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STORMWATER SAMPLING AND ANALYSIS PLAN

AKRON AIRDOCK, AKRON, OHIO

Prepared for:

LOCKHEED MARTIN CORPORATION OCTOBER 1, 2008

JOB NO: 14947614



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CONTENTS

| Sectior | ו P | age |
|---------|--------------------|-----|
| 1.0 | INTRODUCTION | 1 |
| 2.0 | BACKGROUND | 1 |
| 3.0 | OBJECTIVE | 2 |
| 4.0 | SAMPLING LOCATIONS | 2 |

1.0 INTRODUCTION

This Stormwater Sampling and Analysis Plan (SAP) has been prepared to address proposed post-

Following completion of the storm sewer debris and sediment removal program, a post-remediation stormwater sampling program will be implemented. Implementation of the stormwater program is the subject of this SAP.

3.0 OBJECTIVE

The objective of this sampling program is to collect aqueous post-remediation sampling data that are representative of stormwater discharges from the 19-acre Airdock parcel, as required to meet VAP applicable standards and to satisfy requests from the Ohio EPA Division of Surface Water (DSW). The sampling data will be used to evaluate the effectiveness of the remediation activities relative to the current Lake Erie drainage basin surface water quality criterion for PCBs of 0.026 nanograms per liter (ng/L) for protection of human health and 0.12 ng/L for protection of wildlife. The sampling data will also be evaluated relative to the unrestricted use TSCA decontamination standard for PCBs in water of 0.5 micrograms per liter [μ g/L] (40 CFR 761.79(b)(1)(iii).

4.0 SAMPLING LOCATIONS

Sampling is proposed from five locations, one from the western storm sewer and four from the eastern storm sewers, as described below.

| A m-337.0(s)-252.3(dp(,)-337.0(o4 Tm | ([)Tj | E1.9(0()]TJ | ET).9(i)-4.6(c)-1.6(t)-4.6(ons)-2.4(,)-337.0(t)- |
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Stormwater Sampling and Analysis Plan

5.0 SAMPLE COLLECTION

the first 30 minutes to 1 hour of stormwater discharge.

6.2 MEASUREMENT OF FIELD PARAMETERS

9.0 EVALUATION OF RESULTS

Following receipt of the laboratory reports the data will go through a validation process to ensure that the reported results are of sufficient quality for the intended data use. Estimated concentrations reported by the lab that are below the VAP reporting limit of 0.2 μ g/L, i.e. "J" flagged data, will be considered to be non-detectable.

After the validated results are available from the four discrete sampling events, the data will be reviewed and evaluated relative to sampling conditions and applicable standards. The evaluation will consider such factors as the:

Consistency or variability of the analytical results over the sampling events, if applicable;

Sp12 i..0(0ceBT 0 1 501.6354.08 0 F5 11. i)-4.6(..0(0.8(e)-)-4.630 1 4 0 0 1 332.28).6(s)-2.3(c-1.12

FIGURES



APPENDIX A

STORMWATER SAMPLING FORM

Stormwater Sampling Field Form

| Project: | Project Number: |
|----------------------------------|----------------------------------|
| Akron Airdock | |
| Client: | Location: |
| Lockheed Martin | 1210 Massillon Road, Akron, Ohio |
| Sample ID: | Personnel:/ |
| Sample Location | ÷ |
| | Sample Date:/ |
| Sample Medium: <u>Stormwater</u> | Sample Collection Time (ST): |

Storm Event and Sampling Point Information

| Storm Event Start Time (ST): | Precipitation at ST: data | inches/ source of |
|--|--|--------------------|
| Weather Conditions at ST: | Ambient Temperature at ST: data | ⁰F / source of |
| Storm Event Duration: | Total Precipitation for Event (include | e source of data): |
| Estimated Sampling Point Discharge Rate: | | cfs or |

Estimated Sampling Point Discharge Rate:

gpm (circle one)

Notes regarding flow character (turbulent, laminar, etc.):

Water Quality Information

| Instrument: | pH: | Color: | |
|-------------------------------|--|--------|--|
| Temperature(°F): | Oxidation-Reduction Potential (ORP) (mV): | Odor: | |
| Specific Conductance (mS/cm): | Total Dissolved Solids (mg/L): | Other: | |

Sampling Information

| Collection Method (describe): | | | | | |
|-------------------------------|----------------|------------------------|---------------|-------------|--|
| | | | | | |
| | | | | | |
| Sample Container | Preservative | Analysis Required | Method Number | Laboratory | |
| 250 ml Plastic | Chilled to 6°C | Total Suspended Solids | EPA160.2 | TestAmerica | |



OBJECTIVE

The objective of these calculations is to provide an estimated full pipe flow value at manhole PAW-7 at the Akron Airdock site. This full flow value will be used by sampling personnel to estimate partial stormwater flow in the pipe at the PAW-7 test point using the attached worksheet.

METHODOLOGY

The calculation is performed by utilizing Manning's semi-



- D 30 inches 2.5 ft
- $A \quad \frac{D^{2}}{4} \quad \frac{(2.5)^{2}}{4} \quad 4.904 ft^{2}$ $R_{h} \quad \frac{r^{2}}{2 r} \quad \frac{r}{2} \quad \frac{\mathbf{D}}{4} \quad \frac{2.5}{4} \quad 0.625 ft$
- $z_2 = 1035.60 ft, z_1 = 1034.88 ft, x_2 = 350 ft, x_1 = 0 ft$



PAW Flow Calculation Worksheet

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APPENDIX C

PAE FLOW ESTIMATE CALCULATION AND WORKSHEET



FILE <u>AKRON AIRDOCK</u> SUBJECT ESTIMATED



D 30 inches 2.5 ft

$$A \quad \frac{D^{2}}{4} \quad \frac{(2.5)^{2}}{4} \quad 4.904 ft^{2}$$

$$R_{h} \quad \frac{r^{2}}{2 r} \quad \frac{r}{2} \quad \frac{D}{4} \quad \frac{2.5}{4} \quad 0.625 ft$$

$$z \qquad ft \ z \qquad ft \ z \qquad ft \ x \qquad ft, x \qquad 0 ft$$



PAE