No.:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was subcontracted to Del Mar Analytical-Phoenix for 1,4-dioxane analysis, and the sample was received within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the COC, and the transfer COC, the sample was received intact and properly preserved at both laboratories. Information regarding the absence of headspace in the VOA vials was not provided for either laboratory. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were signed by field and laboratory personnel. As the sample was couriered directly to the laboratory from the field, custody seals were not required. According to the transfer COC, there were custody seals present on the cooler received by Del Mar Analytical in Arizona. The EPA IDs were added to the summary report by the reviewer. No qualifications were required.

2.1.3 Holding Times

The sample was analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows were consistent with those specified in EPA Method 8260B. All ion abundances were within the established windows, and the sample was analyzed within 12 hours of the BFB injection time. No qualifications were required.

2.3 CALIBRATION

One initial calibration, dated 09/20/05, was associated with this SDG. The average RRF for 1,4dioxane was ≥0.05 and the correlation coefficient (r2) was ≥0.995. The laboratory reported the continuing calibration and the blank spike (P5J0510-BS1) from the same analysis. As the analysis cannot be reported as both a CCV and a blank spike, the reviewer evaluated P5J0510-BS1 as the continuing calibration. The RRF for 1,4-dioxane was ≥0.05 and the %D was ≤20% in the continuing calibration dated 10/05/05. The r² and average RRF for 1,4-dioxane in the initial calibration, and the %D and RRF for 1,4-dioxane in the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. No qualifications were required.

NPDES SDG No.: IOI1901

Analysis:

VOC

DATA VALIDATION REPORT

2.4 BLANKS

One water method blank (P5J0510-BLK1) was associated with this SDG. Target compound 1,4dioxane was not detected above the MDL in the method blank. The method blank raw data showed no evidence of a false negative. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed a blank spike/blank spike duplicate pair (P5J0510-BS1/BSD1) with this SDG; however, P5J0510-BS1 was reported as the CCV (see section 2.3); therefore, P5J0510-BSD1 was evaluated as a single blank spike. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample and QC were fortified with dibromofluoromethane. The surrogate was recovered within the QC limits of 70-130%. The surrogate recovery for the sample was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy was based on blank spike results. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

The sample in this SDG had no associated trip blank. No qualifications were required.

2.8.2Field Blanks and Equipment Rinsates

The site sample in this SDG had no associated field QC samples. No qualifications were required.

2.8.3 Field Duplicates

There were no field duplicate samples associated with this SDG.

NPDES

SDG No.: Analysis: 1011901 VOC

DATA VALIDATION REPORT

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standard: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. Internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for 1,4-dioxane by Method 8260B/SIM. Chromatograms, retention times, and spectra for the sample and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. As there were no sample detects, compound quantitation was verified by recalculating blank spike and surrogate recoveries from the raw data. No calculation or transcription errors were noted. The reporting limit was supported by the lowest concentration of the initial calibration standards and by the laboratory MDL. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs are not typically reported for SIM methods.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A. Colton, CA 92324 (909) 379-4667 FAX (909) 370-10464 Chesapeakie Dr., Suite 805, San Diego, CA 92123 (858) 505-8566 FAX (858) 505-8669 FAX (858) 505-86

Del Mar Analytical - Irvine 17461 Derian Ave. Suite 100

Irvine, CA 92614 Attention: Michele Chamberlin Project ID: IOI1901

Report Number: POI0799

Sampled: 09/26/05 Received: 09/29/05

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | | |
|--|--------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|----------|-----------|
| Sample ID: POi0799-01 (IOI1901-01 Reporting Units: ug/i | - Water) | ut-fall | 012 | | | | | | Rey qual | Qual wode |
| 1,4-Dioxane Surrogate: Dibromofluoromethane (70-) | EPA 8260B (30%) | P5J0510 | 0.49 | 1.0 | ND 115 % | 1 | 10/05/05 | 10/05/05 | L | |

10 18/0x

AMEC VALIDATED

LEVEL IV

Del Mar Analytical - Phoenix Karen Maxwell Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

| AMEC Earth & Environmental | Package ID T711V | O128 |
|--|-----------------------|------|
| 355 South Teller Street | Task Order 313150 | |
| Suite 300 | SDG No. IOI190 | I |
| Lakewood, CO 80226 | No. of Analyses 2 | |
| Laboratory Del Mar Analytical Laboratories | Date October 14, 200: | 5 |
| Reviewer K. Shadowlight | Reviewer's Signature | |
| Analysis/Method Volatiles by 624 | I K Shadon | fet |
| | | |

| AC | TION ITEMS': ** | |
|----|---|--|
| 1. | Case Narrative | |
| | Deficiencies | |
| ^ | 0-4-60 | |
| 2. | Out of Scope | |
| | Analyses | |
| | | |
| 3. | Analyses Not Conducted | |
| Э. | Analyses Not Conducted | |
| | | |
| 4. | Missing Hardcopy | |
| | Deliverables | |
| | | |
| | | |
| 5. | Incorrect Hardcopy | |
| | Deliverables | |
| 6. | Deviations from Analysis | Qualification was assigned for a %D continuing calibration outlier. |
| | GC/MS Tune/Inst, Perform | |
| | Calibrations | |
| | Blanks | |
| | Surrogates | |
| | Matrix Spike/Dup LCS | |
| | Field QC Internal Standard Performance | |
| | Compound Identification and | |
| | Quantitation | |
| | System Performance | |
| | MENTS ^b | |
| | | |
| | | |
| | | |
| | | meeting contract and/or method requirements. by the laboratory but no action against the laboratory is required |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparatio (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was no within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| 1 | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Т | Presumed contamination from trip blank. | Not applicable. |
| + | False positive - reported compound was not present. Not applicable. | |
| • | False negative – compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| \$ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| • | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| ONQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOI1901

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

SDG: Analysis:

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOI1901 P. Costa

Project Manager:

Matrix:

Water

Analysis:

Volatiles by 624

QC Level:

Level IV

No. of Samples:

2

No. of Reanalyses/Dilutions:

Reviewer:

K. Shadowlight

Date of Review:

October 17, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method 624, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the summary forms as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis: NPDES IOI1901 VOC

Table 1. Sample identification

| Client ID | EPA ID | Lab No. | Matrix | Method |
|-------------|-------------|------------|--------|--------|
| Outfall 012 | Outfall 012 | IOI1901-01 | water | 624 |
| Trip Blank | Trip Blank | IOI1901-02 | water | 624 |

Analysis VOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C, at 5°C. The samples were properly preserved. The COC noted that the samples were received intact; however, information regarding absence of headspace in the VOA vials was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The COC accounted for the analyses presented in this SDG. As the samples were couriered directly from the field to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The samples were analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

The ion abundance windows shown on the quantitation reports were consistent with those specified in EPA Method 624, and all ion abundances were within the established windows. The samples and associated QC were analyzed within 12 hours of the BFB injection time. The BFB summary report was verified from the raw data and no discrepancies between the summary report and the raw data were noted. No qualifications were required.

2.3 CALIBRATION

One initial calibration dated 08/19/05 was associated with this SDG. The average RRFs were ≥0.05 for the target compounds listed on the sample result summaries. The %RSDs were ≤35% for all applicable target compounds. One continuing calibration dated 09/28/05 was associated with the sample analyses in this SDG. The %D for 1,2-dibromoethane (EDB) exceeded 20% in the continuing calibration; therefore, the nondetect result for EDB was qualified as estimated, "UJ," in associated sample Oufall 012. Sample Trip Blank was identified as field QC, and as such was not qualified for the %D calibration outlier. The remaining %Ds were ≤20% and the RRFs were ≥0.05 for the target compounds listed on the sample result summaries. A representative number of %RSDs and average RRFs from the initial calibration, and %Ds and RRFs from the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. No further qualifications were required.

SDG: \nalysis:

2.4 BLANKS

One water method blank (5I28022-BLK1) was associated with the sample analyses. There were no detects above the MDL for the target compounds listed on the sample result summary. The method blank raw data showed no evidence of false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One water blank spike (5I28022-BS1) was associated with the sample analyses. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The surrogates were recovered within the QC limits of 80-120% in the samples and associated QC. A representative number of surrogate recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses performed for this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

2.8 FIELD OC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with this SDG. There were no target compounds detected above the MDL in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.3 Field Duplicates

There were no field duplicate samples associated with this SDG.

IOI1901 VOC

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the samples in this SDG were within the control limits established by the continuing calibration standards: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. A representative number of internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for five volatile target compounds by EPA Method 624. Chromatograms, retention times, and spectra for the samples and QC were examined and no target compound identification problems were noted. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. The reporting limits were supported by the lowest concentrations of the initial calibration standard and by the laboratory MDL study. As there were no sample detects in this SDG, compound quantitation was verified by recalculating a representative number of blank spike and surrogate recoveries from the raw data. Results were reported in µg/L (ppb). No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

The laboratory did not provide TICs for this SDG. No qualifications were required.

2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-329 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-104 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-968 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-043 FAX (480) 785-085 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-362

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

| | PUR | GEABLE | S BY | GC/MS (| EPA 62 | 24) | | | | |
|---|-------------|---------|--------------|--------------------|----------------|---------|-----------------------|----------------|--------------|------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | | Dilutio | on Date rExtracted | Date Analyz | |)ata Llifiers |
| Sample ID: IOI1901-01 (Outfall 0 Reporting Units: ug/i | 12 - Water) | | | | | | | P | er I | Quel |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5128022 | 0.32 | 2.0 |) III) | | | | 41 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5128022 | 0.32 | 5.0 | ND | 1 | | 09/28/05 | 45 | <u>_</u> |
| 1,2,3-Trichloropropane | EPA 624 | 5128022 | 0.85 | 3.0 10 | ND | l . | | + | ir. | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5128022 | 0.05 | 5.0 | ND | I. | 09/28/05 | | | |
| tert-Butanol (TBA) | EPA 624 | 5128022 | 3.1 | 2.0 2.5 | ND | 1 | | 09/28/05 | \mathbf{J} | |
| Surrogate: Dibromofluoromethane | (80-120%) | 5116012 | J. 1 | 23 | ND | 1 | 09/28/05 | 09/28/05 | ¥ | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 101 % | | | | | į. |
| Surrogate: 4-Bromofluorobenzene (| 80-120%) | | | | 104 % | | | | | Α. |
| Sample ID: IOI1901-02 (Trip Blan Reporting Units: ug/l | • | | | | 103 % | | | | far | I toda |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5128022 | 0.32 | 2.0 | NIII | | 50.05.00 | | - | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5I28022 | 0.32 | 5.0 | ND | 1 | | 09/28/05 | U | |
| 1,2,3-Trichloropropane | EPA 624 | 5128022 | 0.85 | 10 | ND | 1 | | 09/28/05 | 1 | 1 |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5128022 | 0.25 | | ND | 1 | | 09/28/05 | 1 | |
| tert-Butanol (TBA) | EPA 624 | 5128022 | 3.1 | 5.0 25 | ND | 1 | | 09/28/05 | | 1 |
| Surrogate: Dibromofluoromethane (8 | 80-120%) | 3120022 | 3.1 | 23 | ND | 1 | 09/28/05 | 09/28/05 | V | 1 |
| Surrogate: Toluene-d8 (80-120%) | , | | | | 100 % | | | | | |
| Surrogate: 4-Bromofluorobenzene (8 | 0-120%) | | | | 103 % 101 % | | | | | 1 |





Del Mar Analytical, Irvine Michele Harper Project Manager

| CONTRACT CO AMEC Earth & Environmer 355 South Teller Street Suite 300 | OMPLIANCE SCREENING ntal | Package ID | DCOPY DATA T711WC176 313150010 IOI1901 |
|--|--------------------------|-----------------|---|
| Lakewood, CO 80226 | | No. of Analyses | 1 |
| Laboratory Del M | far Analytical | Date: 10/14/0 | |
| Reviewer L. Jar | | Reviewer's S | gnature |
| Analysis/Method Perch | lorate | | useure |
| | | | |
| ACTION ITEMS* | | | |
| Case Narrative Deficiencies | | | |
| 2. Out of Scope Analyses | | | |
| 3. Analyses Not Conducted | | | |
| 4. Missing Hardcopy Deliverables | | | |
| 5. Incorrect Hardcopy Deliverables | | | |
| 6. Deviations from Analysis Protocol, e.g., | | | |
| Holding Times GC/MS Tune/Inst. Performance Calibrations Blanks Surrogates Matrix Spike/Dup LCS | | | |
| Field QC Internal Standard Performance Compound Identification and Quantitation System Performance | | | |
| COMMENTS ^b | Acceptable as reviewed. | | |
| | | | |

^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity, |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifie | r Organics | Inorganics |
|------------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within controllimits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| A | Not applicable, | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| r | Presumed contamination from trip blank. | Not applicable. |
| ⊬ 4 | False positive – reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| ì | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| ; | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: PERCHLORATE

SAMPLE DELIVERY GROUP: IOI1901

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

SDG No.: Analysis:

NPDES 1011901 Perchlorate

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

DATA VALIDATION REPORT

313150010

Sample Delivery Group #:

IOI1901

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Perchlorate

QC Level:

Level IV

No. of Samples:

1

Reviewer:

L. Jarusewic

Date of Review:

October 14, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 314.0, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

SDG No.: Analysis: NPDES IOI1901 Perchlorate

DATA VALIDATION REPORT

Table 1. Sample identification

| Client ID | EPA ID | Laboratory ID | Matrix | COC Method |
|-------------|-------------|---------------|--------|-------------|
| Outfall 012 | Outfall 012 | IOI1901-01 | Water | Perchlorate |

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES 1011901 Perchlorate

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. The analysis did not require preservation and no preservation was noted in the field. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel, and accounted for the sample and analysis presented in this SDG. No qualifications were required.

2.1.3 Holding Times

The holding time was assessed by comparing the date of collection with the date of analysis. The 28day analytical holding time for perchlorate was met, and no qualifications were required.

2.2 CALIBRATION

The initial calibration correlation coefficient was ≥0.995. The IPC-MA recovery was within the control limits of 80-120%. The ICV, CCV, IPC, and ICCS recoveries were within the control limits of 90-110%. No qualifications were required.

2.3 BLANKS

The method blank and CCB results reported on the summary form and in the raw data for the blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample associated with this SDG was recovered within the method control limits of 85-115%. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analysis presented in this SDG.

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES 1011901 Perchlorate

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was assessed based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analysis of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analysis presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample result reported on the Form I was verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

2.11 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-329 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-104 6484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-968 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-085 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-362

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

| | | IN | ORG | ANICS | | | -: | - | | |
|--|------------------------|--------------------|--------------|--------------------|------------------|----------------------|------------------|----------------------|-------------|---------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor I | Date Atracted | Date Analyz | D ed Qua | ata lifter |
| Sample ID: IOI1901-01 (Outfal Reporting Units: mg/l | l 012 - Water) - co | ont. | | | | | | | Bhaj | [div |
| Ammonia-N (Distilled) Biochemical Oxygen Demand | EPA 350.2 EPA 405.1 | 5I28099 5I28060 | 0.30 | 0.50 | ND | 1 | 09/28/05 | 09/28/05 | * | |
| Oil & Grease Total Dissolved Solids | EPA 413.1 | 5129068 | 0.59 0.94 | 2.0 5.0 | 2.3 ND | | | 10/03/05 09/29/05 | Î | |
| Total Suspended Solids | SM2540C EPA 160.2 | 5129055 5128120 | 10 10 | 10 10 | 340 24 | | | | | |
| Sample ID: IOI1901-01 (Outfall Reporting Units: ml/l/hr | 012 - Water) | | | | | | | 05,20,05 | | |
| Total Settleable Solids | EPA 160.5 | 5128072 | 0.10 | 0.10 | ND | 1 (| 09/28/05 | 09/28/05 | | |
| Sample ID: IOI1901-01 (Outfall Reporting Units: NTU | 012 - Water) | | · | | | | | | | |
| Turbidity Sample ID: IOI1901-01 (Outfall) | EPA 180.1 | 5128080 | 0.040 | 1.0 | 24 | 1 (| 9/28/05 | 09/28/05 | \bigvee | |
| Reporting Units: ug/l Perchlorate | • | | | | | | , | | Y | |
| *, | EPA 314.0 | 5128064 | 0.80 | 4.0 | ND | 1 0 | 9/28/05 | 09/28/05 | u | |

* analysis not validated

AMEC VALIDATED

LEVEL IV

Del Mar Analytical, Irvine Michele Harper Project Manager

| ARE | CONTRACT CO | MPLIANCE SCI | REENING FO | | | |
|--|--|---|--------------|-----------------|---------------------------------------|---|
| AMEC Earth & Environmental 355 South Teller Street | | | | Package ID | T711WC17 | 7 |
| | | | | Task Order | | |
| | e 300 | | _ | SDG No. | IOI1901 | |
| Lak | ewood, CO 80226 | | 1 | lo. of Analyses | 1 | |
| | Laboratory Del M | | | Date: 10/14/0 | | |
| | Reviewer L. Jaru | | | Reviewer's Si | gnature | |
| | Analysis/Method Genera | l Minerals | | LXA | Main | |
| | | | | | | |
| | TON ITEMS* | | | | | |
| 1. | Case Narrative | | | | | |
| | Deficiencies | | | | | |
| 2. | Out of Scope | | | | | |
| | Analyses | | | | | |
| 3. | Analyses Not Conducted | | | | | |
| 4. | Missing Hardcopy | | ····· | | | · |
| ₩. | Deliverables | | | | | |
| 5. | Incorrect Hardcopy | | ···· | | · · · · · · · · · · · · · · · · · · · | |
| ٠, | Deliverables | | | | | |
| 6. | Deviations from | | | | | |
| | Analysis Protocol, e.g., | | | | | |
| | - | | | | | |
| | Holding Times | | | | | |
| | GC/MS Tune/Inst. | | | | | |
| | Performance Calibrations | | | | | |
| | Blanks | | | M | | |
| | Surrogates | | | | | |
| | Matrix Spike/Dup LCS | | | | | |
| | Field QC | | | | | |
| | Internal Standard | | | | | |
| | Performance | *************************************** | | | | |
| | Compound Identification and Quantitation | | | | | |
| | System Performance | | | · | | |
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| OM | VIENTS ⁶ | Acceptable as revi | ewed. | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

* Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|---|--|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. |
| 1 | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. (Note: Analyte may or may not be present). |

Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|--|
| Н | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards use for the calibration was incorrect |
| С | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| В | Presumed contamination from preparation (method) blank. | Presumed contamination from preparatio (method) or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was no within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatis- factory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Т | Presumed contamination from trip blank. | Not applicable. |
| + | False positive - reported compound was not present. Not applicable. | |
| | False negative - compound was present but not reported. | Not applicable. |
| 7 | Presumed contamination from FB, or ER. | Presumed contamination from FB or ER. |
| : | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| | TIC identity or reported retention time has been changed. | Not applicable. |
|) | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| NQ | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. | The compound was detected between the MDL and the RL and, by definition, is considered an estimated value. |

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).

Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: 1011901

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Project: SDG No.:

* NPDES IO11901

Analysis:

General Minerals

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

DATA VALIDATION REPORT

313150010

Sample Delivery Group #:

IOI1901

Project Manager:

P. Costa

Matrix: Analysis: Water General Minerals

QC Level:

Level IV

No. of Samples:

1 Reviewer: L. Jarusewic

Date of Review:

October 14, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 418.1, 350.2, 405.1, 413.1, 160.2, 160.5, and 180.1, Standard Methods for the Examination of Water and Wastewater Method SM2540C, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

NPDES

SDG No.:

IO11901

Analysis:

General Minerals

Table 1. Sample identification

| | | | | | 1 | | |
|-------------|-------------|---------------|--------|------------------|---|--|--|
| Client ID | EPA ID | Laboratory ID | Matrix | COC Method | | | |
| Outfall 012 | Outfall 012 | IOI1901-01 | Water | General Minerals | | | |

DATA VALIDATION REPORT

SDG No.: Analysis:

IOI1901 General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. No preservation problems were noted by the laboratory. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and all analyses presented in this SDG. No sample qualifications were required.

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The 28-day analytical holding time for total recoverable hydrocarbons, ammonia, and oil and grease, the seven day holding time for total dissolved solids and total suspended solids, and the 48-hour holding time for biological oxygen demand, total settleable solids, and turbidity were met. No qualifications were required.

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 0.995. Initial and continuing calibration information was acceptable with recoveries within the control limits of 90-110%. For ammonia, no information regarding the standardization of the titrant was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required. For BOD, no information regarding the calibration of the oxygen meter was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required. Calibration is not applicable to the total dissolved solid, oil and grease, total suspended solids, and total settleable solids analyses. No qualifications were required.

2.3 BLANKS

Turbidity was detected in method blank 5128080-BLK1 at 0.060 NTU; however, the method blank result was insufficient to qualify the turbidity result. The remaining method blank and CCB results reported on the summary forms and in the raw data for blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

NPDES

SDG No.: Analysis: IOI1901 General Minerals

DATA VALIDATION REPORT

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample and laboratory control sample duplicate (BOD, total recoverable petroleum hydrocarbons, and oil and grease only) recoveries were within the laboratory-established control limits. The LCS is not applicable to turbidity or total settleable solids. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analyses presented in this SDG.

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was based on LCS results. No qualifications were required.

2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analyses of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analyses presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

SDG No.:

NPDES 1011901

Analysis:

General Minerals

2.11 FIELD QC SAMPLES

DATA VALIDATION REPORT

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

2.11.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



17461 Derian Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-329; 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

July Surface Office Control of the C

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

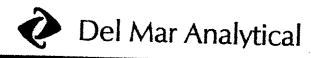
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | | Dilution Date FactorExtracted | | ata lifiaro |
|---|-----------|-----------------|--------------|--------------------|-----|----------------------------------|----------|----------------|
| Sample ID: IOI1901-01 (Outfall 012 Reporting Units: mg/l | • | | | | | | Eia) | Cede |
| Total Recoverable Hydrocarbons | EPA 418.1 | <i>5</i> I28075 | 0.31 | 1.0 | 6.3 | 0.943 09/28/05 | 09/28/05 | |

AMEC VALIDATED

LEVEL

Del Mar Analytical, Irvine Michele Harper Project Manager



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

| | | IN | ORG | | | | | | |
|--|---|---|----------------------------|--------------------------|------------------------------|------------------|--|----------------------------------|---|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | n Date Extracted | Date Analyz | Data ed Qualifi |
| Sample ID: IOI1901-01 (Outfall Reporting Units: mg/l | 012 - Water) - c | ont. | | | | | | Allalya | tiall |
| Ammonia-N (Distilled) Biochemical Oxygen Demand Oil & Grease Total Dissolved Solids Total Suspended Solids | EPA 350.2 EPA 405.1 EPA 413.1 SM2540C EPA 160.2 | 5128099 5128060 5129068 5129055 5128120 | 0.30 0.59 0.94 10 | 0.50 2.0 5.0 10 | ND 2.3 ND 340 24 | 1 1 1 1 | 09/28/05 09/28/05 09/29/05 09/29/05 09/28/05 | 10/03/05 09/29/05 09/29/05 | u |
| Sample ID: IOI1901-01 (Outfall Reporting Units: ml/l/hr Total Settleable Solids | 012 - Water) EPA 160.5 | 5128072 | 0.10 | 0.10 | | | | 09/28/05 | *************************************** |
| Sample ID: IOI1901-01 (Outfall (Reporting Units: NTU | | 3,20072 | 0.10 | 0.10 | ND | 1 | 09/28/05 | 09/28/05 | U |
| Turbidity Sample ID: IOI1901-01 (Outfall (| EPA 180.1 | 5128080 | 0.040 | 1.0 | 24 | 1 | 09/28/05 | 09/28/05 | |
| Reporting Units: ug/l Perchlorate | EPA 314.0 | 5128064 | 0.80 | 4.0 | ND | 1 | 09/28/05 | 09/28/05 | * |

*analysu not validated.

AMEC VALIDATED



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LABORATORY REPORT

Prepared For:

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project: Alfa Outfall 012 - During Test

Sampled: 09/26/05

Received: 09/27/05

Issued: 10/06/05 14:06

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED:

Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID

CLIENT ID

MATRIX

IOI1901-01

Outfall 012

Water

IOI1901-02

Trip Blank

Water

Reviewed By:

Del Mar Analytical, Irvine

Wichele Harper

Michele Harper Project Manager



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|-----------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOI1901-01 (Outfall 012 - W Reporting Units: mg/l | ater) | | | | | | | | |
| Total Recoverable Hydrocarbons | EPA 418.1 | 5128075 | 0.31 | 1.0 | 6.3 | 0.943 | 09/28/05 | 09/28/05 | |



MWH-Pasadena/Boeing

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300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly riojettis. The outsit of Danie 10.

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|-----------------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOI1901-01 (Outfall 012 - W Reporting Units: mg/l EFH (C13 - C22) Surrogate: n-Octacosane (40-125%) | Vater) - cont. EPA 8015B | 5128087 | 0.045 | 0.50 | 1.0 76 % | 0.943 | 09/28/05 | 09/29/05 | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

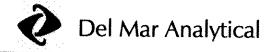
Report Number: IOI1901

Sampled: 09/26/05

Received: 09/27/05

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---------------------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOI1901-01 (Outfall 012 - Reporting Units: mg/l GRO (C4 - C12) | - Water) - cont. EPA 8015 Mod. | 5J05041 | 0.25 | 0.50 | 2.3 | 5 | 10/05/05 | 10/05/05 | MI |
| Surrogate: 4-BFB (FID) (65-140%) Sample ID: IOI1901-02 (Trip Blank - | Water) | | | | 114% | | 14, 00.00 | 10,00,00 | 1741 |
| Reporting Units: mg/l GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%) | EPA 8015 Mod. | 5J05041 | 0.050 | 0.10 | ND 106 % | 1 | 10/05/05 | 10/05/05 | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|--|---------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOI1901-01 (Outfall 012 - Wa | ter) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5128022 | 0.32 | 2.0 | ND | 1 | 09/28/05 | 09/28/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5128022 | 0.32 | 5.0 | ND | 1 | 09/28/05 | 09/28/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5128022 | 0.85 | 10 | ND | 1 | 09/28/05 | 09/28/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5128022 | 0.25 | 5.0 | ND | Ī | 09/28/05 | 09/28/05 | |
| tert-Butanol (TBA) | EPA 624 | 5128022 | 3.1 | 25 | ND | 1 | 09/28/05 | 09/28/05 | |
| Surrogate: Dibromofluoromethane (80-120) | %) | | | | 101 % | - | 05/20/05 | 03,20,03 | |
| Surrogate: Toluene-d8 (80-120%) | • | | | | 104 % | | | | |
| Surrogate: 4-Bromofluorobenzene (80-120% | 6) | | | | 103 % | | | | |
| Sample ID: IOI1901-02 (Trip Blank - Wat | er) | | | • | | | | | |
| Reporting Units: ug/l | , | | | | | | | | |
| 1,2-Dibromoethane (EDB) | EPA 624 | 5128022 | 0.32 | 2.0 | ND | 1 | 09/28/05 | 09/28/05 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 624 | 5128022 | 0.32 | 5.0 | ND | i | 09/28/05 | 09/28/05 | |
| 1,2,3-Trichloropropane | EPA 624 | 5128022 | 0.85 | 10 | ND | 1 | 09/28/05 | 09/28/05 | |
| Di-isopropyl Ether (DIPE) | EPA 624 | 5128022 | 0.25 | 5.0 | ND | 1 | 09/28/05 | 09/28/05 | |
| tert-Butanol (TBA) | EPA 624 | 5128022 | 3.1 | 25 | ND | 1 | 09/28/05 | 09/28/05 | |
| Surrogate: Dibromofluoromethane (80-1209 | 6) | | | _0 | 100 % | • | 07/20/03 | 03/26/03 | |
| Surrogate: Toluene-d8 (80-120%) | • | | | | 103 % | | | | |
| Surrogate: 4-Bromofluorobenzene (80-120% | 9 | | | | 101 % | | | | |



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300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOI1901

Sampled: 09/26/05

Received: 09/27/05

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|-------------------------------------|------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOI1901-01 (Outfall 01) | 2 - Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| Naphthalene | EPA 625 | 5128052 | 4.5 | 10 | 39 | 0.952 | 09/28/05 | 10/05/05 | |
| N-Nitrosodimethylamine | EPA 625 | 5128052 | 3.7 | 20 | ND | 0.952 | 09/28/05 | 10/05/05 | |
| Surrogate: 2-Fluorophenol (30-120% | 6) | | | | 63 % | | | | |
| Surrogate: Phenol-d6 (35-120%) | | | | | 70 % | | | | |
| Surrogate: 2,4,6-Tribromophenol (45 | 5-120%) | | | | 76 % | | | | |
| Surrogate: Nitrobenzene-d5 (45-120) | %) | | | | 79 % | | | | |
| Surrogate: 2-Fluorobiphenyl (45-120 | 0%) | | | | 81 % | | | | |
| Surrogate: Terphenyl-d14 (45-120%) |) | | | | 79 % | | | | |



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Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

| INORGANICS | | | | | | | | | | | | |
|--------------------------------------|------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|--|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | | | |
| Sample ID: IOI1901-01 (Outfall 012 | - Water) - cont. | | | | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | | | | |
| Ammonia-N (Distilled) | EPA 350.2 | 5128099 | 0.30 | 0.50 | ND | 1 | 09/28/05 | 09/28/05 | | | | |
| Biochemical Oxygen Demand | EPA 405.1 | 5128060 | 0.59 | 2.0 | 2.3 | 1 | 09/28/05 | 10/03/05 | | | | |
| Oil & Grease | EPA 413.1 | 5129068 | 0.94 | 5.0 | ND | 1 | 09/29/05 | 09/29/05 | | | | |
| Total Dissolved Solids | SM2540C | 5129055 | 10 | 10 | 340 | 1 | 09/29/05 | 09/29/05 | | | | |
| Total Suspended Solids | EPA 160.2 | 5128120 | 10 | 10 | 24 | 1 | 09/28/05 | 09/28/05 | | | | |
| Sample ID: IOI1901-01 (Outfall 012 | - Water) | | | | | | | | | | | |
| Reporting Units: ml/l/hr | , | | | | | | | | | | | |
| Total Settleable Solids | EPA 160.5 | 5128072 | 0.10 | 0.10 | ND | 1 | 09/28/05 | 09/28/05 | | | | |
| Sample ID: IOI1901-01 (Outfall 012 | - Water) | | | | | | | | | | | |
| Reporting Units: NTU | ŕ | | | | | | | | | | | |
| Turbidity | EPA 180.1 | 5128080 | 0.040 | 1.0 | 24 | 1 | 09/28/05 | 09/28/05 | | | | |
| Sample ID: IOI1901-01 (Outfall 012 - | · Water) | | | | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | | | | |
| Perchlorate | EPA 314.0 | 5128064 | 0.80 | 4.0 | ND | 1 | 09/28/05 | 09/28/05 | | | | |



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Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|-----------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: IOI1901-01 (Outfall 012 - Wat Reporting Units: ug/l | ter) - cont. | | | | | | | | |
| 1,4-Dioxane Surrogate: Dibromofluoromethane (70-130) | EPA 8260B %) | P5J0510 | 0.49 | 1.0 | ND 115 % | 1 | 10/05/05 | 10/05/05 | |



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Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

SHORT HOLD TIME DETAIL REPORT

| Sample ID: Outfall 012 (IOI1901-01) - Water | Hold Time | Date/Time | Date/Time | Date/Time | Date/Time |
|---|-----------|------------------|------------------|------------------|------------------|
| | (in days) | Sampled | Received | Extracted | Analyzed |
| EPA 160.5 | 2 | 09/26/2005 13:16 | 09/27/2005 17:30 | 09/28/2005 09:49 | 09/28/2005 11:00 |
| EPA 180.1 | 2 | 09/26/2005 13:16 | 09/27/2005 17:30 | 09/28/2005 10:30 | 09/28/2005 11:30 |
| EPA 405.1 | 2 | 09/26/2005 13:16 | 09/27/2005 17:30 | 09/28/2005 12:00 | |
| | ••• | 07/20/2005 15:10 | 09/2//2003 17.30 | 09/26/2003 12:00 | 10/03/2005 10:30 |



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Report Number: IOI1901

Sampled: 09/26/05

Received: 09/27/05

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|--------|--------------------|------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 5128075 Extracted: 09/28/05 | • | | | | | | | | | | |
| Blank Analyzed: 09/28/2005 (5I28075-BI | .K1) | | | | | | | | | | |
| Total Recoverable Hydrocarbons | ND | 1.0 | 0.31 | mg/l | | | | | | | |
| LCS Analyzed: 09/28/2005 (5I28075-BS1 |) | | | | | | | | | | M-NR1 |
| Total Recoverable Hydrocarbons | 4.60 | 1.0 | 0.31 | mg/l | 5.00 | | 92 | 65-120 | | | |
| LCS Dup Analyzed: 09/28/2005 (5128075 | -BSD1) | | | | | | | | | | |
| Total Recoverable Hydrocarbons | 4.58 | 1.0 | 0.31 | mg/l | 5.00 | | 92 | 65-120 | 0 | 20 | |



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Sampled: 09/26/05 Received: 09/27/05

METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|--|--------|--------------------|-------|-------|----------------|------------------|------|--------|-----|--------------|--------------------|
| Batch: 5128087 Extracted: 09/28/05 | • | | | | | | | | | | - |
| Blank Analyzed: 09/30/2005 (5128087-B) | LK1) | | | | | | | | | | |
| EFH (C13 - C22) | ND | 0.50 | 0.045 | mg/l | | | | | | | |
| EFH (C13 - C40) | ND | 0.50 | 0.045 | mg/l | | | | | | | |
| Surrogate: n-Octacosane | 0.142 | | | mg/l | 0.200 | | 71 | 40-125 | | | |
| LCS Analyzed: 09/30/2005 (5I28087-BS1 |) | | | | | | | | | | M-NR1 |
| EFH (C13 - C40) | 0.534 | 0.50 | 0.045 | mg/l | 0.776 | | 69 | 40-120 | | | 274 1 7442 |
| Surrogate: n-Octacosane | 0.146 | | | mg/l | 0.200 | | 73 | 40-125 | | | |
| LCS Dup Analyzed: 09/30/2005 (5128087 | -BSD1) | | | | | | | | | | |
| EFH (C13 - C40) | 0.477 | 0.50 | 0.045 | mg/l | 0.776 | | 61 | 40-120 | 11 | 25 | J |
| Surrogate: n-Octacosane | 0.134 | | | mg/l | 0.200 | | 67 | 40-125 | | | ū |



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Received: 09/27/05

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--|-------------|-----------|-------|-------|--------|-----------|--------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5J05041 Extracted: 10/05/05 | <u>L</u> | | | | | | | | | | |
| Blank Analyzed: 10/05/2005 (5J05041-B | LK1) | | | | | | | • | | | |
| GRO (C4 - C12) | ND | 0.10 | 0.050 | mg/l | | | | | | | |
| Surrogate: 4-BFB (FID) | 0.0112 | | | mg/l | 0.0100 | | 112 | 65-140 | | | |
| LCS Analyzed: 10/05/2005 (5J05041-BS | 1) | | | | | | | | | | |
| GRO (C4 - C12) | 0.809 | 0.10 | 0.050 | mg/l | 0.800 | | 101 | 65-140 | | | |
| Surrogate: 4-BFB (F1D) | 0.0390 | | | mg/l | 0.0300 | | 130 | 65-140 | | | |
| Matrix Spike Analyzed: 10/05/2005 (5J0 | 5041-MS1) | | | | Sou | rce: IOI1 | 901-01 | | | | |
| GRO (C4 - C12) | 2.55 | 0.50 | 0.25 | mg/l | 0.220 | 2.3 | 114 | 60-145 | | | |
| Surrogate: 4-BFB (FID) | 0.0108 | | | mg/l | 0.0100 | | 108 | 65-140 | | | |
| Matrix Spike Dup Analyzed: 10/05/2005 | (5J05041-MS | SD1) | | | Sour | rce: IOI1 | 901-01 | | | | |
| GRO (C4 - C12) | 2.73 | 0.50 | 0.25 | mg/l | 0.220 | 2,3 | 195 | 60-145 | 7 | 20 | Ml |
| Surrogate: 4-BFB (FID) | 0.0117 | | | mg/l | 0.0100 | | 117 | 65-140 | | | |

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Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--|--------------|-----------|------|--------------|-------|----------|-----------|------------------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 5I28022 Extracted: 09/28/05 | | | | | | | | | | | • |
| | | | | | | | | | | | |
| Blank Analyzed: 09/28/2005 (5I28022-BI | .K1) | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 2.0 | 0.32 | ug/l | | | | | | | |
| Methyl-tert-butyl Ether (MTBE) | ND | 5.0 | 0.32 | ug/l | | | | | | | |
| 1,2,3-Trichloropropane | ND | 10 | 0.85 | ug/l | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 5.0 | 0.25 | ug/l | | | | | | | |
| tert-Butanol (TBA) | ND | 25 | 3.1 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 24.4 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.9 | | | ug/l | 25.0 | | 104 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 25.4 | | | ug/l | 25.0 | | 102 | 80-120 | | | |
| LCS Analyzed: 09/28/2005 (5128022-BS1) | 1 | | | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 26.4 | 2.0 | 0.32 | ug/l | 25.0 | | 106 | 70.126 | | | |
| Methyl-tert-butyl Ether (MTBE) | 23.8 | 5.0 | 0.32 | ug/i ug/i | 25.0 | | 95 | 70-125 55-140 | | | |
| 1,2,3-Trichloropropane | 23.5 | 10 | 0.85 | ug/I | 25.0 | | 93 94 | | | | |
| Di-isopropyl Ether (DIPE) | 17.4 | 5.0 | 0.25 | ug/I ug/l | 25.0 | | 70 | 55-130 60-135 | | | |
| tert-Butanol (TBA) | 110 | 25 | 3.1 | ug/I | 125 | | 88 | 65-135 | | | |
| Surrogate: Dibromofluoromethane | 25.3 | 23 | J.1 | ug/l | 25.0 | | 00 101 | 80-120 | | | |
| Surrogate: Toluene-d8 | 25.9 | | | ug/l | 25.0 | | 101 | 80-120 80-120 | | | • |
| Surrogate: 4-Bromofluorobenzene | 26.0 | | | ug/l | 25.0 | | 104 | 80-120 80-120 | | | |
| Matrix Spike Analyzed: 09/28/2005 (51280 | 922.MS1) | | | Ü | | IAT10 | | 00.120 | | | |
| 1,2-Dibromoethane (EDB) | 30.7 | 2.0 | 0.32 | | | e: IOI18 | | | | | |
| Methyl-tert-butyl Ether (MTBE) | 28.3 | 5.0 | | ug/l | 25.0 | ND | 123 | 65-130 | | | |
| 1,2,3-Trichloropropane | 26.3 27.7 | 5.0 10 | 0.32 | ug/l | 25.0 | ND | 113 | 50-150 | | | |
| Di-isopropyl Ether (DIPE) | 19.3 | 5.0 | 0.85 | ug/l | 25.0 | ND | 111 | 50-135 | | | |
| tert-Butanol (TBA) | 19.3 | | 0.25 | ug/l | 25.0 | ND | | 60-140 | | | |
| Surrogate: Dibromofluoromethane | 26.0 | 25 | 3.1 | ug/l | 125 | ND | | 60-145 | | | |
| Surrogate: Toluene-d8 | | | | ug/l | 25.0 | | | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 26.2 | | | ug/l | 25.0 | | | 80-120 | | | |
| sairogaie. 4-bromojiuoropenzene | 26.7 | | | ug/l | 25.0 | | 107 | 80-120 | | | |



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Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte <u>Batch: 5128022 Extracted: 09/28/05</u> | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---------------|--------------------|------|-------|----------------|------------------|--------|----------------|-----|--------------|--------------------|
| Matrix Spike Dup Analyzed: 09/28/2005 | 5 (5I28022-MS | 5 D 1) | | | Sou | rce: IOI1 | 878-01 | | | | |
| 1,2-Dibromoethane (EDB) | 27.3 | 2.0 | 0.32 | ug/l | 25.0 | ND | 109 | 65-130 | 12 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 23.6 | 5.0 | 0.32 | ug/l | 25.0 | ND | 94 | 50-150 | 18 | 25 | |
| 1,2,3-Trichloropropane | 22.2 | 10 | 0.85 | ug/l | 25.0 | ND | 89 | 50-135 | 22 | 30 | |
| Di-isopropyl Ether (DIPE) | 18.9 | 5.0 | 0.25 | ug/i | 25.0 | ND | 76 | 60-140 | 2 | 25 | |
| tert-Butanol (TBA) | 128 | 25 | 3.1 | ug/l | 125 | ND | 102 | 60-145 | 18 | 25 | |
| Surrogate: Dibromofluoromethane | 24.6 | | | ug/l | 25.0 | | 98 | 80-120 | | 23 | |
| Surrogate: Toluene-d8 | <i>25.7</i> | | | ug/l | 25.0 | | 103 | 80-120 | | | |
| Surrogate: 4-Bromofluorobenzene | 26.2 | | | ug/l | 25.0 | | 105 | 80-120 | | | |



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Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|---------------|--------------------|-----|-------|----------------|------------------|-----------|----------------|-----|--------------|--------------------|
| Batch: 5I28052 Extracted: 09/28/05 | • | | | | | | | | | | |
| Blank Analyzed: 10/03/2005 (5128052-Bl | L K1) | | | | | | | | | | |
| Naphthalene | ND | 10 | 4.5 | ug/l | | | | | | | |
| N-Nitrosodimethylamine | ND | 20 | 3.7 | ug/l | | | | | | | |
| Surrogate: 2-Fluorophenol | 114 | | | ug/l | 200 | | <i>57</i> | 30-120 | | | |
| Surrogate: Phenol-d6 | 125 | | | ug/l | 200 | | 62 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 130 | | | ug/l | 200 | | 65 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 71.9 | | | ug/l | 100 | | 72 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 77.7 | | | ug/l | 100 | | <i>78</i> | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 97.6 | | | ug/l | 100 | | 98 | 45-120 | | | |
| LCS Analyzed: 10/03/2005 (5128052-BS1 |) | | | | | | | | | | M-NR1 |
| Naphthalene | 72.9 | 10 | 4.5 | ug/l | 100 | | 73 | 50-120 | | | |
| N-Nitrosodimethylamine | 61.7 | 20 | 3.7 | ug/l | 100 | | 62 | 40-120 | | | |
| Surrogate: 2-Fluorophenol | III | | | ug/l | 200 | | 56 | 30-120 | | | |
| Surrogate: Phenol-d6 | 123 | | | ug/l | 200 | | 62 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 144 | | | ug/l | 200 | | 72 | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 69.1 | | | ug/l | 100 | | 69 | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 74.4 | | | ug/l | 100 | | 74 | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 80.0 | | | ug/l | 100 | | 80 | 45-120 | | | |
| LCS Dup Analyzed: 10/03/2005 (5I28052- | BSD1) | | | | | | | | | | |
| Naphthalene | 82.8 | 10 | 4.5 | ug/l | 100 | | 83 | 50-120 | 13 | 20 | |
| N-Nitrosodimethylamine | 70.3 | 20 | 3.7 | ug/l | 100 | | 70 | 40-120 | 13 | 20 | |
| Surrogate: 2-Fluorophenol | 125 | | | ug/l | 200 | | 62 | 30-120 | | 20 | |
| Surrogate: Phenol-d6 | 146 | | | ug/l | 200 | | 73 | 35-120 | | | |
| Surrogate: 2,4,6-Tribromophenol | 147 | | | ug/l | 200 | | | 45-120 | | | |
| Surrogate: Nitrobenzene-d5 | 77.7 | | | ug/l | 100 | | | 45-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 79.3 | | | ug/l | 100 | | | 45-120 | | | |
| Surrogate: Terphenyl-d14 | 82.1 | | | ug/l | 100 | | | 45-120 | | | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|-------------|--------------------|-------|-------|----------------|------------------|--------|----------------|-----|--------------|--------------------|
| Batch: 5128060 Extracted: 09/28/05 | | | | | | | | | | | |
| Blank Analyzed: 10/03/2005 (5128060-BL | K1) | | | | | | | | | | |
| Biochemical Oxygen Demand | ND | 2.0 | 0.59 | mg/l | | | | | | | |
| LCS Analyzed: 10/03/2005 (5I28060-BS1) | • | | | | | | | | | | |
| Biochemical Oxygen Demand | 200 | 100 | 30 | mg/l | 198 | | 101 | 85-115 | | | |
| LCS Dup Analyzed: 10/03/2005 (5128060- | BSD1) | | | | | | | | | | |
| Biochemical Oxygen Demand | 202 | 100 | 30 | mg/l | 198 | | 102 | 85-115 | 1 | 20 | |
| Batch: 5128064 Extracted: 09/28/05 | | | | | | | | | | | |
| Blank Analyzed: 09/28/2005 (5128064-BL | K1) | | | | | | | | | | |
| Perchlorate | ND | 4.0 | 0.80 | ug/l | | | | | | | |
| LCS Analyzed: 09/28/2005 (5128064-BS1) | | | | | | | | | | | |
| Perchlorate | 49.3 | 4.0 | 0.80 | ug/l | 50.0 | | 99 | 85-115 | | | • |
| Matrix Spike Analyzed: 09/28/2005 (51280 | 64-MS1) | | | | Sour | ce: IOI19 | 009-01 | | | | |
| Perchlorate | 54.3 | 4.0 | 0.80 | ug/l | 50.0 | 3.5 | 102 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 09/28/2005 (| 5128064-MS) | D1) | | | Sour | ce: IOI19 | 09-01 | | | | |
| Perchlorate | 56.0 | 4.0 | 0.80 | ug/l | 50.0 | 3.5 | 105 | 80-120 | 3 | 20 | |
| Batch: 5128080 Extracted: 09/28/05 | | | | | | | | | | | |
| Blank Analyzed: 09/28/2005 (5128080-BLI | (1) | | | | | | | | | | |
| | 0.0600 | 1.0 | 0.040 | NTU | | | | | | | J |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source | %REC | %REC | RPD | RPD Limit | Data |
|--|---|--------------------|-------|-------|----------------|-----------|----------|--------|-----|--------------|------------|
| Batch: 5128080 Extracted: 09/28/05 | *************************************** | Limit | NEDE | Cuits | Treves | Result | 76REC | Limits | KrD | Limit | Qualifiers |
| Duplicate Analyzed: 09/28/2005 (5128080 | -DUP1) | | | | Son | rce: IOI1 | 912_01 | | | | |
| Turbidity | ND | 1.0 | 0.040 | NTU | 504 | ND |) I 4-QI | | | 20 | |
| Batch: 5128099 Extracted: 09/28/05 | | | | | | | | | | | |
| Blank Analyzed: 09/28/2005 (5128099-BL | K1) | | | | | | | | | | |
| Ammonia-N (Distilled) | ND | 0.50 | 0.30 | mg/l | | | | | | | |
| LCS Analyzed: 09/28/2005 (5I28099-BS1) |) | | | | | | | | | | |
| Ammonia-N (Distilled) | 11.5 | 0.50 | 0.30 | mg/l | 10.0 | | 115 | 80-115 | | | |
| Matrix Spike Analyzed: 09/28/2005 (5128) | 099-MS1) | | | | Sour | ce: IOI09 |)17-02RE | 21 | | | |
| Ammonia-N (Distilled) | 11.8 | 0.50 | 0.30 | mg/l | 10.0 | 0.84 | 110 | 70-120 | | | |
| Matrix Spike Dup Analyzed: 09/28/2005 (| 5128099-MS | D1) | | | Sour | ce: IO109 | 17-02RE | 1 | | | |
| Ammonia-N (Distilled) | 11.5 | 0.50 | 0.30 | mg/l | 10.0 | 0.84 | 107 | 70-120 | 3 | 15 | 1,14 |
| Batch: 5128120 Extracted: 09/28/05 | | | | | | | | | • | | |
| Blank Analyzed: 09/28/2005 (5I28120-BL) | K1) | | | | | | | | | | |
| Total Suspended Solids | ND | 10 | 10 | mg/l | | | | | | | |
| LCS Analyzed: 09/28/2005 (5128120-BS1) | | | | | | | | | | | |
| Total Suspended Solids | 995 | 10 | 10 | mg/l | 1000 | | 100 | 85-115 | | | |
| Duplicate Analyzed: 09/28/2005 (5I28120- | DUP1) | | | | Sour | ce: IOI18 | 33-01 | | | | |
| Total Suspended Solids | ND | 10 | 10 | mg/l | | ND | | | | 10 | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---------|--------------------|------|-------|----------------|------------------|--------|----------------|-----|--------------|--------------------|
| Batch: 5I29055 Extracted: 09/29/05 | | | | | | | | | | | |
| Blank Analyzed: 09/29/2005 (5129055-BI | LK1) | | • | | | | | | | | |
| Total Dissolved Solids | ND | 10 | 10 | mg/l | | | | | | | |
| Duplicate Analyzed: 09/29/2005 (5129055 | 5-DUP1) | | | | Sour | rce: IOI2 | 017-02 | | | | |
| Total Dissolved Solids | 1660 | 10 | 10 | mg/l | | 1600 | | | 4 | 10 | |
| Reference Analyzed: 09/29/2005 (5129053 | 5-SRM1) | | | | | | | | | | |
| Total Dissolved Solids | 1020 | 10 | 10 | mg/l | 1000 | | 102 | 0-200 | | | |
| Batch: 5129068 Extracted: 09/29/05 | | | | | | | | | | | |
| Blank Analyzed: 09/29/2005 (5129068-BL | K1) | | | | | | | | | | |
| Oil & Grease | ND | 5.0 | 0.94 | mg/l | | | | | | | |
| LCS Analyzed: 09/29/2005 (5I29068-BS1) |) | | | | | | | | | | M-NRI |
| Oil & Grease | 16.7 | 5.0 | 0.94 | mg/l | 20.0 | | 84 | 65-120 | | | ्री शिक्स |
| LCS Dup Analyzed: 09/29/2005 (5129068- | BSD1) | | | * | | | | | | | |
| Oil & Grease | 15.6 | 5.0 | 0.94 | mg/l | 20.0 | | 78 | 65-120 | 7 | 20 | |



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|-------|----------------|------------------|--------|--------|-----|--------------|--------------------|
| Batch: P5J0510 Extracted: 10/05/05 | | | | | | | | | | | • |
| Blank Analyzed: 10/05/2005 (P5J0510-B | LK1) | | | | | | | | | | |
| 1,4-Dioxane | ND | 1.0 | 0.49 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 1.11 | | | ug/l | 1.00 | | 111 | 70-130 | | | |
| LCS Analyzed: 10/05/2005 (P5J0510-BS | 1) | | | | | | | | | | |
| 1,4-Dioxane | 9.63 | 1.0 | 0.49 | ug/l | 10.0 | | 96 | 70-130 | | | |
| Surrogate: Dibromofluoromethane | 1.14 | | | ug/l | 1.00 | | 114 | 70-130 | | | |
| LCS Dup Analyzed: 10/05/2005 (P5J051 | 0-BSD1) | | | | | | | | | | |
| 1,4-Dioxane | 10.8 | 1.0 | 0.49 | ug/l | 10.0 | | 108 | 70-130 | 11 | 20 | |
| Surrogate: Dibromofluoromethane | 1.09 | | | ug/l | 1.00 | | 109 | 70-130 | •• | 20 | |
| Matrix Spike Analyzed: 10/05/2005 (P5J | 0510-MS1) | | | | Sour | rce: POI0 | 848-01 | | | | |
| 1,4-Dioxane | 13.3 | 1.0 | 0.49 | ug/l | 10.0 | 5.5 | 78 | 65-125 | | | |
| Surrogate: Dibromofluoromethane | 0.970 | | | ug/l | 1:00 | | 97 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 10/05/2005 | (P5J0510-M | SD1) | | | Sour | ce: POI0 | 848-01 | | | | |
| 1,4-Dioxane | 15.2 | 1.0 | 0.49 | ug/l | 10.0 | 5.5 | 97 | 65-125 | 13 | 20 | |
| Surrogate: Dibromofluoromethane | 0.990 | | | ug/l | 1.00 | - | 99 | 70-130 | | | |



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

M-NR1 There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike

Duplicate.

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO):

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Project ID: Alfa Outfall 012 - During Test

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOI1901

Sampled: 09/26/05 Received: 09/27/05

Certification Summary

Del Mar Analytical, Irvine

| Method | Matrix | Nelac | California |
|---------------|--------|-------|------------|
| EPA 160.2 | Water | x | Х |
| EPA 160.5 | Water | X | X |
| EPA 180.1 | Water | X | X |
| EPA 314.0 | Water | N/A | X |
| EPA 350.2 | Water | | X |
| EPA 405.1 | Water | X | X |
| EPA 413.1 | Water | X | X |
| EPA 418.1 | Water | X | X |
| EPA 624 | Water | X | X |
| EPA 625 | Water | X | X |
| EPA 8015 Mod. | Water | X | X |
| EPA 8015B | Water | X | x |
| EPA 8260B | Water | X | X |
| Level 4 | Water | ** | |
| SM2540C | Water | X | X |
| | | | |

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Subcontracted Laboratories

Del Mar Analytical - Phoenix NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907 9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed:

EPA 8260B

Samples: IOI1901-01



17461 Derlen Ave. Sulte 100, Irvine, CA 92614 1014 E. Cooley Dr., Sulte A. Colton, CA 92324 9484 Chesapeelse Drive, Sulte 805, Sen Diego, CA 92123

(619) 505-9596 Fi

ax (909) 370-1046 ax (619) 505-9689 ax (480) 785-0851

2520 E. Surent Rd., Sulle #3, Lee Veges, NV 8912

SUBCONTRACT ORDER - PROJECT # IOI1901

SENDING LABORATORY:

Del Mar Analytical, Irvine

17461 Derian Avenue. Suite 100

Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228

Project Manager: Michele Harper

RECEIVING LABORATORY:

Del Mar Analytical - Phoenix

9830 S. 51st Street, Suite B-120

Phoenix, AZ 85044 Phone :(480) 785-0043

Fax: (480) 785-0851

| Analysis | Expiration | Due . | Comments |
|---------------------------|------------------|------------------|--|
| Sample ID: IOI1901-01 V | Water Sampled | : 09/26/05 13:16 | POID799-1 |
| Dioxane-8260B-out | 10/10/05 13:16 | 10/06/05 12:00 | Boeing-permit, sub DMAP, J flags, ID=DMA+Outfall 012 |
| Level 4 Data Package - Ou | t 10/24/05 13:16 | 10/06/05 12:00 | Boeing |
| Containers Supplied: | | | |
| 40 ml VOA w/HCL (IOI19 | 01-01M) | | |
| 40 ml VOA w/HCL (IOI19 | 01-01N) | | |
| 40 ml VOA w/HCL (IOI19 | 01-010) | | |

| , | SAMPLE INTEGRITY: | |
|-----------------------------------|---------------------------------|-------------------------------------|
| All containers intact: Yes D No | Sample labels/COC agree: PYes | No Samples Received On Ice:: Yes No |
| Custody Scals Present: 💢 Yes 🔲 No | Samples Preserved Properly: Yes | No Samples Received at (temp): |
|) | | |
| | | anatos |
| eleased By | Date Time Received By | Date Time |
| | | |
| effect By | Date Time Received By | Ponen 9/29/05 1000 |

| of 1 | . G | | 25 |) | į | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | 25- |
|-------------------------|---|---|---|--|--------------|-------------|--------------------------|-------------|--------------|-------------|-----------|-------------|-----------|--|-----------|-------------|--------------|-------------|-------------|-----------|-------------|-------------|----------|---------------------------------|---------------------------|----------|-----------------|----------|---------------------------|----------------------|--|
| Page 1 | Field readings: | dme | | : E | £ | | | | | | | | | | | | | | | | | | | | Turn around Time: (check) | 5 Days | 10 Days | Normal | Perchlorate Only 72 Hours | 24 | Semple Megaty: (Check) Intact On los: |
| | | \$ | sbild | os elde | settie | PS | | | | | | | | | | | | | | | | | × | | d Time | | | | Omly 7 | 72 Ho | |
| ۵ | | SS. | ı,8 | SCIT,QH | bidnı | л | | | | | | | | | | | | | | | | × | | | Un GLOOM | Tog | 48 Hours | 72 Hours | Chlorate | Metals Only 72 Hours | |
| ANALYSIS REQUIRED | | | | lorate | ətchi | ď | | | | | | | | | | | | | | | | × | | | Ē | 74 | \$ | 72 | <u>*</u> | ₹ . | 중로 |
| REG | (Z.036 | ;) : | AT. | ,VI-Bind | sip / | | | | | T | | | | ľ | | T | | | | | × | Ī | | | | | | | | | |
| YSIS. | | 9 | ilen İysi | sritriqei sns Al | NDN Se n | + 29 | | | | | | | | | | | | | × | × | | | | | | | | | | | |
| ANA | | ****** | | ep ((S) | | | | | | | | | | 1 | | | | × | | | | | | |] | | | | | | |
| | |)Τ: (Α) | 5,2, 3T , | EDB, 1 EDB, 1 | 34 (1 | W 9 | | | | | | | | | | × | × | | | | | | | × | | | d | | | | |
| | snodis | :00: | ibŲi | H muəl (r.8r.) | orte Aq: | 3) | | T | 1 | T | | | | T _× | × | T | | | T | | T | | | | | (| 360 | | | f | 0 |
| | | ec. | 1 K | ensxol stoT=,l | Bb | 1 | - | - | ऻ | - | | L | 1 | l | - | - | - | - | - | _ | - | | <u> </u> | | ┨. | • | 0 | | | • | 7 |
| | | | *************************************** | deseib- | | _ | + | + | | × | × | × | × | ╁ | \vdash | + | | <u> </u> | \vdash | _ | + | _ | | | me: | ĺ | | ė | | Ė | |
| | | | | se6- | | | | × | × | | | | | | | | | | | | | | | × | Date/Time | ~ | 3 | | 1000 | | 3 |
| | • | /d | 3) o | esene) | .8 lic |) | <u>×</u> | | | | | | | | | | | | | | | | | |] ` | / | | | | 7 | Z. |
| | | *************************************** | | | Bottle # | | Z = 18 | 24 | 28, 20 | æ | 38 | \$ | 48,40 | *************************************** | 58 | ₩ | 08, 6C | 7.4 | 8A | 88 | 9A | 10A | 11A | 12A, 12B, 12C, 12D, 12E, 12F | |) a | が大な | 0. | | ユ | |
| | NPDES - Outfall 012 Id | | . | <u>-</u> vo | Preservative | Š | <u> </u> | 모 | 오 | None | None | HC | Ę. | ₽ | 호 | ŦĢ. | 쟞 | None | None | None | H2S04 | None | None | | Received By | ナミス | Received By | | Received By | | TO THE PROPERTY OF THE PROPERT |
| Project. Boeing Sori | Doeing-SSTL NPDES During Teet - Outfall Alfa Test Stand | | rnone Number (R2R) 589 6894 | (dze) pos-oce Fax Number: (626) 568-6515 | Sampling | Date / Ime | 97:2: | | | | | | | The state of the s | | | | | | | | 4 | 3:/67 | | | K2.64 | 200 | | | | |
| a | | - 2 | | | | 7 | | | 8 | | | | | | | | | | \dashv | | | - 6 | | | Date/Time: | - | -16 | 48× | Date/Time: | | |
| | 2 | 1 | ≥ / | 1 | | 5 - | - | - | | | _ | | | - | - | * | -2 | - | 7 | - | \dashv | 1 | + | • | | 59/12 | | |) To | | |
| ٠ | i, Suite 120 | Common Ko | | Janapa | Container | 1. Amber | 1L Amber | VOAs | VOAs | 1L Amber | 1L. Amber | VOAs | VOA. | 1. Amber | 1L Amber | VOAs | VOAs | 1L Poly | 1L. Amber | 1L Amber | 500ml Poly | 1. Poly | T. Poly | VOAs | , | U V | + | 7946 | · 172 | | |
| | sadena ke Avenue | ager Ar | | Rich | Sample | 3 | * | 3 | 3 | 3 | ≥ | 3 | | *** | 3 | 3 | 3 | 3 | 3 | 3 | ≱ : | 8 3 | 8 | 3 | | <u>}</u> | 2 | 6 i (| 1 | > | |
| כופון ועשוום/ערכו פצצי | MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 | Project Manager: Bronwin Kelly | | Sampler: | Sample | Outfall 012 | Outfell 012 duplicate | Outfall 012 | duplicate | Outfall 012 | duplicate | Out all 012 | duplicate | Outfall 012 | duplicate | Outfall 012 | duplicate | Outfall 012 | Outfall 012 | duplicate | Outfall 012 | Outfall 012 | 70.00 | Trip Blank | Keinparament By | 1 / W | Refinquished By | TA TO | Refinquished By | PDE: | - 39 |

293

100/10

O Page 1 of Temp = 77.7 Comments 7.83 Field readings: 15 Nomal Sample integrity: (Check) intect 10 Days Turn around Time: (check) 24 Hours 5 Days 표 Perchiorate Only 72 Hours Metals Only 72 Hours Settleable Solids Turbidity, TDS, TSS 72 Hours 48 Hours × ANALYSIS REQUIRED Perchlorate × ISID /W × (3.03E) Titr (350.2) sizylens AMUN+ SZ5 Naphthalene × × SOD5(20 degrees C) × (A8T, 390, 38TM × × × 624 (EDB, 1,2,3-TCP, 2500 (F 8F4 A93) Petroleum Hydrocarbons × × TRPH,=Total Rec. 80928-enexoid-4,f × **CHAIN OF CUSTODY FORM** Date/Time leut te[\leseib-2f08 × × 8015-gas × × × Oil & Grease (EPA 413.1) × Ò 12A, 12B, 12C, 12D, 12E, 12F 2B, 2C ₽. 4C Bottle # 6B, 6C 114 \$ 4 4 \$ ž 贸 \$ \$ 8 Ş \$ 88 8 Boeing-SSFL NPDES During Test -- Outfall 012 Preservative **8** By Received By Received By H2S04 Recent None None Society No. S None None 뀿 $\overline{\mathbf{Q}}$ $\ddot{\Sigma}$ Ş 쟞 至 至 오 오 쟞 Ş Alfa Test Stand (626) 568-6515 Phone Number (626) 568-669 Fax Number: Sampling Date/Time 13/18/26 47/05 0953 Project \$ / X Del Mar Analytical version 02/17/05 Date/Time: Date/Time: Date/Time: Sampler Rick Jungs Cont. N N N ထ Project Manager: Bronwyn Kelly 300 North Lake Avenue, Suite 1200 Container Type 500ml Poly 1L Amber 1L Amber 1i. Amber 1L Amber 1L Amber 11. Amber 1L Amber 1L Amber 1L Poly 1L Poly 11. Poly VOAs VOAs VOAs VOAs VOAs VOAs ₹ Ş Client Name/Address Sample Matrix MWH-Pasadena Pasadena, CA 91101 \$ ₹ ₹ ₹ ₹ ≥ ≥ ₹ ≤ ₹ š š ₹ ≥ ≥ \$ s 3 S Reliperatement By Sample Description Outfall 012 Trip Blank duplicate ouplicate duplicate duplicate duplicate duplicate duplicate 392