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Interim Report, Missile Community Cancer Study, Minot Air Force Base, Round 2 Results

Lt Col Scott M. Boyd
Occupational & Environmental Health Department

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1 February 2024

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U.S. Air Force School of Aerospace Medicine
Occupational & Environmental Health Department
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14. ABSTRACT
At the request of the Air Force Global Strike Commander (AFGSC/CC), the United States Air Force School of Aerospace Medicine (USAFSAM) Defense Centers for Public Health-Dayton (DCPH-D) Occupational and Environmental Health Department Consultative Services Division (OEC) performed an environmental health survey for all fifteen Missile Alert Facilities (MAFs) at Minot AFB, North Dakota. The purpose of this environmental health survey was to assess elevated cancer concerns within the Air Force missile community by characterizing and documenting potential exposures to environmental hazards in the MAFs. Round 2 occurred from 2 to 12 October 2023 and built upon the Round 1 environmental health survey which occurred from 20 to 27 July 2023. Round 2 was executed as part of a three-round surveillance effort to determine seasonal variations associated with potential environmental hazards at MAF locations. Round 2 repeated area air sampling, direct reading instrument (DRI) air monitoring, swipe sampling of surfaces, drinking water sampling, and soil sampling which were conducted in Round 1.

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DEFENSE HEALTH AGENCY
DEFENSE CENTER FOR PUBLIC HEALTH - DAYTON
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1 February 2024

MEMORANDUM FOR: AFGSC/SGPB
ATTN: Lt Col Raymond Mak

FROM: DCPH-D/OE
2510 Fifth Street, Building 840
WPAFB OH 45433-7913

SUBJECT: Consultative Letter, AFRL-SA-WP-TR-2024-0001, Missileer Cancer Study, Minot Air Force Base (AFB) Round 2 Results

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1. INTRODUCTION

At the request of the Air Force Global Strike Commander (AFGSC/CC), the United States Air Force School of Aerospace Medicine (USAFSAM) Defense Centers for Public Health-Dayton (DCPH-D) Occupational and Environmental Health Department Consultative Services Division (OEC) performed an environmental health survey for all fifteen Missile Alert Facilities (MAFs) at Minot AFB, North Dakota. The purpose of this environmental health survey was to assess elevated cancer concerns within the Air Force missile community by characterizing and documenting potential exposures to environmental hazards in the MAFs. Round 2 occurred from 2 to 12 October 2023 and built upon the Round 1 environmental health survey which occurred from 20 to 27 July 2023. Round 2 was executed as part of a three-round surveillance effort to determine seasonal variations associated with potential environmental hazards at MAF locations. Round 2 repeated area air sampling, direct reading instrument (DRI) air monitoring, swipe sampling of surfaces, drinking water sampling, and soil sampling which were conducted in Round 1.

Environmental sampling conducted in Round 2 replicated Round 1 sampling with the following intended exceptions:

A. DCPH-D/OE did not collect Polychlorinated Biphenyl (PCB) swipe and air samples in any of the fifteen MAFs given the persistent nature of PCBs are unaffected by seasonal changes.

B. DCPH-D/OE collected PCB swipe and air samples within the two Missile Procedures Trainers (MPTs) to assess the presence/absence of PCBs during 13N-Nuclear and Missile Operations Officers routine training.

The purpose of this memo is to convey Round 2 sample results received from three civilian laboratories.

A. Survey Personnel:

(1) TSgt Bridgette Brzezinski, Occupational & Environmental Health (OEH) Technician, DCPH-D/OEC

(2) TSgt Kristopher Beckwith, OEH Technician, DCPH-D/OEC

(3) SrA Alfredo Gomez, OEH Technician, DCPH-D/OEC

B. Minot AFB Personnel:

(1) Maj Douglas Schneekloth, 5th Operational Medical Readiness Squadron (OMRS) Bioenvironmental Engineering Flight Commander

(2) SSgt Jesse Ford, 5th OMRS Bioenvironmental Engineering Flight Chief

C. Equipment Used:

(1) Thermo-System Engineering Incorporated (TSI) VelociCalc Meter: Ventilation air velocity and pressure differential

(2) TSI Indoor Air Quality (IAQ) Meter: Temperature, humidity, carbon monoxide, carbon dioxide

(3) Forensics Detectors Ozone Meter

(4) HACH DR900 Colorimeter: pH, Total Chlorine, Free Available Chlorine in water

(5) Scientific Kit Corporation (SKC) Air Sampling Pumps

(6) MESA LABS Air Sampling Pump Calibrator

(7) Ancillary equipment including sterile containers, cassettes, tubes, swipes, and other items to facilitate sample collection and analysis

2. BACKGROUND

Following a March 2023 site visit to address cancer concerns in the missileer community, DCPH-D performed the first and second rounds of environmental sampling at all MAFs at Minot AFB, North Dakota. The sampling plan targeted carcinogens which could potentially affect MAF personnel through dermal, ingestion, and inhalation exposure pathways. The survey also included other parameters such as air temperature, relative humidity, and carbon dioxide (CO_2); water potential of hydrogen (pH); and percent moisture in soil. The potential health hazards/concerns associated with each carcinogen and the other parameters sampled will be discussed in Section 3: Health Hazard Summary.

The missile squadrons included in this survey at Minot AFB are the 740th, 741st, and 742nd each comprised of five MAFs. The 740th Missile Squadron is responsible for MAFs Alpha through Echo, the 741st Missile Squadron is responsible for Foxtrot through Juliet and the 742nd Missile Squadron is responsible for Kilo through Oscar. MAFs are of similar construction where the Topside Support Building consists of bedrooms, common areas, offices and a kitchen whereas the Launch Control Center (LCC) is completely underground with access by an elevator. The Launch Control Equipment Building (LCEB) which stores ancillary equipment and generators is also underground and connected to the LCC by a hallway.

When activated, Minot AFB mans the MAFs for twenty-four hours per day, seven days per week, three hundred sixty-five days a year with rotating crews. Each crew works in the MAF seven straight days at the MAF followed by two weeks in non-MAF locations. The LCCs are periodically deactivated for maintenance.

Except for some unique differences to include operational equipment and equipment/power redundancies, MPTs are of identical configuration to an LCC and located at the main operating

base. MPTs are LCC simulators used to periodically train and enhance the readiness of 13N Nuclear and Missile Operations Officers.

3. HEALTH HAZARD SUMMARY

This section details the potential health hazards and other parameters measured in the MAFs and LCCs. In addition to carcinogens that can be present in the air, soil and water, the survey also included indoor air quality (IAQ) parameters such as temperature, relative humidity and carbon dioxide that can indicate comfort levels in a workplace, as well as pH and chlorine in water. All samples were used to characterize and identify potential hazards in the work centers. Organophosphates and Diquat/Paraquat were sampled due to location/proximity of MAFs on/to agricultural land and historical use.

3.1 INDOOR AIR QUALITY

3.1.1 CARBON MONOXIDE

Carbon monoxide (CO) is an odorless gas and can cause fatigue, drowsiness at low concentrations and nausea, headache, and difficulty breathing at higher concentrations. Carbon monoxide poisoning prevents the body from absorbing enough oxygen and has the potential to lead to unconsciousness, coma and death. The major source of carbon monoxide is the combustion of fuels from equipment inside a building or vehicles running outside nearby the air intake vent of the building (Arceo, 2014). Carbon monoxide is also naturally produced in the human body. People who smoke are vulnerable to increased levels of carbon monoxide within their body. The American Conference of Governmental Industrial Hygienists (ACGIH) established a Threshold Limit Value (TLV) as an 8-hour time-weighted average (TWA) of twenty-five parts-per-million (25 ppm, or 29 milligrams per cubic meter [29 mg/m^3]) for carbon monoxide (ACGIH, 2023). TLVs are ACGIH health-based recommendations which establish levels of exposures that workers can be exposed to without adverse health effects. The TLV-TWA is the airborne chemical concentration for a conventional eight-hour workday and forty-hour workweek (Ibid, 2023). The TLV-TWA for carbon monoxide is intended to maintain blood carboxyhemoglobin (COHb) levels below 3.5%, to minimize the potential for adverse neurobehavioral changes, and to maintain cardiovascular work and exercise capacities (ACGIH, 2001). Furthermore, this TLV provides a margin of safety for workers particularly susceptible to the adverse effects of carbon monoxide exposure, including pregnant workers (i.e., the fetus) and those with chronic heart and respiratory diseases (Ibid, 2001).

Although not linked to cancer, sampling for carbon monoxide serves two purposes: (1) assess direct exposure to MAF occupants; and (2) assess the effectiveness of MAF ventilation systems.

3.1.2 CARBON DIOXIDE

Carbon dioxide is a gas released by human exhalation. If inadequate fresh air or “make-up” air is available in a building, carbon dioxide can accumulate indoors. Carbon dioxide is not considered a health risk unless at very high levels (5,000 parts-per-million and above), but symptoms of concentrations exceeding 600 parts-per-million (600 ppm [1,080 mg/m^3]) can

include headache, drowsiness, difficulty concentrating, and dizziness (Arceo, 2014). The Bioenvironmental Engineering Technical Guide for IAQ Surveys further reflects maximum levels to carbon dioxide should not exceed one-thousand parts-per-million (Ibid, 2014). Although not linked to cancer, sampling for carbon dioxide serves three purposes: (1) assess direct exposure to MAF occupants; (2) assess the effectiveness of MAF ventilation systems; and (3) assess MAF structural integrity.

3.1.3 OZONE

Ozone is a colorless gas that can be emitted directly by urban and industrial processes, but also forms in the atmosphere by chemical reactions between nitrogen oxides and volatile organic compounds (VOCs). Ozone is also used as a bleaching agent for pulp and paper. Ozone affects the lower respiratory system and exposure limits are based on work activity levels (light, moderate, and heavy work activity). As respiratory rates increase, the potential for ozone reaching the deep lung also increases (Luttrell et al., 2019). The ACGIH established a TLV-TWA for light work recommending airborne ozone exposures are limited to 0.1 parts-per-million (0.1 ppm [0.2 mg/m3]). Symptoms of excessive exposure to ozone include fatigue, dizziness, headache, and decreased concentration, motor activity, and cognitive response (Ibid, 2019). Although inconclusive, increased ozone levels have been linked to an increase in cancer risk (Kim, et al., 2019); however, ACGIH indicates ozone is Not Classifiable as a Human Carcinogen (A4) (ACGIH, 2023).

3.1.4 TEMPERATURE AND RELATIVE HUMIDITY

Temperature and humidity recommendations are set by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and are based on comfort of the occupants as opposed to health risk. ASHRAE recommends indoor temperatures of 68°F – 74°F in cold seasons and 72°F – 80°F during warm seasons. Relative humidity indoors below 40% is commonly associated with building occupant discomfort and dissatisfaction. Symptoms due to relative humidity less than 40% can include dry nose and throat, nose bleeds, sinus and throat irritation, and dry eyes. Long term exposure to low relative humidity can also contribute to respiratory illness via weakening pulmonary mucous membrane defense (Arceo, 2014). High relative humidity indoors promotes conditions suitable for fungi and mold growth. Although not linked to cancer, analyzing temperature and relative humidity assesses MAF ventilation systems which can be used to evaluate changes to DCPH-D/OE's current environmental sampling strategy are needed.

3.2 VOLATILE ORGANIC COMPOUNDS

VOCs are a group of substances that have a high vapor pressure and low water solubility. This makes them able to easily change from a liquid or solid to a gaseous state which increases the potential for human exposure via inhalation. Exposure limits for VOCs are unique to each chemical. They are commonly found in both industrial environments and household products such as cleaning supplies, varnishes, plug-in air fresheners, essential oils, and pesticides (United States Environmental Protection Agency, 2023). Some VOCs (acetone, for example) can be present in the outdoor environment. Fifty-one (51) VOCs were sampled for at each MAF.

Health effects from VOC exposure vary from eye, nose, and throat irritation to headaches and damage to the liver, kidney, and central nervous system (Ibid, 2023) and include 1,2,3-trichloropropane, Dibromochloropropane (DBCP), Ethylene dibromide, Benzene, Bromodichloromethane, Carbon tetrachloride, Methylene chloride, and Trichloroethylene (TCE). VOCs can accumulate in an indoor setting if there is insufficient ventilation and thereby affect the quality of indoor air. The most up-to-date and comprehensive method to sample and analyze for VOCs was used to test for VOCs within the MAFs.

3.3 ORGANOPHOSPHATES

Organophosphates are a type of insecticide or pesticide commonly used in agriculture, homes, and gardens. Several organophosphates are highly toxic and can potentially cause acute (sudden) or subacute (rapid) toxicity (United States Environmental Protection Agency, 2013). Various organophosphates were sampled in the air, soil, and water. These compounds have varying exposure limits or maximum contaminant levels (MCLs) although their human health effects are similar. Acute symptoms from organophosphate exposure includes diarrhea, excessive salivation, and constriction of pupils. Acute and subacute symptoms include fluid accumulation in the respiratory tract as well as central nervous system effects such as tremors, delirium, loss of coordination, and convulsions (Luttrell et al., 2019). Organophosphates (specifically malathion, diazinon, dichlorvos, parathion, and tetrachlorvinphos) have been deemed possible carcinogens or probable carcinogens by The International Agency for Research on Cancer (IARC) and/or the United States Environmental Protection Agency (USEPA) (National Institute of Health, 2015). According to United States Department of Agriculture data, the half-life of organophosphate pesticides and insecticides in soil is one (1) to two hundred (200) days. Air, water, and soil samples were collected to test for organophosphate compounds due to MAF locations adjacent to agricultural land.

3.4 POLY CHLORINATED BIPHENYLS (PCBs)

PCBs are synthetic organic chemicals used for a variety of industrial and commercial purposes. They were commonly used synthetic dielectric and coolant fluids in electrical components, capacitors, and transformers. PCBs were developed in the 1940's and used through the late 1970's. In the late 1970's, they were banned because of evidence that determined PCBs accumulate in the environment and may be toxic to humans and wildlife. PCBs remain present in electrical components of equipment in the LCCs because of their capability to insulate and regulate equipment temperatures (Agency for Toxic Substances and Disease Registry, 2014). Forty (40) Code of Federal Regulations (CFR) 761.61 establishes a standard for PCB spills to be cleaned to ten micrograms per one hundred square centimeters (10 $\mu g/100\ cm^2$) (National Archives, 2023). The USEPA classifies PCBs as a probable human carcinogen. Many of the cancer concerns from MAF occupants originated with concerns about PCB exposures.

3.5 SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

SVOCs are persistent pollutants in soils and aquatic environments which can be transported over long distances and accumulate in organisms (Liu et al., 2019). SVOCs can be found in many pesticides, oil-based products, and flame retardants. Exposure limits for SVOCs are

unique to each chemical yet have similar adverse health effects on the human body. Forty-one (41) SVOCs were analyzed for in the water samples and their respective MCLs can be found in the results tables in the Appendices. Some SVOCs could cause cancer (e.g., polycyclic aromatic hydrocarbons), reproductive disorders (e.g., phthalates), nervous system damage (e.g., pesticides/insecticides/herbicides), and immune system disruption (Ibid, 2019). Considering concerns with carcinogenic effects, SVOC water samples were collected within the MAFs. The most comprehensive, up-to-date method was used to sample and analyze for SVOCs.

3.6 DIQUAT/PARAQUAT

Diquat and paraquat compounds are herbicides used in agriculture and homes, although diquat is utilized less in agriculture than paraquat (Jones and Vale, 2000). Paraquat was first produced for commercial purposes in 1961 and is one of the most used herbicides worldwide (Centers for Disease Control and Prevention, 2018). The USEPA set a MCL for diquat at 0.02 milligrams per liter. While no paraquat MCL exists, the USEPA requires mitigation measures to reduce risks to human health and the environment (USEPA, 2023). Health effects from diquat and paraquat exposure include gastrointestinal symptoms and heart, liver, and kidney failure (Centers for Disease Control and Prevention, 2018). Herbicides have the potential to be present in environments surrounding MAFs due to MAF proximity to agricultural land which likely use herbicides. Considering the National Institute of Health reports of potential links between diquat/paraquat and elevated rates of non-Hodgkin's lymphoma (National Institute of Health, 2016), water samples were collected to test for diquat/paraquat.

3.7 DIOXINS

Dioxins are persistent organic pollutants found throughout the world that can take a long time to break down once in the environment. They can bioaccumulate resulting in greater than 90% of typical human exposure to be via dietary intake of animal, dairy, and fish products (USEPA, 2023). Dioxins can be found in the water from air emissions due to burning of waste or other combustion sources (Ibid, 2023). The USEPA established a MCL of thirty picograms per liter (30 pg/L) for 2,3,7,8-Tetrachlorodibenzodioxin. Exposure to 2,3,7,8-Tetrachlorodibenzodioxin results in severe skin disease and acne-like skin lesions (Agency for Toxic Substances and Disease Registry, 1999). Variations of dioxins have been banned for use inside the United States. The dioxin 2,3,7,8-Tetrachlorodibenzodioxin is deemed a human carcinogen by the World Health Organization (IARC, 2004). In the 1980s, 2,3,7,8-Tetrachlorodibenzodioxin was banned from use within the United States. Due to MAFs utilizing wells for drinking water and dioxins ability to remain present in environments and settle in sediment, drinking water samples were collected to test for dioxins in drinking water.

3.8 NITRATE/NITRITE

Fertilizers and animal waste can contain nitrogen increasing the concentration of nitrate in water sources. Per the Agency for Toxic Substances and Disease Registry (ATSDR), nitrate-containing compounds in the soil can easily dissolve in water making them easy to migrate into groundwater (ATSDR, 2017). Nitrite is more easily oxidized than nitrate, therefore nitrate is more commonly found in groundwater and surface waters. The USEPA established a MCL of

ten milligrams per liter for total nitrates and nitrites as nitrogen. Excessive nitrate or nitrite exposure can cause blood disorders. The IARC classified nitrates as "probably carcinogenic to humans" (ATSDR, 2023). Due to the location of most MAFs near agricultural land, water samples were collected to test for nitrite and nitrate.

3.9 CHLORINE & POTENTIAL OF HYDROGEN (pH)

Chlorine is a commonly used microbe disinfectant for drinking water (USEPA, 2000). Personnel may be exposed to chlorine through the ingestion of drinking water which has been disinfected with an excess amount of chlorine (Ibid, 2000). The USEPA has established a chlorine MCL of four milligrams per liter (4 mg/L) (USEPA, 2023). Stomach discomfort has been the primary reported health effect resulting from long-term exposures to chlorine above the MCL (Ibid, 2023).

pH measures acidity and alkalinity of a substance (USEPA, 2023). pH ranges from zero to fourteen where substances equal to seven are "neutral", substances less than seven are "acidic", and substances greater than seven are "basic" (Ibid, 2023). In its purest form, the pH of water is neutral, however, the existence of other chemicals has the potential to increase or decrease pH (Ibid, 2023). Recommended pH levels are defined by the USEPA's National Secondary Drinking Water Regulations (NSDWR) which are established guidelines to manage aesthetical characteristics of drinking water such as taste, color, and odor (USEPA, 2023). NSDWRs that exceed their applicable secondary maximum contaminant levels (SMCLs) affect the palatability of drinking water but are not known to pose a health risk for consumers (Ibid, 2023). However, the USEPA establishes SMCLs to encourage the consumption of drinking water that is aesthetically and/or aromatically appealing and/or palatable (Ibid, 2023). The SMCL for pH is 6.5 to 8.5; drinking water below 6.5 have been reported to may have a bitter, metallic taste while pH greater than 8.5 have been reported to have a slippery texture and soda-like taste (Ibid, 2023).

4. METHODOLOGY & ANALYSIS

This section summarizes sampling plans utilized to ensure proper collection, analysis, and validity of results. Detailed sampling plans for each potential health hazard sampled will be included in the final report. National Institute for Occupational Safety and Health (NIOSH) and USEPA-approved methods were used to develop sampling plans and execute sample analysis. The individual methods for sampling can test for multiple analytes or chemical compounds. Laboratory analysis included five methods for water sampling, three methods for air sampling, one method for PCB swipe sampling, and one method for soil sampling. The tables in the appendices of this report contain sample type, location, analyte, result, and applicable detection limit. Except for soil, which was collected outside of the MAFs, all samples were collected in the LCC, Topside Support Building, and MPT. A summary of analytical methods and number of samples taken for each method can be found in Chart 1 and Chart 2. Samples were shipped from Minot AFB to three civilian analytical laboratories to conduct the analysis. DCPH-D/OE validated results as they were received from the laboratories.

4.1 WATER

Sample locations at each MAF were the kitchen sink in the Topside Support Building and the

bathroom sink in the LCC. In accordance with USEPA sampling methods, screen aerators were removed, and the water was flushed for five minutes prior to sample collection. After sample collection, samples were immediately stored to meet required temperature parameters defined in the analytical method. Three samples for each method were taken at the two specified locations: (1) the sample, (2) matrix spike, and (3) matrix spike duplicate. Matrix spike and matrix spike duplicates are quality-control samples used to evaluate the performance of the analytical method by measuring the effect on interferences caused by the sample matrix – water in this case. Matrix spike and matrix spike duplicates were spiked with a required, known amount of the analyte and run through the analytical method by the labs. The lab calculates the percent recovery of the spike which must fall within parameters to ensure sample results are not affected by interferents.

4.2 AIR

Air sampling quantifies the concentration of analytes within the volume of air sampled. Area air samples were collected to characterize the indoor air environment in the MAFs. DCPH-D/OE used three different methods to analyze for sixty-one (61) analytes consisting of organophosphates, PCBs, and VOCs in each of the fifteen MAFs and seven (7) analytes within the MPT. The following area air samples were collected for each method:

A. Organophosphate: eight- and two-hour samples in the LCC and eight- and two-hour samples in the Topside Support Building. Two-hour sampling was conducted because one of the chemicals (Malathion) analyzed in the method had a lower maximum collection volume that could be exceeded if sampled for eight hours.

B. PCB: eight-hour sample in the MPT.

C. VOCs: eight-hour sample in the LCC and eight-hour sample in the Topside Support Building.

In addition to the area air samples collected at each MAF, field and media blanks were also analyzed. Media blanks are never exposed to the environment and are used to ensure there is no contamination of media during the equipment/media manufacturing and handling processes. Field blanks are opened to the environment to assess any initial contamination that may be associated with the handling of the samples and then are capped, meaning no tested air would have flowed through the sample media.

Eight-hour area air samples were collected to minimize missile crew rest interruption. The two-man crew is in the LCC for twenty-four hours where each crew member will have crew rest for about eight hours. The remaining time is spent in the crew members' seat in front of their visual display console. Considering missileers are not performing any processes that would change LCC conditions, an eight-hour area sample appropriately characterizes a twenty-four-hour alert shift.

4.3 SOIL

To determine the presence of organophosphates, six grab samples were collected eight to twelve inches below the soil surface at each MAF. Samples were collected at each corner, outside of the MAF restricted area fence line to establish background concentrations. Additionally, a sample was collected near the air intake vent where dirt can potentially enter the

MAF ventilation system. The sixth soil sample location was selected at random within the MAF fence line.

4.4 PCB SWIPES

Swipe sampling was conducted to determine the presence/absence of PCBs. No more than twenty (20) swipes were collected in each MPT at locations historically known to contain PCBs (e.g., panels, transformers, & batteries) as well as commonly touched areas and equipment (e.g., display screens, & keyboards). Surfaces of a ten-centimeter by ten-centimeter (100 cm^2) area were swiped horizontally and vertically within the same location, side to side, up and down. The media used to swipe the surfaces was a cotton gauze pad saturated with ten milliliters of hexane. Once the surface was swiped, the cotton gauze pad was placed into a glass vial, labelled, stored and shipped in accordance with laboratory specifications. When possible, for equipment being swiped, both a surface swipe and ground level or underside of the piece of equipment was swiped to capture any potential PCB equipment leaks.

Chart 1: Summary of Analytical Methods and Sample Quantity for each Potential Health Hazard

Potential Health Hazard	Lab (Location)	Analytical Method	Matrix	No. of Samples (per MAF)	No. of Samples (per base)
PCBs	Australian Laboratory Services (Houston, TX)	EPA 505	Water	6	90
Total Nitrate/Nitrite as N	Australian Laboratory Services	EPA 353.2	Water	6	90
Pesticides/SVOCs	Australian Laboratory Services	EPA 525.2	Water	6	90
Diquat/Paraquat	Australian Laboratory Services	EPA 549.2	Water	6	90
Dioxin	Australian Laboratory Services	EPA 1613B	Water	6	90
VOCs	Bureau Veritas North America (Fort Lauderdale, FL)	EPA TO 17	Air	4	60
Organophosphates	Bureau Veritas North America	NIOSH 5600	Air	6	90
Organophosphates	Summit (Cuyahoga Falls, OH)	EPA 1699	Soil	6	90

Chart 2: Summary of Analytical Methods and Sample Quantity for each Potential Health Hazard

Potential Health Hazard	Lab (Location)	Analytical Method	Matrix	No. of Samples (per MPT)	No. of Samples (per base)
PCBs	Bureau Veritas North America	NIOSH 5503	Air	1	2
PCB Swipe Sampling	Summit	EPA 8082A	Surface	16	36*
* Four (4) PCB swipe samples were collected in the observation room adjacent to MPT Trainer 1 and MPT Trainer 2.					

5. RESULTS & DISCUSSION

This section summarizes the findings of all samples collected at Minot AFB. Sample results were received from the laboratories and checked for quality assurance and control. All results for each MAF and MPT received from the laboratories are documented in the appendices of this report. Each MAF and MPT result can be found as its own appendix, Appendix Alpha through Appendix Oscar. Non-Detects (ND) mean the sample result was below the laboratory limit of detection (LOD) for that specific method. The appendices may document occurrences when the laboratory's reported LOD exceeded the associated health limit for a given analyte. If/when this occurs, DCPH-D/OE will characterize the analyte health risk by considering revisions to the Round 3 sampling strategy.

5.1 PCB SWIPE SAMPLING

Swipe sampling for PCBs were compared to the 40 CFR 761 clean-up standard of ten micrograms per one hundred square centimeters (10 µg/100 cm^2). All swipes were non-detect for both MPTs. A full list of all swipe locations at each MPT and results can be found in Tables T1 and T2 in Appendices 16 and 17.

5.2 AIR SAMPLING

All PCB area air sampling in the MPTs and organophosphate area air sampling in the LCC and Topside Support Building were non-detect. As reflected in Table 3 of the Appendices, the two-hour area air sampling using method NIOSH 5600 for organophosphates only analyzed for malathion to ensure the desired air volumes were achieved. Malathion was also analyzed with nine other organophosphates within all the eight-hour samples using method NIOSH 5600. As with the other organophosphates, the concentration of malathion was less than the reporting limit in all two-hour and eight-hour samples. Given the concentrations for both the two-hour and eight-hour samples were low and paralleled with organophosphate concentrations sampled in Round 1, eliminating the two-hour NIOSH 5600 air sampling from Round 3 should be considered.

VOC air sampling detected trace amounts of Methylene Chloride (less than 1% of the Occupational and Exposure Limit (OEL)) in November Topside. The VOC media blank sample in Charlie showed trace amounts of toluene above the reporting limit. The trace amounts of

chemicals found on media and field blanks can be indicators for false positive results. Therefore, DCPH-D/OE will resample for these constituents in Round 3. A full list of results can be found in Tables 1 and 2 in the appendices.

5.3 WATER SAMPLING

In the Round 1 report, the concentration for Aldrin was reported to be below the lab LOD, yet above the USEPA-established MCL. Upon further research, DCPH-D/OE discovered Aldrin has no associated MCL and the USEPA determined:

A. "While there is evidence that aldrin and dieldrin have adverse health effects in humans, their occurrence in drinking water at frequencies or concentrations significant for public health concern is low" (USEPA, 2003)

B. "Furthermore, occurrence of aldrin and dieldrin in drinking water supplies in the coming years is likely to decrease since the substances are no longer commercially produced or used. Therefore, regulation of aldrin and dieldrin may be unlikely to represent a meaningful opportunity for health risk reduction" (USEPA, 2003)

All analytes with an USEPA-established MCL had results less than its corresponding MCL except:

A. Benzo[a]anthracene which were non-detect in MAFs Bravo (Topside and LCC), Delta (Topside and LCC), Foxtrot (LCC), Juliet (LCC), Lima (LCC), and Oscar (LCC)

B. PCBs which were non-detect in MAFs Bravo (LCC) and Kilo (Topside)

Therefore, there are currently no identified analytes within the drinking water presenting a current risk to human health. Some analytes evaluated do not have an MCL, noted not applicable (N/A) in the tables located in the Appendix. The USEPA has not determined these analytes to be a risk considering public health protection, technical and financial barriers. The water results for each method can be found in Tables 3-7 of the Appendices.

Due to a sample collection error, the lab was unable to analyze the 2,3,7,8-Tetrachlorodibenzodioxin at Charlie Topside. Table 4 in Appendix 3 annotates "Sample Compromised" for 2,3,7,8-Tetrachlorodibenzodioxin. Round 1 sampling for 2,3,7,8-Tetrachlorodibenzodioxin at Charlie Topside revealed concentrations below the MCL.

A different laboratory for drinking water analysis was used in Round 2, therefore, some analytes in method 525.2 that were analyzed in Round 1 were not evaluated for Round 2. Nineteen analytes in Round 2 that were not included in the laboratory analysis are: 1-Methylnapthalene, Dichlorodiphenyldichloroethane, alpha-Chlordane, Bromacil, Chlorothalonil, Cyanazine, Deisopropylatrazine, Desethyl Atrazine, Di(2-ethylhexyl)phthalate, Diazinon, Dibenz[a-h]anthracene, Dimethoate, Di-n-octylphthalate, gamma-Chlordane, Malathion, Metolachlor, Parathion, Prometryn, and Thiobencarb. The IARC classifies:

A. Diazinon, Dibenz[a-h]anthracene, and Malathion as Probably Carcinogenic to Humans (IARC, 2023)

B. Chlorothalonil, Di(2-ethylhexyl)phthalate, and Parathion as Possibly Carcinogenic to Humans (IARC, 2023)

1-Methylnapthalene, Alpha-Chlordane, Bromacil, Cyanazine, Desethyl Atrazine, Deisopropylatrazine, Dichlorodiphenyldichloroethane, Dimethoate, Di-n-octylphthalate, Gamma-Chlordane, Metolachlor, Prometryn, and Thiobencarb have not been classified by the IARC.

5.4 SOIL SAMPLING

Soil sampling was performed to determine presence or absence of organophosphate compounds on and around MAF property. The results were non-detect for all ten analytes screened at all fifteen MAFs. The full list of results can be found as Tables 8 in the Appendices.

5.5 IAQ

Direct reading measurements for carbon monoxide, carbon dioxide, ozone, relative humidity, and temperature were taken in each MAF. Readings were compared to comfort levels provided by the ASHRAE Standard 62.1-2010 and exposure limits dictated by ACGIH. A full list of IAQ results can be found in Tables 9 in the appendices.

A. Carbon monoxide: Levels ranged from 0 to 7.2 parts-per-million; all below ACGIH TLV of twenty-five parts-per-million.

B. Carbon dioxide: MAF levels ranged from 462 to 915 parts-per-million, with an average concentration in the LCC of 718 parts-per-million and Topside Support Building of 561 parts-per-million. All carbon dioxide levels were below the recommended worker comfort maximum exposure limit of 1,000 parts-per-million (Arceo, 2014).

C. Ozone: All levels were at below the ACGIH TLV of 0.1 parts-per-million for light work.

D. Relative humidity: Average relative humidity levels ranged from 31.5% to 54.1%, compared to ASHRAE's comfort criteria for relative humidity of 30% to 60%.

E. Temperature: MAF temperature ranged from 59.8°F to 71.4°F, with an average MAF temperature in the LCC of 65.7°F and Topside Support Building of 67.7°F. ASHRAE temperature recommendation range for winter is 68°F to 74°F. Although many locations had temperatures slightly below ASHRAE recommendations, DCPH-D/OE does not foresee any comfort risks associated with these temperature variances.

5.6 RADON

Due to the length of time required to collect the radon samples and complete analysis, results from Round 2 radon sampling will be captured in a future report.

6. CONCLUSIONS

The results presented in this report are a part of a multi-faceted study to characterize the environment in which the missileer community works. Three sampling events will occur over a year to determine if seasonal variations in the analytes analyzed exist. Round 3 of this assessment is planned to occur in Spring 2024. If you have any questions, comments, or concerns, please contact Capt Leigh Durden at 937-938-3297 or by e-mail at leigh.durden@us.af.mil.

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SCOTT M. BOYD, Lt Col, USAF, BSC
Chief Consulting Executive

Appendix 1: MAF ALPHA (A-01) Results, Sampled on 4 October 2023

Table 1A: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2A: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2A: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3A: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.69	0.68	10

Table 4A: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<0.911	<0.856	30

Table 5A: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6A: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00049	0.0005
PCB-1221	<0.00049	<0.00049	0.0005
PCB-1232	<0.00049	<0.00049	0.0005
PCB-1242	<0.00049	<0.00049	0.0005
PCB-1248	<0.00049	<0.00049	0.0005
PCB-1254	<0.00049	<0.00049	0.0005
PCB-1260	<0.00049	<0.00049	0.0005
Total PCBs	<0.00049	<0.00049	0.0005

Table 7A: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00019	<0.00021	N/A
4,4'-DDE	<0.00019	<0.00021	N/A
Acenaphthene	<0.000096	<0.0001	N/A
Acenaphthylene	<0.000096	<0.0001	N/A
Alachlor	<0.00019	<0.00021	0.002
Aldrin	<0.00019	<0.00021	N/A
Anthracene	<0.00019	<0.00021	N/A
Atrazine	<0.00019	<0.00021	0.003
Benzo[a]anthracene	<0.000096	<0.0001	0.0001
Benzo[a]pyrene	<0.000096	<0.0001	0.0002
Benzo[b]fluoranthene	<0.000096	<0.0001	0.0002
Benzo[g,h,i]perylene	<0.000096	<0.0001	N/A
Benzo[k]fluoranthene	<0.000096	<0.0001	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00096	<0.001	0.006
Butachlor	<0.00019	<0.00021	N/A
Butylbenzylphthalate	<0.00096	<0.001	N/A
Chrysene	<0.000096	<0.0001	0.0002
Di(2-ethylhexyl)adipate	<0.00096	<0.001	0.40
Dieldrin	<0.00019	<0.00021	N/A
Diethylphthalate	<0.00096	<0.001	N/A
Dimethylphthalate	<0.00096	<0.001	N/A
Di-n-butylphthalate	<0.00096	<0.001	N/A
Endrin	<0.00019	<0.00021	0.002
EPTC	<0.00019	<0.00021	N/A
Fluoranthene	<0.000096	<0.0001	N/A
Fluorene	<0.000096	<0.0001	N/A
gamma-BHC (Lindane)	<0.000096	<0.0001	0.0002
Heptachlor	<0.000096	<0.0001	0.0004
Heptachlor Epoxide	<0.000096	<0.0001	0.0002
Hexachlorobenzene	<0.000096	<0.0001	0.001
Hexachlorocyclopentadiene	<0.00019	<0.00021	0.05
Indeno[1,2,3-cd]pyrene	<0.000096	<0.0001	0.0004
Methoxychlor	<0.00019	<0.00021	0.04
Metribuzin	<0.00019	<0.00021	N/A
Molinate	<0.00019	<0.00021	N/A
Naphthalene	<0.00019	<0.00021	N/A
Phenanthrene	<0.000096	<0.0001	N/A

Table 7A: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00019	<0.00021	N/A
Pyrene	<0.000096	<0.0001	0.0002
Simazine	<0.00019	<0.00021	0.004
Terbacil	<0.00048	<0.00052	N/A
Trifluralin	<0.00019	<0.00021	N/A

Table 8A: Soil Sampling Results

Analyte	South of MAF Near Air Intake Vent (mg/kg-dry)	South of MAF Near Concrete Circle (mg/kg-dry)	SW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.212	<0.226	<0.206
Phorate	<0.212	<0.226	<0.206
Parathion	<0.212	<0.226	<0.206
Methamidophos	<0.212	<0.226	<0.206
Malathion	<0.212	<0.226	<0.206
Ethoprop	<0.212	<0.226	<0.206
Dicrotophos	<0.212	<0.226	<0.206
Diazinon	<0.212	<0.226	<0.206
Chlorpyrifos	<0.212	<0.226	<0.206
Terbufos	<0.212	<0.226	<0.206

Table 8A: Soil Sampling Results Cont.

Analyte	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.227	<0.229	<0.232
Phorate	<0.227	<0.229	<0.232
Parathion	<0.227	<0.229	<0.232
Methamidophos	<0.227	<0.229	<0.232
Malathion	<0.227	<0.229	<0.232
Ethoprop	<0.227	<0.229	<0.232
Dicrotophos	<0.227	<0.229	<0.232
Diazinon	<0.227	<0.229	<0.232
Chlorpyrifos	<0.227	<0.229	<0.232
Terbufos	<0.227	<0.229	<0.232

Table 9A: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	491 ppm	663 ppm	<1000 ppm
Relative Humidity	45.8%	38.6%	30% - 60%
Temperature	71.4°F	68.2°F	68°F - 74°F
Carbon Monoxide	0 ppm	3.1 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10A: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	7.7	>8.5	6.5 - 8.5
Total Available Chlorine	0.66	0.05	> 0 mg/L; < 4 mg/L

Appendix 2: MAF BRAVO (B-01) Results, Sampled on 5 October 2023

Table 1B: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2B: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2B: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3B: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.84	0.91	10

Table 4B: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<6.56	<3.70	30

Table 5B: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6B: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00051	0.0005
PCB-1221	<0.00049	<0.00051	0.0005
PCB-1232	<0.00049	<0.00051	0.0005
PCB-1242	<0.00049	<0.00051	0.0005
PCB-1248	<0.00049	<0.00051	0.0005
PCB-1254	<0.00049	<0.00051	0.0005
PCB-1260	<0.00049	<0.00051	0.0005
Total PCBs	<0.00049	<0.00051	0.0005

Table 7B: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00021	<0.00021	N/A
4,4'-DDE	<0.00021	<0.00021	N/A
Acenaphthene	<0.00011	<0.00011	N/A
Acenaphthylene	<0.00011	<0.00011	N/A
Alachlor	<0.00021	<0.00021	0.002
Aldrin	<0.00021	<0.00021	N/A
Anthracene	<0.00021	<0.00021	N/A
Atrazine	<0.00021	<0.00021	0.003
Benzo[a]anthracene	<0.00011	<0.00011	0.0001
Benzo[a]pyrene	<0.00011	<0.00011	0.0002
Benzo[b]fluoranthene	<0.00011	<0.00011	0.0002
Benzo[g,h,i]perylene	<0.00011	<0.00011	N/A
Benzo[k]fluoranthene	<0.00011	<0.00011	0.0002
Bis(2-Ethylhexyl)phthalate	<0.0011	<0.0011	0.006
Butachlor	<0.00021	<0.00021	N/A
Butylbenzylphthalate	<0.0011	<0.0011	N/A
Chrysene	<0.00011	<0.00011	0.0002
Di(2-ethylhexyl)adipate	<0.0011	<0.0011	0.40
Dieldrin	<0.00021	<0.00021	N/A
Diethylphthalate	<0.0011	<0.0011	N/A
Dimethylphthalate	<0.0011	<0.0011	N/A
Di-n-butylphthalate	<0.0011	<0.00011	N/A
Endrin	<0.00021	<0.00021	0.002
EPTC	<0.00021	<0.00021	N/A
Fluoranthene	<0.00011	<0.00011	N/A
Fluorene	<0.00011	<0.00011	N/A
gamma-BHC (Lindane)	<0.00011	<0.00011	0.0002
Heptachlor	<0.00011	<0.00011	0.0004
Heptachlor Epoxide	<0.00011	<0.00011	0.0002
Hexachlorobenzene	<0.00011	<0.00011	0.001
Hexachlorocyclopentadiene	<0.00021	<0.00021	0.05
Indeno[1,2,3-cd]pyrene	<0.00011	<0.00011	0.0004
Methoxychlor	<0.00021	<0.00021	0.04
Metribuzin	<0.00021	<0.00021	N/A
Molinate	<0.00021	<0.00021	N/A
Naphthalene	<0.00021	<0.00021	N/A
Phenanthrene	<0.00011	<0.00011	N/A

Table 7B: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00021	<0.00021	N/A
Pyrene	<0.00011	<0.00011	0.0002
Simazine	<0.00021	<0.00021	0.004
Terbacil	<0.00053	<0.00053	N/A
Trifluralin	<0.00021	<0.00021	N/A

Table 8B: Soil Sampling Results

Analyte	SW Inside Near Air Intake Vent (mg/kg-dry)	NE Inside Near Big Radar (mg/kg-dry)	SW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.227	<0.208	<0.216
Phorate	<0.227	<0.208	<0.216
Parathion	<0.227	<0.208	<0.216
Methamidophos	<0.227	<0.208	<0.216
Malathion	<0.227	<0.208	<0.216
Ethoprop	<0.227	<0.208	<0.216
Dicrotophos	<0.227	<0.208	<0.216
Diazinon	<0.227	<0.208	<0.216
Chlorpyrifos	<0.227	<0.208	<0.216
Terbufos	<0.227	<0.208	<0.216

Table 8B: Soil Sampling Results Cont.

Analyte	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.235	<0.227	<0.214
Phorate	<0.235	<0.227	<0.214
Parathion	<0.235	<0.227	<0.214
Methamidophos	<0.235	<0.227	<0.214
Malathion	<0.235	<0.227	<0.214
Ethoprop	<0.235	<0.227	<0.214
Dicrotophos	<0.235	<0.227	<0.214
Diazinon	<0.235	<0.227	<0.214
Chlorpyrifos	<0.235	<0.227	<0.214
Terbufos	<0.235	<0.227	<0.214

Table 9B: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	637 ppm	768 ppm	<1000 ppm
Relative Humidity	50.5%	44.5%	30% - 60%
Temperature	70.5°F	69.7°F	68°F - 74°F
Carbon Monoxide	0 ppm	0.7 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10B: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	>8.5	7.9	6.5 - 8.5
Total Available Chlorine	0.73	0.05	> 0 mg/L; < 4 mg/L

Appendix 3: MAF CHARLIE (C-01) Results, Sampled on 5 October 2023

Table 1C: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2C: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2C: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3C: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.84	0.91	10

Table 4C: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	Sample Compromised	<5.11	30

Table 5C: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6C: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00049	0.0005
PCB-1221	<0.00049	<0.00049	0.0005
PCB-1232	<0.00049	<0.00049	0.0005
PCB-1242	<0.00049	<0.00049	0.0005
PCB-1248	<0.00049	<0.00049	0.0005
PCB-1254	<0.00049	<0.00049	0.0005
PCB-1260	<0.00049	<0.00049	0.0005
Total PCBs	<0.00049	<0.00049	0.0005

Table 7C: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00019	<0.0002	N/A
4,4'-DDE	<0.00019	<0.0002	N/A
Acenaphthene	<0.000096	<0.0001	N/A
Acenaphthylene	<0.000096	<0.0001	N/A
Alachlor	<0.00019	<0.0002	0.002
Aldrin	<0.00019	<0.0002	N/A
Anthracene	<0.00019	<0.0002	N/A
Atrazine	<0.00019	<0.0002	0.003
Benzo[a]anthracene	<0.000096	<0.0001	0.0001
Benzo[a]pyrene	<0.000096	<0.0001	0.0002
Benzo[b]fluoranthene	<0.000096	<0.0001	0.0002
Benzo[g,h,i]perylene	<0.000096	<0.0001	N/A
Benzo[k]fluoranthene	<0.000096	<0.0001	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00096	<0.001	0.006
Butachlor	<0.00019	<0.0002	N/A
Butylbenzylphthalate	<0.00096	<0.001	N/A
Chrysene	<0.000096	<0.0001	0.0002
Di(2-ethylhexyl)adipate	<0.00096	<0.001	0.40
Dieldrin	<0.00019	<0.0002	N/A
Diethylphthalate	<0.00096	<0.001	N/A
Dimethylphthalate	<0.00096	<0.001	N/A
Di-n-butylphthalate	<0.00096	<0.001	N/A
Endrin	<0.00019	<0.0002	0.002
EPTC	<0.00019	<0.0002	N/A
Fluoranthene	<0.000096	<0.0001	N/A
Fluorene	<0.000096	<0.0001	N/A
gamma-BHC (Lindane)	<0.000096	<0.0001	0.0002
Heptachlor	<0.000096	<0.0001	0.0004
Heptachlor Epoxide	<0.000096	<0.0001	0.0002
Hexachlorobenzene	<0.000096	<0.0001	0.001
Hexachlorocyclopentadiene	<0.00019	<0.0002	0.05
Indeno[1,2,3-cd]pyrene	<0.000096	<0.0001	0.0004
Methoxychlor	<0.00019	<0.0002	0.04
Metribuzin	<0.00019	<0.0002	N/A
Molinate	<0.00019	<0.0002	N/A
Naphthalene	<0.00019	<0.0002	N/A
Phenanthrene	<0.000096	<0.0001	N/A

Table 7C: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00019	<0.0002	N/A
Pyrene	<0.000096	<0.0001	0.0002
Simazine	<0.00019	<0.0002	0.004
Terbacil	<0.00048	<0.0005	N/A
Trifluralin	<0.00019	<0.0002	N/A

Table 8C: Soil Sampling Results

Analyte	West of MAF Near Air Intake Vent (mg/kg-dry)	West of MAF Near Concrete Circle (mg/kg-dry)	West Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.239	<0.220	<0.227
Phorate	<0.239	<0.220	<0.227
Parathion	<0.239	<0.220	<0.227
Methamidophos	<0.239	<0.220	<0.227
Malathion	<0.239	<0.220	<0.227
Ethoprop	<0.239	<0.220	<0.227
Dicrotophos	<0.239	<0.220	<0.227
Diazinon	<0.239	<0.220	<0.227
Chlorpyrifos	<0.239	<0.220	<0.227
Terbufos	<0.239	<0.220	<0.227

Table 8C: Soil Sampling Results Cont.

Analyte	SW Corner Outside Fenceline (mg/kg-dry)	East Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.217	<0.254	<0.265
Phorate	<0.217	<0.254	<0.265
Parathion	<0.217	<0.254	<0.265
Methamidophos	<0.217	<0.254	<0.265
Malathion	<0.217	<0.254	<0.265
Ethoprop	<0.217	<0.254	<0.265
Dicrotophos	<0.217	<0.254	<0.265
Diazinon	<0.217	<0.254	<0.265
Chlorpyrifos	<0.217	<0.254	<0.265
Terbufos	<0.217	<0.254	<0.265

Table 9C: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	462 ppm	726 ppm	<1000 ppm
Relative Humidity	42.6%	42.4%	30% - 60%
Temperature	67.5°F	66.5°F	68°F - 74°F
Carbon Monoxide	0.7 ppm	2.9 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10C: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	7.6	7.3	6.5 - 8.5
Total Available Chlorine	0.07	0	> 0 mg/L; < 4 mg/L

Appendix 4: MAF DELTA (D-01) Results, Sampled on 10 October 2023

Table 1D: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2D: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2D: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3D: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.98	0.58	10

Table 4D: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<2.12	<2.68	30

Table 5D: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6D: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00049	0.005
PCB-1221	<0.00049	<0.00049	0.005
PCB-1232	<0.00049	<0.00049	0.005
PCB-1242	<0.00049	<0.00049	0.005
PCB-1248	<0.00049	<0.00049	0.005
PCB-1254	<0.00049	<0.00049	0.005
PCB-1260	<0.00049	<0.00049	0.005
Total PCBs	<0.00049	<0.00049	0.005

Table 7D: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00019	<0.00021	N/A
4,4'-DDE	<0.00019	<0.00021	N/A
Acenaphthene	<0.000097	<0.0001	N/A
Acenaphthylene	<0.000097	<0.0001	N/A
Alachlor	<0.00019	<0.00021	0.002
Aldrin	<0.00019	<0.00021	N/A
Anthracene	<0.00019	<0.00021	N/A
Atrazine	<0.00019	<0.00021	0.003
Benzo[a]anthracene	<0.000097	<0.0001	0.0001
Benzo[a]pyrene	<0.000097	<0.0001	0.0002
Benzo[b]fluoranthene	<0.000097	<0.0001	0.0002
Benzo[g,h,i]perylene	<0.000097	<0.0001	N/A
Benzo[k]fluoranthene	<0.000097	<0.0001	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00097	<0.001	0.006
Butachlor	<0.00019	<0.00021	N/A
Butylbenzylphthalate	<0.00097	<0.001	N/A
Chrysene	<0.000097	<0.0001	0.0002
Di(2-ethylhexyl)adipate	<0.00097	<0.001	0.40
Dieldrin	<0.00019	<0.00021	N/A
Diethylphthalate	<0.00097	<0.001	N/A
Dimethylphthalate	<0.00097	<0.001	N/A
Di-n-butylphthalate	<0.00097	<0.001	N/A
Endrin	<0.00019	<0.00021	0.002
EPTC	<0.00019	<0.00021	N/A
Fluoranthene	<0.000097	<0.0001	N/A
Fluorene	<0.000097	<0.0001	N/A
gamma-BHC (Lindane)	<0.000097	<0.0001	0.0002
Heptachlor	<0.000097	<0.0001	0.0004
Heptachlor Epoxide	<0.000097	<0.0001	0.0002
Hexachlorobenzene	<0.000097	<0.0001	0.001
Hexachlorocyclopentadiene	<0.00019	<0.00021	0.05
Indeno[1,2,3-cd]pyrene	<0.000097	<0.0001	0.0004
Methoxychlor	<0.00019	<0.00021	0.04
Metribuzin	<0.00019	<0.00021	N/A
Molinate	<0.00019	<0.00021	N/A
Naphthalene	<0.00019	<0.00021	N/A
Phenanthrene	<0.000097	<0.0001	N/A

Table 7D: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00019	<0.00021	N/A
Pyrene	<0.000097	<0.0001	0.0002
Simazine	<0.00019	<0.00021	0.004
Terbacil	<0.00048	<0.00052	N/A
Trifluralin	<0.00019	<0.00021	N/A

Table 8D: Soil Sampling Results

Analyte	SE Side of MAF Inside Fenceline (mg/kg-dry)	NW of MAF Near Air Intake Vent (mg/kg-dry)	North Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.209	<0.219	<0.223
Phorate	<0.209	<0.219	<0.223
Parathion	<0.209	<0.219	<0.223
Methamidophos	<0.209	<0.219	<0.223
Malathion	<0.209	<0.219	<0.223
Ethoprop	<0.209	<0.219	<0.223
Dicrotophos	<0.209	<0.219	<0.223
Diazinon	<0.209	<0.219	<0.223
Chlorpyrifos	<0.209	<0.219	<0.223
Terbufos	<0.209	<0.219	<0.223

Table 8D: Soil Sampling Results Cont.

Analyte	West Corner Outside Fenceline (mg/kg-dry)	South Corner Outside Fenceline (mg/kg-dry)	East Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.253	<0.222	<0.220
Phorate	<0.253	<0.222	<0.220
Parathion	<0.253	<0.222	<0.220
Methamidophos	<0.253	<0.222	<0.220
Malathion	<0.253	<0.222	<0.220
Ethoprop	<0.253	<0.222	<0.220
Dicrotophos	<0.253	<0.222	<0.220
Diazinon	<0.253	<0.222	<0.220
Chlorpyrifos	<0.253	<0.222	<0.220
Terbufos	<0.253	<0.222	<0.220

Table 9D: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	526 ppm	628 ppm	<1000 ppm
Relative Humidity	35.9%	35.8%	30% - 60%
Temperature	69.6°F	70.8°F	68°F - 74°F
Carbon Monoxide	0.2 ppm	1.4 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10D: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	7.9	7.8	6.5 - 8.5
Total Available Chlorine	0.39	0	> 0 mg/L; < 4 mg/L

Appendix 5: MAF ECHO (E-01) Results, Sampled on 10 October 2023

Table 1E: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2E: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2E: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3E: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.94	0.94	10

Table 4E: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<3.07	<4.02	30

Table 5E: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6E: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00049	0.0005
PCB-1221	<0.00049	<0.00049	0.0005
PCB-1232	<0.00049	<0.00049	0.0005
PCB-1242	<0.00049	<0.00049	0.0005
PCB-1248	<0.00049	<0.00049	0.0005
PCB-1254	<0.00049	<0.00049	0.0005
PCB-1260	<0.00049	<0.00049	0.0005
Total PCBs	<0.00049	<0.00049	0.0005

Table 7E: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00022	<0.00021	N/A
4,4'-DDE	<0.00022	<0.00021	N/A
Acenaphthene	<0.00011	<0.00011	N/A
Acenaphthylene	<0.00011	<0.00011	N/A
Alachlor	<0.00022	<0.00021	0.002
Aldrin	<0.00022	<0.00021	N/A
Anthracene	<0.00022	<0.00021	N/A
Atrazine	<0.00022	<0.00021	0.003
Benzo[a]anthracene	<0.00011	<0.00011	0.0001
Benzo[a]pyrene	<0.00011	<0.00011	0.0002
Benzo[b]fluoranthene	<0.00011	<0.00011	0.0002
Benzo[g,h,i]perylene	<0.00011	<0.00011	N/A
Benzo[k]fluoranthene	<0.00011	<0.00011	0.0002
Bis(2-Ethylhexyl)phthalate	<0.0011	<0.0011	0.006
Butachlor	<0.00022	<0.00021	N/A
Butylbenzylphthalate	<0.0011	<0.0011	N/A
Chrysene	<0.00011	<0.00011	0.0002
Di(2-ethylhexyl)adipate	<0.0011	<0.0011	0.40
Dieldrin	<0.00022	<0.00021	N/A
Diethylphthalate	<0.0011	<0.0011	N/A
Dimethylphthalate	<0.0011	<0.0011	N/A
Di-n-butylphthalate	<0.0011	<0.0011	N/A
Endrin	<0.00022	<0.00021	0.002
EPTC	<0.00022	<0.00021	N/A
Fluoranthene	<0.00011	<0.00011	N/A
Fluorene	<0.00011	<0.00011	N/A
gamma-BHC (Lindane)	<0.00011	<0.00011	0.0002
Heptachlor	<0.00011	<0.00011	0.0004
Heptachlor Epoxide	<0.00011	<0.00011	0.0002
Hexachlorobenzene	<0.00011	<0.00011	0.001
Hexachlorocyclopentadiene	<0.00022	<0.00021	0.05
Indeno[1,2,3-cd]pyrene	<0.00011	<0.00011	0.0004
Methoxychlor	<0.00022	<0.00021	0.04
Metribuzin	<0.00022	<0.00021	N/A
Molinate	<0.00022	<0.00021	N/A
Naphthalene	<0.00022	<0.00021	N/A
Phenanthrene	<0.00011	<0.00011	N/A

Table 7E: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00022	<0.00021	N/A
Pyrene	<0.00011	<0.00011	0.0002
Simazine	<0.00022	<0.00021	0.004
Terbacil	<0.00054	<0.00053	N/A
Trifluralin	<0.00022	<0.00021	N/A

Table 8E: Soil Sampling Results

Analyte	SW of MAF Near Air Intake Vent (mg/kg-dry)	SE Corner, Backyard of MAF (mg/kg-dry)	SW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.210	<0.216	<0.227
Phorate	<0.210	<0.216	<0.227
Parathion	<0.210	<0.216	<0.227
Methamidophos	<0.210	<0.216	<0.227
Malathion	<0.210	<0.216	<0.227
Ethoprop	<0.210	<0.216	<0.227
Dicrotophos	<0.210	<0.216	<0.227
Diazinon	<0.210	<0.216	<0.227
Chlorpyrifos	<0.210	<0.216	<0.227
Terbufos	<0.210	<0.216	<0.227

Table 8E: Soil Sampling Results Cont.

Analyte	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.227	<0.230	<0.226
Phorate	<0.227	<0.230	<0.226
Parathion	<0.227	<0.230	<0.226
Methamidophos	<0.227	<0.230	<0.226
Malathion	<0.227	<0.230	<0.226
Ethoprop	<0.227	<0.230	<0.226
Dicrotophos	<0.227	<0.230	<0.226
Diazinon	<0.227	<0.230	<0.226
Chlorpyrifos	<0.227	<0.230	<0.226
Terbufos	<0.227	<0.230	<0.226

Table 9E: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	725 ppm	700 ppm	<1000 ppm
Relative Humidity	39%	54.1%	30% - 60%
Temperature	62.4°F	59.8°F	68°F - 74°F
Carbon Monoxide	0.3 ppm	2.6 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10E: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	7.7	7.8	6.5 - 8.5
Total Available Chlorine	0.18	0.03	> 0 mg/L; < 4 mg/L

Appendix 6: MAF FOXTROT (F-01) Results, Sampled on 11 October 2023

Table 1F: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2F: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2F: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3F: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.89	0.88	10

Table 4F: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<3.44	<2.48	30

Table 5F: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6F: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.0005	<0.00048	0.0005
PCB-1221	<0.0005	<0.00048	0.0005
PCB-1232	<0.0005	<0.00048	0.0005
PCB-1242	<0.0005	<0.00048	0.0005
PCB-1248	<0.0005	<0.00048	0.0005
PCB-1254	<0.0005	<0.00048	0.0005
PCB-1260	<0.0005	<0.00048	0.0005
Total PCBs	<0.0005	<0.00048	0.0005

Table 7F: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.0002	<0.00024	N/A
4,4'-DDE	<0.0002	<0.00024	N/A
Acenaphthene	<0.0001	<0.00012	N/A
Acenaphthylene	<0.0001	<0.00012	N/A
Alachlor	<0.0002	<0.00024	0.002
Aldrin	<0.0002	<0.00024	N/A
Anthracene	<0.0002	<0.00024	N/A
Atrazine	<0.0002	<0.00024	0.003
Benzo[a]anthracene	<0.0001	<0.00012	0.0001
Benzo[a]pyrene	<0.0001	<0.00012	0.0002
Benzo[b]fluoranthene	<0.0001	<0.00012	0.0002
Benzo[g,h,i]perylene	<0.0001	<0.00012	N/A
Benzo[k]fluoranthene	<0.0001	<0.00012	0.0002
Bis(2-Ethylhexyl)phthalate	<0.001	<0.0012	0.006
Butachlor	<0.0002	<0.00024	N/A
Butylbenzylphthalate	<0.001	<0.0012	N/A
Chrysene	<0.0001	<0.00012	0.0002
Di(2-ethylhexyl)adipate	<0.001	<0.0012	0.40
Dieldrin	<0.0002	<0.00024	N/A
Diethylphthalate	<0.001	<0.0012	N/A
Dimethylphthalate	<0.001	<0.0012	N/A
Di-n-butylphthalate	<0.001	<0.0012	N/A
Endrin	<0.0002	<0.00024	0.002
EPTC	<0.0002	<0.00024	N/A
Fluoranthene	<0.0001	<0.00012	N/A
Fluorene	<0.0001	<0.00012	N/A
gamma-BHC (Lindane)	<0.0001	<0.00012	0.0002
Heptachlor	<0.0001	<0.00012	0.0004
Heptachlor Epoxide	<0.0001	<0.00012	0.0002
Hexachlorobenzene	<0.0001	<0.00012	0.001
Hexachlorocyclopentadiene	<0.0002	<0.00024	0.05
Indeno[1,2,3-cd]pyrene	<0.0001	<0.00012	0.0004
Methoxychlor	<0.0002	<0.00024	0.04
Metribuzin	<0.0002	<0.00024	N/A
Molinate	<0.0002	<0.00024	N/A
Naphthalene	<0.0002	<0.00024	N/A
Phenanthrene	<0.0001	<0.00012	N/A

Table 7F: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.0002	<0.00024	N/A
Pyrene	<0.0001	<0.00012	0.0002
Simazine	<0.0002	<0.00024	0.004
Terbacil	<0.0005	<0.00059	N/A
Trifluralin	<0.0002	<0.00024	N/A

Table 8F: Soil Sampling Results

Analyte	North of MAF Inside Fenceline (mg/kg-dry)	South of MAF Near Air Intake Vent (mg/kg-dry)	SW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.237	<0.242	<0.228
Phorate	<0.237	<0.242	<0.228
Parathion	<0.237	<0.242	<0.228
Methamidophos	<0.237	<0.242	<0.228
Malathion	<0.237	<0.242	<0.228
Ethoprop	<0.237	<0.242	<0.228
Dicrotophos	<0.237	<0.242	<0.228
Diazinon	<0.237	<0.242	<0.228
Chlorpyrifos	<0.237	<0.242	<0.228
Terbufos	<0.237	<0.242	<0.228

Table 8F: Soil Sampling Results Cont.

Analyte	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.242	<0.210	<0.227
Phorate	<0.242	<0.210	<0.227
Parathion	<0.242	<0.210	<0.227
Methamidophos	<0.242	<0.210	<0.227
Malathion	<0.242	<0.210	<0.227
Ethoprop	<0.242	<0.210	<0.227
Dicrotophos	<0.242	<0.210	<0.227
Diazinon	<0.242	<0.210	<0.227
Chlorpyrifos	<0.242	<0.210	<0.227
Terbufos	<0.242	<0.210	<0.227

Table 9F: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	583 ppm	730 ppm	<1000 ppm
Relative Humidity	31.7%	47%	30% - 60%
Temperature	69.5°F	65.2°F	68°F - 74°F
Carbon Monoxide	0.5 ppm	2.4 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10F: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	>8.5	>8.5	6.5 - 8.5
Total Available Chlorine	0.62	0.06	> 0 mg/L; < 4 mg/L

Appendix 7: MAF GOLF (G-01) Results, Sampled on 7 October 2023

Table 1G: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2G: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2G: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3G: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.70	0.58	10

Table 4G: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<3.74	<3.60	30

Table 5G: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6G: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00048	<0.0005	0.0005
PCB-1221	<0.00048	<0.0005	0.0005
PCB-1232	<0.00048	<0.0005	0.0005
PCB-1242	<0.00048	<0.0005	0.0005
PCB-1248	<0.00048	<0.0005	0.0005
PCB-1254	<0.00048	<0.0005	0.0005
PCB-1260	<0.00048	<0.0005	0.0005
Total PCBs	<0.00048	<0.0005	0.0005

Table 7G: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00019	<0.00019	N/A
4,4'-DDE	<0.00019	<0.00019	N/A
Acenaphthene	<0.000097	<0.000097	N/A
Acenaphthylene	<0.000097	<0.000097	N/A
Alachlor	<0.00019	<0.00019	0.002
Aldrin	<0.00019	<0.00019	N/A
Anthracene	<0.00019	<0.00019	N/A
Atrazine	<0.00019	<0.00019	0.003
Benzo[a]anthracene	<0.000097	<0.000097	0.0001
Benzo[a]pyrene	<0.000097	<0.000097	0.0002
Benzo[b]fluoranthene	<0.000097	<0.000097	0.0002
Benzo[g,h,i]perylene	<0.000097	<0.000097	N/A
Benzo[k]fluoranthene	<0.000097	<0.000097	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00097	<0.00097	0.006
Butachlor	<0.00019	<0.00019	N/A
Butylbenzylphthalate	<0.00097	<0.00097	N/A
Chrysene	<0.000097	<0.000097	0.0002
Di(2-ethylhexyl)adipate	<0.00097	<0.00097	0.40
Dieldrin	<0.00019	<0.00019	N/A
Diethylphthalate	<0.00097	<0.00097	N/A
Dimethylphthalate	<0.00097	<0.00097	N/A
Di-n-butylphthalate	<0.00097	<0.00097	N/A
Endrin	<0.00019	<0.00019	0.002
EPTC	<0.00019	<0.00019	N/A
Fluoranthene	<0.000097	<0.000097	N/A
Fluorene	<0.000097	<0.000097	N/A
gamma-BHC (Lindane)	<0.000097	<0.000097	0.0002
Heptachlor	<0.000097	<0.000097	0.0004
Heptachlor Epoxide	<0.000097	<0.000097	0.0002
Hexachlorobenzene	<0.000097	<0.000097	0.001
Hexachlorocyclopentadiene	<0.00019	<0.00019	0.05
Indeno[1,2,3-cd]pyrene	<0.000097	<0.000097	0.0004
Methoxychlor	<0.00019	<0.00019	0.04
Metribuzin	<0.00019	<0.00019	N/A
Molinate	<0.00019	<0.00019	N/A
Naphthalene	<0.00019	<0.00019	N/A
Phenanthrene	<0.000097	<0.000097	N/A

Table 7G: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00019	<0.00019	N/A
Pyrene	<0.000097	<0.000097	0.0002
Simazine	<0.00019	<0.00019	0.004
Terbacil	<0.00049	<0.00049	N/A
Trifluralin	<0.00019	<0.00019	N/A

Table 8G: Soil Sampling Results

Analyte	North of MAF Inside Fence (mg/kg-dry)	South of MAF Inside Fence (mg/kg-dry)	SW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.237	<0.238	<0.265
Phorate	<0.237	<0.238	<0.265
Parathion	<0.237	<0.238	<0.265
Methamidophos	<0.237	<0.238	<0.265
Malathion	<0.237	<0.238	<0.265
Ethoprop	<0.237	<0.238	<0.265
Dicrotophos	<0.237	<0.238	<0.265
Diazinon	<0.237	<0.238	<0.265
Chlorpyrifos	<0.237	<0.238	<0.265
Terbufos	<0.237	<0.238	<0.265

Table 8G: Soil Sampling Results Cont.

Analyte	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.254	<0.233	<0.261
Phorate	<0.254	<0.233	<0.261
Parathion	<0.254	<0.233	<0.261
Methamidophos	<0.254	<0.233	<0.261
Malathion	<0.254	<0.233	<0.261
Ethoprop	<0.254	<0.233	<0.261
Dicrotophos	<0.254	<0.233	<0.261
Diazinon	<0.254	<0.233	<0.261
Chlorpyrifos	<0.254	<0.233	<0.261
Terbufos	<0.254	<0.233	<0.261

Table 9G: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	540 ppm	743 ppm	<1000 ppm
Relative Humidity	31.5%	49.9%	30% - 60%
Temperature	67.8°F	63.8°F	68°F - 74°F
Carbon Monoxide	0 ppm	3.1 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10G: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	6.5	6.7	6.5 - 8.5
Total Available Chlorine	0.61	0.17	> 0 mg/L; < 4 mg/L

Appendix 8: MAF HOTEL (H-01) Results, Sampled on 11 October 2023

Table 1H: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2H: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2H: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3H: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.52	0.51	10

Table 4H: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<4.18	<3.80	30

Table 5H: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6H: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00049	0.0005
PCB-1221	<0.00049	<0.00049	0.0005
PCB-1232	<0.00049	<0.00049	0.0005
PCB-1242	<0.00049	<0.00049	0.0005
PCB-1248	<0.00049	<0.00049	0.0005
PCB-1254	<0.00049	<0.00049	0.0005
PCB-1260	<0.00049	<0.00049	0.0005
Total PCBs	<0.00049	<0.00049	0.0005

Table 7H: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.0002	<0.0002	N/A
4,4'-DDE	<0.0002	<0.0002	N/A
Acenaphthene	<0.000098	<0.000098	N/A
Acenaphthylene	<0.000098	<0.000098	N/A
Alachlor	<0.0002	<0.0002	0.002
Aldrin	<0.0002	<0.0002	N/A
Anthracene	<0.0002	<0.0002	N/A
Atrazine	<0.0002	<0.0002	0.003
Benzo[a]anthracene	<0.000098	<0.000098	0.0001
Benzo[a]pyrene	<0.000098	<0.000098	0.0002
Benzo[b]fluoranthene	<0.000098	<0.000098	0.0002
Benzo[g,h,i]perylene	<0.000098	<0.000098	N/A
Benzo[k]fluoranthene	<0.000098	<0.000098	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00098	<0.00098	0.006
Butachlor	<0.0002	<0.0002	N/A
Butylbenzylphthalate	<0.00098	<0.00098	N/A
Chrysene	<0.000098	<0.000098	0.0002
Di(2-ethylhexyl)adipate	<0.000098	<0.000098	0.40
Dieldrin	<0.0002	<0.0002	N/A
Diethylphthalate	<0.00098	<0.00098	N/A
Dimethylphthalate	<0.00098	<0.00098	N/A
Di-n-butylphthalate	<0.00098	<0.00098	N/A
Endrin	<0.0002	<0.0002	0.002
EPTC	<0.0002	<0.0002	N/A
Fluoranthene	<0.000098	<0.000098	N/A
Fluorene	<0.000098	<0.000098	N/A
gamma-BHC (Lindane)	<0.000098	<0.000098	0.0002
Heptachlor	<0.000098	<0.000098	0.0004
Heptachlor Epoxide	<0.000098	<0.000098	0.0002
Hexachlorobenzene	<0.000098	<0.000098	0.001
Hexachlorocyclopentadiene	<0.0002	<0.0002	0.05
Indeno[1,2,3-cd]pyrene	<0.000098	<0.000098	0.0004
Methoxychlor	<0.0002	<0.0002	0.04
Metribuzin	<0.0002	<0.0002	N/A
Molinate	<0.0002	<0.0002	N/A
Naphthalene	<0.0002	<0.0002	N/A
Phenanthrene	<0.000098	<0.000098	N/A

Table 7H: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.0002	<0.0002	N/A
Pyrene	<0.000098	<0.000098	0.0002
Simazine	<0.0002	<0.0002	0.004
Terbacil	<0.00049	<0.00049	N/A
Trifluralin	<0.0002	<0.0002	N/A

Table 8H: Soil Sampling Results

Analyte	West of MAF Near Air Intake Vent (mg/kg-dry)	SW of MAF Near Radio Tower (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.228	<0.222	<0.222
Phorate	<0.228	<0.222	<0.222
Parathion	<0.228	<0.222	<0.222
Methamidophos	<0.228	<0.222	<0.222
Malathion	<0.228	<0.222	<0.222
Ethoprop	<0.228	<0.222	<0.222
Dicrotophos	<0.228	<0.222	<0.222
Diazinon	<0.228	<0.222	<0.222
Chlorpyrifos	<0.228	<0.222	<0.222
Terbufos	<0.228	<0.222	<0.222

Table 8H: Soil Sampling Results Cont.

Analyte	SW Corner Outside Fenceline (mg/kg-dry)	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.217	<0.217	<0.217
Phorate	<0.217	<0.217	<0.217
Parathion	<0.217	<0.217	<0.217
Methamidophos	<0.217	<0.217	<0.217
Malathion	<0.217	<0.217	<0.217
Ethoprop	<0.217	<0.217	<0.217
Dicrotophos	<0.217	<0.217	<0.217
Diazinon	<0.217	<0.217	<0.217
Chlorpyrifos	<0.217	<0.217	<0.217
Terbufos	<0.217	<0.217	<0.217

Table 9H: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	495 ppm	485 ppm	<1000 ppm
Relative Humidity	34.2%	40.5%	30% - 60%
Temperature	61.8°F	65.3°F	68°F - 74°F
Carbon Monoxide	0 ppm	1.3 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10H: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	7.7	7.2	6.5 - 8.5
Total Available Chlorine	0.8	0.01	> 0 mg/L; < 4 mg/L

Appendix 9: MAF INDIA (I-01) Results, Sampled on 7 October 2023

Table 1I: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2I: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2I: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3I: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.35	0.31	10

Table 4I: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<4.67	<3.51	30

Table 5I: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6I: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00048	<0.00049	0.0005
PCB-1221	<0.00048	<0.00049	0.0005
PCB-1232	<0.00048	<0.00049	0.0005
PCB-1242	<0.00048	<0.00049	0.0005
PCB-1248	<0.00048	<0.00049	0.0005
PCB-1254	<0.00048	<0.00049	0.0005
PCB-1260	<0.00048	<0.00049	0.0005
Total PCBs	<0.00048	<0.00049	0.0005

Table 7I: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.0002	<0.0002	N/A
4,4'-DDE	<0.0002	<0.0002	N/A
Acenaphthene	<0.000098	<0.0001	N/A
Acenaphthylene	<0.000098	<0.0001	N/A
Alachlor	<0.0002	<0.0002	0.002
Aldrin	<0.0002	<0.0002	N/A
Anthracene	<0.0002	<0.0002	N/A
Atrazine	<0.0002	<0.0002	0.003
Benzo[a]anthracene	<0.000098	<0.0001	0.0001
Benzo[a]pyrene	<0.000098	<0.0001	0.0002
Benzo[b]fluoranthene	<0.000098	<0.0001	0.0002
Benzo[g,h,i]perylene	<0.000098	<0.0001	N/A
Benzo[k]fluoranthene	<0.000098	<0.0001	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00098	<0.001	0.006
Butachlor	<0.0002	<0.0002	N/A
Butylbenzylphthalate	<0.00098	<0.001	N/A
Chrysene	<0.000098	<0.0001	0.0002
Di(2-ethylhexyl)adipate	<0.00098	<0.001	0.40
Dieldrin	<0.0002	<0.0002	N/A
Diethylphthalate	<0.00098	<0.001	N/A
Dimethylphthalate	<0.00098	<0.001	N/A
Di-n-butylphthalate	<0.00098	<0.001	N/A
Endrin	<0.0002	<0.0002	0.002
EPTC	<0.0002	<0.0002	N/A
Fluoranthene	<0.000098	<0.0001	N/A
Fluorene	<0.000098	<0.0001	N/A
gamma-BHC (Lindane)	<0.000098	<0.0001	0.0002
Heptachlor	<0.000098	<0.0001	0.0004
Heptachlor Epoxide	<0.000098	<0.0001	0.0002
Hexachlorobenzene	<0.000098	<0.0001	0.001
Hexachlorocyclopentadiene	<0.0002	<0.0002	0.05
Indeno[1,2,3-cd]pyrene	<0.000098	<0.0001	0.0004
Methoxychlor	<0.0002	<0.0002	0.04
Metribuzin	<0.0002	<0.0002	N/A
Molinate	<0.0002	<0.0002	N/A
Naphthalene	<0.0002	<0.0002	N/A
Phenanthrene	<0.000098	<0.0001	N/A

Table 7I: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.0002	<0.0002	N/A
Pyrene	<0.000098	<0.0001	0.0002
Simazine	<0.0002	<0.0002	0.004
Terbacil	<0.00049	<0.00051	N/A
Trifluralin	<0.0002	<0.0002	N/A

Table 8I: Soil Sampling Results

Analyte	West of MAF Near Air Intake Vent (mg/kg-dry)	West of MAF Near Cones (mg/kg-dry)	West Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.208	<0.222	<0.232
Phorate	<0.208	<0.222	<0.232
Parathion	<0.208	<0.222	<0.232
Methamidophos	<0.208	<0.222	<0.232
Malathion	<0.208	<0.222	<0.232
Ethoprop	<0.208	<0.222	<0.232
Dicrotophos	<0.208	<0.222	<0.232
Diazinon	<0.208	<0.222	<0.232
Chlorpyrifos	<0.208	<0.222	<0.232
Terbufos	<0.208	<0.222	<0.232

Table 8I: Soil Sampling Results Cont.

Analyte	South Corner Outside Fenceline (mg/kg-dry)	East Corner Outside Fenceline (mg/kg-dry)	North Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.218	<0.219	<0.241
Phorate	<0.218	<0.219	<0.241
Parathion	<0.218	<0.219	<0.241
Methamidophos	<0.218	<0.219	<0.241
Malathion	<0.218	<0.219	<0.241
Ethoprop	<0.218	<0.219	<0.241
Dicrotophos	<0.218	<0.219	<0.241
Diazinon	<0.218	<0.219	<0.241
Chlorpyrifos	<0.218	<0.219	<0.241
Terbufos	<0.218	<0.219	<0.241

Table 9I: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	549 ppm	910 ppm	<1000 ppm
Relative Humidity	44.9%	48.2%	30% - 60%
Temperature	68.3°F	64.6°F	68°F - 74°F
Carbon Monoxide	0.7 ppm	1.5 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10I: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	7.7	7.7	6.5 - 8.5
Total Available Chlorine	0.12	0.02	> 0 mg/L; < 4 mg/L

Appendix 10: MAF JULIET (J-01) Results, Sampled on 8 October 2023

Table 1J: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2J: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2J: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3J: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.88	0.94	10

Table 4J: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<5.99	<3.94	30

Table 5J: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6J: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00048	0.0005
PCB-1221	<0.00049	<0.00048	0.0005
PCB-1232	<0.00049	<0.00048	0.0005
PCB-1242	<0.00049	<0.00048	0.0005
PCB-1248	<0.00049	<0.00048	0.0005
PCB-1254	<0.00049	<0.00048	0.0005
PCB-1260	<0.00049	<0.00048	0.0005
Total PCBs	<0.00049	<0.00048	0.0005

Table 7J: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00019	<0.00023	N/A
4,4'-DDE	<0.00019	<0.00023	N/A
Acenaphthene	<0.000097	<0.00011	N/A
Acenaphthylene	<0.000097	<0.00011	N/A
Alachlor	<0.00019	<0.00023	0.002
Aldrin	<0.00019	<0.00023	N/A
Anthracene	<0.00019	<0.00023	N/A
Atrazine	<0.00019	<0.00023	0.003
Benzo[a]anthracene	<0.000097	<0.00011	0.0001
Benzo[a]pyrene	<0.000097	<0.00011	0.0002
Benzo[b]fluoranthene	<0.000097	<0.00011	0.0002
Benzo[g,h,i]perylene	<0.000097	<0.00011	N/A
Benzo[k]fluoranthene	<0.000097	<0.00011	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00097	<0.0011	0.006
Butachlor	<0.00019	<0.00023	N/A
Butylbenzylphthalate	<0.00097	<0.0011	N/A
Chrysene	<0.000097	<0.00011	0.0002
Di(2-ethylhexyl)adipate	<0.00097	<0.0011	0.40
Dieldrin	<0.00019	<0.00023	N/A
Diethylphthalate	<0.00097	<0.0011	N/A
Dimethylphthalate	<0.00097	<0.0011	N/A
Di-n-butylphthalate	<0.00097	<0.0011	N/A
Endrin	<0.00019	<0.00023	0.002
EPTC	<0.00019	<0.00023	N/A
Fluoranthene	<0.000097	<0.00011	N/A
Fluorene	<0.000097	<0.00011	N/A
gamma-BHC (Lindane)	<0.000097	<0.00011	0.0002
Heptachlor	<0.000097	<0.00011	0.0004
Heptachlor Epoxide	<0.000097	<0.00011	0.0002
Hexachlorobenzene	<0.000097	<0.00011	0.001
Hexachlorocyclopentadiene	<0.00019	<0.00023	0.05
Indeno[1,2,3-cd]pyrene	<0.000097	<0.00011	0.0004
Methoxychlor	<0.00019	<0.00023	0.04
Metribuzin	<0.00019	<0.00023	N/A
Molinate	<0.00019	<0.00023	N/A
Naphthalene	<0.00019	<0.00023	N/A
Phenanthrene	<0.000097	<0.00011	N/A

Table 7J: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00019	<0.00023	N/A
Pyrene	<0.000097	<0.00011	0.0002
Simazine	<0.00019	<0.00023	0.004
Terbacil	<0.00049	<0.00057	N/A
Trifluralin	<0.00019	<0.00023	N/A

Table 8J: Soil Sampling Results

Analyte	NW of MAF Near Air Intake Vent (mg/kg-dry)	NW of MAF Next To Building (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0287	<0.0280	<0.0278
Phorate	<0.0287	<0.0280	<0.0278
Parathion	<0.0287	<0.0280	<0.0278
Methamidophos	<0.0287	<0.0280	<0.0278
Malathion	<0.0287	<0.0280	<0.0278
Ethoprop	<0.0287	<0.0280	<0.0278
Dicrotophos	<0.0287	<0.0280	<0.0278
Diazinon	<0.0287	<0.0280	<0.0278
Chlorpyrifos	<0.0287	<0.0280	<0.0278
Terbufos	<0.0287	<0.0280	<0.0278
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 8J: Soil Sampling Results Cont.

Analyte	SW Corner Outside Fenceline (mg/kg-dry)	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0288	<0.0290	<0.0273
Phorate	<0.0288	<0.0290	<0.0273
Parathion	<0.0288	<0.0290	<0.0273
Methamidophos	<0.0288	<0.0290	<0.0273
Malathion	<0.0288	<0.0290	<0.0273
Ethoprop	<0.0288	<0.0290	<0.0273
Dicrotophos	<0.0288	<0.0290	<0.0273
Diazinon	<0.0288	<0.0290	<0.0273
Chlorpyrifos	<0.0288	<0.0290	<0.0273
Terbufos	<0.0288	<0.0290	<0.0273
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 9J: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	511 ppm	629 ppm	<1000 ppm
Relative Humidity	42.4%	40.9%	30% - 60%
Temperature	70°F	69.1°F	68°F - 74°F
Carbon Monoxide	0.3 ppm	2.1 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10J: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	6.6	7.0	6.5 - 8.5
Total Available Chlorine	0.94	0.02	> 0 mg/L; < 4 mg/L

Appendix 11: MAF KILO (K-01) Results, Sampled on 8 October 2023

Table 1K: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2K: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2K: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3K: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.66	0.64	10

Table 4K: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<3.14	<6.67	30

Table 5K: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6K: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00052	<0.00049	0.0005
PCB-1221	<0.00052	<0.00049	0.0005
PCB-1232	<0.00052	<0.00049	0.0005
PCB-1242	<0.00052	<0.00049	0.0005
PCB-1248	<0.00052	<0.00049	0.0005
PCB-1254	<0.00052	<0.00049	0.0005
PCB-1260	<0.00052	<0.00049	0.0005
Total PCBs	<0.00052	<0.00049	0.0005

Table 7K: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.0002	<0.0002	N/A
4,4'-DDE	<0.0002	<0.0002	N/A
Acenaphthene	<0.0001	<0.0001	N/A
Acenaphthylene	<0.0001	<0.0001	N/A
Alachlor	<0.0002	<0.0002	0.002
Aldrin	<0.0002	<0.0002	N/A
Anthracene	<0.0002	<0.0002	N/A
Atrazine	<0.0002	<0.0002	0.003
Benzo[a]anthracene	<0.0001	<0.0001	0.0001
Benzo[a]pyrene	<0.0001	<0.0001	0.0002
Benzo[b]fluoranthene	<0.0001	<0.0001	0.0002
Benzo[g,h,i]perylene	<0.0001	<0.0001	N/A
Benzo[k]fluoranthene	<0.0001	<0.0001	0.0002
Bis(2-Ethylhexyl)phthalate	<0.001	<0.001	0.006
Butachlor	<0.0002	<0.0002	N/A
Butylbenzylphthalate	<0.001	<0.001	N/A
Chrysene	<0.0001	<0.0001	0.0002
Di(2-ethylhexyl)adipate	<0.001	<0.001	0.40
Dieldrin	<0.0002	<0.0002	N/A
Diethylphthalate	<0.001	<0.001	N/A
Dimethylphthalate	<0.001	<0.001	N/A
Di-n-butylphthalate	<0.001	<0.001	N/A
Endrin	<0.0002	<0.0002	0.002
EPTC	<0.0002	<0.0002	N/A
Fluoranthene	<0.0001	<0.0001	N/A
Fluorene	<0.0001	<0.0001	N/A
gamma-BHC (Lindane)	<0.0001	<0.0001	0.0002
Heptachlor	<0.0001	<0.0001	0.0004
Heptachlor Epoxide	<0.0001	<0.0001	0.0002
Hexachlorobenzene	<0.0001	<0.0001	0.001
Hexachlorocyclopentadiene	<0.0002	<0.0002	0.05
Indeno[1,2,3-cd]pyrene	<0.0001	<0.0001	0.0004
Methoxychlor	<0.0002	<0.0002	0.04
Metribuzin	<0.0002	<0.0002	N/A
Molinate	<0.0002	<0.0002	N/A
Naphthalene	<0.0002	<0.0002	N/A
Phenanthrene	<0.0001	<0.0001	N/A

Table 7K: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.0002	<0.0002	N/A
Pyrene	<0.0001	<0.0001	0.0002
Simazine	<0.0002	<0.0002	0.004
Terbacil	<0.0005	<0.0005	N/A
Trifluralin	<0.0002	<0.0002	N/A

Table 8K: Soil Sampling Results

Analyte	SW of MAF Near Air Intake Vent (mg/kg-dry)	NE of MAF Near Antenna (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0309	<0.0286	<0.0290
Phorate	<0.0309	<0.0286	<0.0290
Parathion	<0.0309	<0.0286	<0.0290
Methamidophos	<0.0309	<0.0286	<0.0290
Malathion	<0.0309	<0.0286	<0.0290
Ethoprop	<0.0309	<0.0286	<0.0290
Dicrotophos	<0.0309	<0.0286	<0.0290
Diazinon	<0.0309	<0.0286	<0.0290
Chlorpyrifos	<0.0309	<0.0286	<0.0290
Terbufos	<0.0309	<0.0286	<0.0290
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 8K: Soil Sampling Results Cont.

Analyte	NE Corner Outside Fenceline (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)	SW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0294	<0.0289	<0.0299
Phorate	<0.0294	<0.0289	<0.0299
Parathion	<0.0294	<0.0289	<0.0299
Methamidophos	<0.0294	<0.0289	<0.0299
Malathion	<0.0294	<0.0289	<0.0299
Ethoprop	<0.0294	<0.0289	<0.0299
Dicrotophos	<0.0294	<0.0289	<0.0299
Diazinon	<0.0294	<0.0289	<0.0299
Chlorpyrifos	<0.0294	<0.0289	<0.0299
Terbufos	<0.0294	<0.0289	<0.0299
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 9K: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	613 ppm	672 ppm	<1000 ppm
Relative Humidity	44.9%	42.3%	30% - 60%
Temperature	66.9°F	62.9°F	68°F - 74°F
Carbon Monoxide	0 ppm	3.2 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10K: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	>8.5	7.9	6.5 - 8.5
Total Available Chlorine	1.22	0.04	> 0 mg/L; < 4 mg/L

Appendix 12: MAF LIMA (L-01) Results, Sampled on 9 October 2023

Table 1L: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2L: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2L: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3L: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.37	0.37	10

Table 4L: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<8.51	<2.44	30

Table 5L: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6L: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.0005	0.0005
PCB-1221	<0.00049	<0.0005	0.0005
PCB-1232	<0.00049	<0.0005	0.0005
PCB-1242	<0.00049	<0.0005	0.0005
PCB-1248	<0.00049	<0.0005	0.0005
PCB-1254	<0.00049	<0.0005	0.0005
PCB-1260	<0.00049	<0.0005	0.0005
Total PCBs	<0.00049	<0.0005	0.0005

Table 7L: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.0002	<0.00024	N/A
4,4'-DDE	<0.0002	<0.00024	N/A
Acenaphthene	<0.0001	<0.00012	N/A
Acenaphthylene	<0.0001	<0.00012	N/A
Alachlor	<0.0002	<0.00024	0.002
Aldrin	<0.0002	<0.00024	N/A
Anthracene	<0.0002	<0.00024	N/A
Atrazine	<0.0002	<0.00024	0.003
Benzo[a]anthracene	<0.0001	<0.00012	0.0001
Benzo[a]pyrene	<0.0001	<0.00012	0.0002
Benzo[b]fluoranthene	<0.0001	<0.00012	0.0002
Benzo[g,h,i]perylene	<0.0001	<0.00012	N/A
Benzo[k]fluoranthene	<0.0001	<0.00012	0.0002
Bis(2-Ethylhexyl)phthalate	<0.001	<0.0012	0.006
Butachlor	<0.0002	<0.00024	N/A
Butylbenzylphthalate	<0.001	<0.0012	N/A
Chrysene	<0.0001	<0.00012	0.0002
Di(2-ethylhexyl)adipate	<0.001	<0.0012	0.40
Dieldrin	<0.0002	<0.00024	N/A
Diethylphthalate	<0.001	<0.0012	N/A
Dimethylphthalate	<0.001	<0.0012	N/A
Di-n-butylphthalate	<0.001	<0.0012	N/A
Endrin	<0.0002	<0.00024	0.002
EPTC	<0.0002	<0.00024	N/A
Fluoranthene	<0.0001	<0.00012	N/A
Fluorene	<0.0001	<0.00012	N/A
gamma-BHC (Lindane)	<0.0001	<0.00012	0.0002
Heptachlor	<0.0001	<0.00012	0.0004
Heptachlor Epoxide	<0.0001	<0.00012	0.0002
Hexachlorobenzene	<0.0001	<0.00012	0.001
Hexachlorocyclopentadiene	<0.0002	<0.00024	0.05
Indeno[1,2,3-cd]pyrene	<0.0001	<0.00012	0.0004
Methoxychlor	<0.0002	<0.00024	0.04
Metribuzin	<0.0002	<0.00024	N/A
Molinate	<0.0002	<0.00024	N/A
Naphthalene	<0.0002	<0.00024	N/A
Phenanthrene	<0.0001	<0.00012	N/A

Table 7L: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.0002	<0.00024	N/A
Pyrene	<0.0001	<0.00012	0.0002
Simazine	<0.0002	<0.00024	0.004
Terbacil	<0.0005	<0.00061	N/A
Trifluralin	<0.0002	<0.00024	N/A

Table 8L: Soil Sampling Results

Analyte	NW of MAF Near Air Intake Vent (mg/kg-dry)	NW of MAF Near Concrete Pad (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0281	<0.0267	<0.0276
Phorate	<0.0281	<0.0267	<0.0276
Parathion	<0.0281	<0.0267	<0.0276
Methamidophos	<0.0281	<0.0267	<0.0276
Malathion	<0.0281	<0.0267	<0.0276
Ethoprop	<0.0281	<0.0267	<0.0276
Dicrotophos	<0.0281	<0.0267	<0.0276
Diazinon	<0.0281	<0.0267	<0.0276
Chlorpyrifos	<0.0281	<0.0267	<0.0276
Terbufos	<0.0281	<0.0267	<0.0276
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 8L: Soil Sampling Results Cont.

Analyte	SW Corner Outside Fenceline (mg/kg-dry)	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0304	<0.0291	<0.0286
Phorate	<0.0304	<0.0291	<0.0286
Parathion	<0.0304	<0.0291	<0.0286
Methamidophos	<0.0304	<0.0291	<0.0286
Malathion	<0.0304	<0.0291	<0.0286
Ethoprop	<0.0304	<0.0291	<0.0286
Dicrotophos	<0.0304	<0.0291	<0.0286
Diazinon	<0.0304	<0.0291	<0.0286
Chlorpyrifos	<0.0304	<0.0291	<0.0286
Terbufos	<0.0304	<0.0291	<0.0286
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 9L: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	580 ppm	703 ppm	<1000 ppm
Relative Humidity	32.4%	43.8%	30% - 60%
Temperature	65.3°F	61.1°F	68°F - 74°F
Carbon Monoxide	0.1 ppm	1.8 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10L: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	>8.5	>8.5	6.5 - 8.5
Total Available Chlorine	0.84	0.3	> 0 mg/L; < 4 mg/L

Appendix 13: MAF MIKE (M-01) Results, Sampled on 9 October 2023

Table 1M: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2M: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2M: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3M: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.36	0.35	10

Table 4M: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<5.28	<4.69	30

Table 5M: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6M: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00049	<0.00049	0.0005
PCB-1221	<0.00049	<0.00049	0.0005
PCB-1232	<0.00049	<0.00049	0.0005
PCB-1242	<0.00049	<0.00049	0.0005
PCB-1248	<0.00049	<0.00049	0.0005
PCB-1254	<0.00049	<0.00049	0.0005
PCB-1260	<0.00049	<0.00049	0.0005
Total PCBs	<0.00049	<0.00049	0.0005

Table 7M: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.00019	<0.0002	N/A
4,4'-DDE	<0.00019	<0.0002	N/A
Acenaphthene	<0.000097	<0.0001	N/A
Acenaphthylene	<0.000097	<0.0001	N/A
Alachlor	<0.00019	<0.0002	0.002
Aldrin	<0.00019	<0.0002	N/A
Anthracene	<0.00019	<0.0002	N/A
Atrazine	<0.00019	<0.0002	0.003
Benzo[a]anthracene	<0.000097	<0.0001	0.0001
Benzo[a]pyrene	<0.000097	<0.0001	0.0002
Benzo[b]fluoranthene	<0.000097	<0.0001	0.0002
Benzo[g,h,i]perylene	<0.000097	<0.0001	N/A
Benzo[k]fluoranthene	<0.000097	<0.0001	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00097	<0.001	0.006
Butachlor	<0.00019	<0.0002	N/A
Butylbenzylphthalate	<0.00097	<0.001	N/A
Chrysene	<0.000097	<0.0001	0.0002
Di(2-ethylhexyl)adipate	<0.00097	<0.001	0.40
Dieldrin	<0.00019	<0.0002	N/A
Diethylphthalate	<0.00097	<0.001	N/A
Dimethylphthalate	<0.00097	<0.001	N/A
Di-n-butylphthalate	<0.00097	<0.001	N/A
Endrin	<0.00019	<0.0002	0.002
EPTC	<0.00019	<0.0002	N/A
Fluoranthene	<0.000097	<0.0001	N/A
Fluorene	<0.000097	<0.0001	N/A
gamma-BHC (Lindane)	<0.000097	<0.0001	0.0002
Heptachlor	<0.000097	<0.0001	0.0004
Heptachlor Epoxide	<0.000097	<0.0001	0.0002
Hexachlorobenzene	<0.000097	<0.0001	0.001
Hexachlorocyclopentadiene	<0.00019	<0.0002	0.05
Indeno[1,2,3-cd]pyrene	<0.000097	<0.0001	0.0004
Methoxychlor	<0.00019	<0.0002	0.04
Metribuzin	<0.00019	<0.0002	N/A
Molinate	<0.00019	<0.0002	N/A
Naphthalene	<0.00019	<0.0002	N/A
Phenanthrene	<0.000097	<0.0001	N/A

Table 7M: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.00019	<0.0002	N/A
Pyrene	<0.000097	<0.0001	0.0002
Simazine	<0.00019	<0.0002	0.004
Terbacil	<0.00049	<0.0005	N/A
Trifluralin	<0.00019	<0.0002	N/A

Table 8M: Soil Sampling Results

Analyte	East of MAF Inside Fenceline (mg/kg-dry)	West of MAF Near Air Intake Vent (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0321	<0.0295	<0.0296
Phorate	<0.0321	<0.0295	<0.0296
Parathion	<0.0321	<0.0295	<0.0296
Methamidophos	<0.0321	<0.0295	<0.0296
Malathion	<0.0321	<0.0295	<0.0296
Ethoprop	<0.0321	<0.0295	<0.0296
Dicrotophos	<0.0321	<0.0295	<0.0296
Diazinon	<0.0321	<0.0295	<0.0296
Chlorpyrifos	<0.0321	<0.0295	<0.0296
Terbufos	<0.0321	<0.0295	<0.0296
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 8M: Soil Sampling Results Cont.

Analyte	NW Corner Outside Fenceline (mg/kg-dry)	SW Corner Outside Fenceline (mg/kg-dry)	SE Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0298	<0.0287	<0.0296
Phorate	<0.0298	<0.0287	<0.0296
Parathion	<0.0298	<0.0287	<0.0296
Methamidophos	<0.0298	<0.0287	<0.0296
Malathion	<0.0298	<0.0287	<0.0296
Ethoprop	<0.0298	<0.0287	<0.0296
Dicrotophos	<0.0298	<0.0287	<0.0296
Diazinon	<0.0298	<0.0287	<0.0296
Chlorpyrifos	<0.0298	<0.0287	<0.0296
Terbufos	<0.0298	<0.0287	<0.0296
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 9M: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	685 ppm	915 ppm	<1000 ppm
Relative Humidity	35.2%	35.1%	30% - 60%
Temperature	64.1°F	62.8°F	68°F - 74°F
Carbon Monoxide	0.6 ppm	7.2 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10M: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	>8.5	>8.5	6.5 - 8.5
Total Available Chlorine	0.95	0.09	> 0 mg/L; < 4 mg/L

Appendix 14: MAF NOVEMBER (N-01) Results, Sampled on 6 October 2023

Table 1N: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2N: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2N: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	11
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3N: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.77	0.68	10

Table 4N: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<4.18	<4.47	30

Table 5N: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6N: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.00048	<0.0005	0.0005
PCB-1221	<0.00048	<0.0005	0.0005
PCB-1232	<0.00048	<0.0005	0.0005
PCB-1242	<0.00048	<0.0005	0.0005
PCB-1248	<0.00048	<0.0005	0.0005
PCB-1254	<0.00048	<0.0005	0.0005
PCB-1260	<0.00048	<0.0005	0.0005
Total PCBs	<0.00048	<0.0005	0.0005

Table 7N: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.0002	<0.00021	N/A
4,4'-DDE	<0.0002	<0.00021	N/A
Acenaphthene	<0.0001	<0.00011	N/A
Acenaphthylene	<0.0001	<0.00011	N/A
Alachlor	<0.0002	<0.00021	0.002
Aldrin	<0.0002	<0.00021	N/A
Anthracene	<0.0002	<0.00021	N/A
Atrazine	<0.0002	<0.00021	0.003
Benzo[a]anthracene	<0.0001	<0.00011	0.0001
Benzo[a]pyrene	<0.0001	<0.00011	0.0002
Benzo[b]fluoranthene	<0.0001	<0.00011	0.0002
Benzo[g,h,i]perylene	<0.0001	<0.00011	N/A
Benzo[k]fluoranthene	<0.0001	<0.00011	0.0002
Bis(2-Ethylhexyl)phthalate	<0.001	<0.0011	0.006
Butachlor	<0.0002	<0.00021	N/A
Butylbenzylphthalate	<0.001	<0.0011	N/A
Chrysene	<0.0001	<0.00011	0.0002
Di(2-ethylhexyl)adipate	<0.001	<0.0011	0.40
Dieldrin	<0.0002	<0.00021	N/A
Diethylphthalate	0.066	<0.0011	N/A
Dimethylphthalate	<0.001	<0.0011	N/A
Di-n-butylphthalate	<0.001	<0.0011	N/A
Endrin	<0.0002	<0.00021	0.002
EPTC	<0.0002	<0.00021	N/A
Fluoranthene	<0.0001	<0.00011	N/A
Fluorene	<0.0001	<0.00011	N/A
gamma-BHC (Lindane)	<0.0001	<0.00011	0.0002
Heptachlor	<0.0001	<0.00011	0.0004
Heptachlor Epoxide	<0.0001	<0.00011	0.0002
Hexachlorobenzene	<0.0001	<0.00011	0.001
Hexachlorocyclopentadiene	<0.0002	<0.00021	0.05
Indeno[1,2,3-cd]pyrene	<0.0001	<0.00011	0.0004
Methoxychlor	<0.0002	<0.00021	0.04
Metribuzin	<0.0002	<0.00021	N/A
Molinate	<0.0002	<0.00021	N/A
Naphthalene	<0.0002	<0.00021	N/A
Phenanthrene	<0.0001	<0.00011	N/A

Table 7N: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.0002	<0.00021	N/A
Pyrene	<0.0001	<0.00011	0.0002
Simazine	<0.0002	<0.00021	0.004
Terbacil	<0.00051	<0.00053	N/A
Trifluralin	<0.0002	<0.00021	N/A

Table 8N: Soil Sampling Results

Analyte	NW of MAF Near Air Intake Vent (mg/kg-dry)	SW of MAF Inside Fenceline (mg/kg-dry)	NW Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0295	<0.0293	<0.0264
Phorate	<0.0295	<0.0293	<0.0264
Parathion	<0.0295	<0.0293	<0.0264
Methamidophos	<0.0295	<0.0293	<0.0264
Malathion	<0.0295	<0.0293	<0.0264
Ethoprop	<0.0295	<0.0293	<0.0264
Dicrotophos	<0.0295	<0.0293	<0.0264
Diazinon	<0.0295	<0.0293	<0.0264
Chlorpyrifos	<0.0295	<0.0293	<0.0264
Terbufos	<0.0295	<0.0293	<0.0264
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 8N: Soil Sampling Results Cont.

Analyte	SW Corner Outside Fenceline (mg/kg-dry)	SE Corner Outside Fenceline (mg/kg-dry)	NE Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0290	<0.0315	<0.0263
Phorate	<0.0290	<0.0315	<0.0263
Parathion	<0.0290	<0.0315	<0.0263
Methamidophos	<0.0290	<0.0315	<0.0263
Malathion	<0.0290	<0.0315	<0.0263
Ethoprop	<0.0290	<0.0315	<0.0263
Dicrotophos	<0.0290	<0.0315	<0.0263
Diazinon	<0.0290	<0.0315	<0.0263
Chlorpyrifos	<0.0290	<0.0315	<0.0263
Terbufos	<0.0290	<0.0315	<0.0263
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 9N: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	512 ppm	855 ppm	<1000 ppm
Relative Humidity	37.2%	45.6%	30% - 60%
Temperature	69°F	67.1°F	68°F - 74°F
Carbon Monoxide	0 ppm	2.5 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10N: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	>8.5	>8.5	6.5 - 8.5
Total Available Chlorine	0.86	0.03	> 0 mg/L; < 4 mg/L

Appendix 15: MAF OSCAR (O-01) Results, Sampled on 6 October 2023

Table 1O: Air Sampling Results – Organophosphates

Analyte	LCC (8hr) Result (mg/m^3)	Topside (8hr) Result (mg/m^3)	LCC (2hr) Result (mg/m^3)	Topside (2hr) Result (mg/m^3)
Chloropyrifos (Dursban)	<0.0026	<0.0026	<0.010	<0.010
Diazinon	<0.0026	<0.0026	<0.010	<0.010
Dicrotophos	<0.0026	<0.0026	<0.010	<0.010
Ethoprophos (Mocap)	<0.0026	<0.0026	<0.010	<0.010
Malathion	<0.0026	<0.0026	<0.010	<0.010
Methamidophos	<0.0026	<0.0026	<0.010	<0.010
Methyl Parathion	<0.0026	<0.0026	<0.010	<0.010
Parathion (Parathion Ethyl)	<0.0026	<0.0026	<0.010	<0.010
Phorate	<0.0026	<0.0026	<0.010	<0.010
Terbufos	<0.0026	<0.0026	<0.010	<0.010

Table 2O: Air Sampling Results – VOCs

Analyte	LCC Result ($\mu g/m^3$)	Topside Result ($\mu g/m^3$)
1,1,1,2-Tetrachloroethane	<10	<10
1,1,1-Trichloroethane	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10
1,1,2-Trichloroethane	<10	<10
1,1-Dichloroethane	<10	<10
1,1-Dichloroethylene	<10	<10
1,1-Dichloropropylene	<10	<10
1,2,3-Trichlorobenzene	<10	<10
1,2,3-Trichloropropane	<10	<10
1,2,4-Trichlorobenzene	<10	<10
1,2,4-Trimethylbenzene	<10	<10
1,2-Dibromo-3-chloropropane (DBCP)	<10	<10
Ethylene Dibromide	<10	<10
1,2-Dichlorobenzene	<10	<10

Table 2O: Air Sampling Results – VOCs Cont.

Analyte	LCC Result (µg/m^3)	Topside Result (µg/m^3)
1,2-Dichloroethane	<10	<10
1,2-Dichloropropane	<10	<10
1,3,5-Trimethylbenzene	<10	<10
1,3-Dichlorobenzene	<10	<10
1,3-Dichloropropane	<10	<10
1,4-Dichlorobenzene	<10	<10
2-Chlorotoluene	<10	<10
4-chlorotoluene	<10	<10
Benzene	<10	<10
Bromobenzene	<10	<10
Bromochloromethane	<10	<10
Bromodichloromethane	<10	<10
Bromoform	<10	<10
Carbon Tetrachloride	<10	<10
Chlorobenzene	<10	<10
Chloroform	<10	<10
cis-1,2-Dichloroethylene	<10	<10
cis-1,3-Dichloropropene	<10	<10
Dibromochloromethane	<10	<10
Ethylbenzene	<10	<10
Hexachlorobutadiene	<10	<10
Isopropylbenzene	<10	<10
Methylene Chloride(Dichloromethane)	<10	<10
p+m-Xylene	<10	<10
Naphthalene	<10	<10
n-Butylbenzene	<10	<10
n-Propylbenzene	<10	<10
o-Xylene	<10	<10
p-isopropyltoluene	<10	<10
sec-butylbenzene	<10	<10
Styrene	<10	<10
tert-butylbenzene	<10	<10
Tetrachloroethylene	<10	<10
Toluene	<10	<10
trans-1,2-Dichloroethylene	<10	<10
trans-1,3-Dichloropropene	<10	<10
Trichloroethylene	<10	<10

Table 3O: Water Sampling Results – Nitrate/Nitrite

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Nitrate/Nitrite (Total)	0.68	0.64	10

Table 4O: Water Sampling Results – Dioxins

Analyte	Topside Result (pg/L)	LCC Result (pg/L)	Maximum Containment Level (pg/L)
2-3-7-8-Tetrachlorodibenzo-p-dioxin	<3.50	<4.73	30

Table 5O: Water Sampling Results – Diquat/Paraquat

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Diquat	<0.002	<0.002	0.02
Paraquat	<0.002	<0.002	N/A

Table 6O: Water Sampling Results – PCBs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
PCB-1016	<0.0005	<0.00048	0.0005
PCB-1221	<0.0005	<0.00048	0.0005
PCB-1232	<0.0005	<0.00048	0.0005
PCB-1242	<0.0005	<0.00048	0.0005
PCB-1248	<0.0005	<0.00048	0.0005
PCB-1254	<0.0005	<0.00048	0.0005
PCB-1260	<0.0005	<0.00048	0.0005
Total PCBs	<0.0005	<0.00048	0.0005

Table 7O: Water Sampling Results – Pesticides/SVOCs

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
2-Methylnapthalene	<0.0002	<0.00022	N/A
4,4'-DDE	<0.0002	<0.00022	N/A
Acenaphthene	<0.000098	<0.00011	N/A
Acenaphthylene	<0.000098	<0.00011	N/A
Alachlor	<0.0002	<0.00022	0.002
Aldrin	<0.0002	<0.00022	N/A
Anthracene	<0.0002	<0.00022	N/A
Atrazine	<0.0002	<0.00022	0.003
Benzo[a]anthracene	<0.000098	<0.00011	0.0001
Benzo[a]pyrene	<0.000098	<0.00011	0.0002
Benzo[b]fluoranthene	<0.000098	<0.00011	0.0002
Benzo[g,h,i]perylene	<0.000098	<0.00011	N/A
Benzo[k]fluoranthene	<0.000098	<0.00011	0.0002
Bis(2-Ethylhexyl)phthalate	<0.00098	<0.0011	0.006
Butachlor	<0.0002	<0.00022	N/A
Butylbenzylphthalate	<0.00098	<0.0011	N/A
Chrysene	<0.000098	<0.00011	0.0002
Di(2-ethylhexyl)adipate	<0.00098	<0.0011	0.40
Dieldrin	<0.0002	<0.00022	N/A
Diethylphthalate	<0.00098	<0.0011	N/A
Dimethylphthalate	<0.00098	<0.0011	N/A
Di-n-butylphthalate	<0.00098	<0.0011	N/A
Endrin	<0.0002	<0.00022	0.002
EPTC	<0.0002	<0.00022	N/A
Fluoranthene	<0.000098	<0.00011	N/A
Fluorene	<0.000098	<0.00011	N/A
gamma-BHC (Lindane)	<0.000098	<0.00011	0.0002
Heptachlor	<0.000098	<0.00011	0.0004
Heptachlor Epoxide	<0.000098	<0.00011	0.0002
Hexachlorobenzene	<0.000098	<0.00011	0.001
Hexachlorocyclopentadiene	<0.0002	<0.00022	0.05
Indeno[1,2,3-cd]pyrene	<0.000098	<0.00011	0.0004
Methoxychlor	<0.0002	<0.00022	0.04
Metribuzin	<0.0002	<0.00022	N/A
Molinate	<0.0002	<0.00022	N/A
Naphthalene	<0.0002	<0.00022	N/A
Phenanthrene	<0.000098	<0.00011	N/A

Table 7O: Water Sampling Results – Pesticides/SVOCs Cont.

Analyte	Topside Result (mg/L)	LCC Result (mg/L)	Maximum Containment Level (mg/L)
Propachlor	<0.0002	<0.00022	N/A
Pyrene	<0.000098	<0.00011	0.0002
Simazine	<0.0002	<0.00022	0.004
Terbacil	<0.00049	<0.00054	N/A
Trifluralin	<0.0002	<0.00022	N/A

Table 8O: Soil Sampling Results

Analyte	NE of MAF Near Air Intake Vent (mg/kg-dry)	NE of MAF Behind Garage (mg/kg-dry)	East Corner Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0286	<0.0276	<0.0321
Phorate	<0.0286	<0.0276	<0.0321
Parathion	<0.0286	<0.0276	<0.0321
Methamidophos	<0.0286	<0.0276	<0.0321
Malathion	<0.0286	<0.0276	<0.0321
Ethoprop	<0.0286	<0.0276	<0.0321
Dicrotophos	<0.0286	<0.0276	<0.0321
Diazinon	<0.0286	<0.0276	<0.0321
Chlorpyrifos	<0.0286	<0.0276	<0.0321
Terbufos	<0.0286	<0.0276	<0.0321
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 8O: Soil Sampling Results Cont.

Analyte	North of MAF Outside Fenceline (mg/kg-dry)	West of MAF Outside Fenceline (mg/kg-dry)	South of MAF Outside Fenceline (mg/kg-dry)
Methyl Parathion	<0.0329	<0.0287	<0.0286
Phorate	<0.0329	<0.0287	<0.0286
Parathion	<0.0329	<0.0287	<0.0286
Methamidophos	<0.0329	<0.0287	<0.0286
Malathion	<0.0329	<0.0287	<0.0286
Ethoprop	<0.0329	<0.0287	<0.0286
Dicrotophos	<0.0329	<0.0287	<0.0286
Diazinon	<0.0329	<0.0287	<0.0286
Chlorpyrifos	<0.0329	<0.0287	<0.0286
Terbufos	<0.0329	<0.0287	<0.0286
Practical Quantification Limit differed from MAFs Alpha-India due to laboratory equipment maintenance.			

Table 9O: Air Direct Reading Values

Analyte	Topside Measured Value	LCC Measure Value	Recommended Range
Carbon Dioxide	512 ppm	648 ppm	<1000 ppm
Relative Humidity	35.1%	31.7%	30% - 60%
Temperature	70.8°F	69.2°F	68°F - 74°F
Carbon Monoxide	0.7 ppm	4 ppm	<25 ppm (8-hr TWA)
Ozone	0 ppm	0 ppm	<0.1 ppm (8-hr TWA)

Table 10O: Water Direct Reading Values

Analyte	Topside Measured Value	LCC Measured Value	Recommended Range
pH	>8.5	>8.5	6.5 - 8.5
Total Available Chlorine	>4.0	1.09	> 0 mg/L; < 4 mg/L

Appendix 16: Trainer 1 Results, Sampled on 4 October 2023

Table T1: PCB Swipe Sampling

Location	Analyte	Result (µg/100 cm^2)	Standard (40 CFR Part 761) (µg/100 cm^2)
Battery Charger Access – Surface	Total PCBs	Not Detected	<10
Battery Charger Access – Underside	Total PCBs	Not Detected	<10
Right Console Keyboard Above T1/T2/T3	Total PCBs	Not Detected	<10
Right Console Display Screen	Total PCBs	Not Detected	<10
Left Console Keyboard Above T1/T2/T3	Total PCBs	Not Detected	<10
Left Console Display Screen	Total PCBs	Not Detected	<10
Wing 3 LCPA Panel - Surface	Total PCBs	Not Detected	<10
Wing 3 LCPA Panel - Underside	Total PCBs	Not Detected	<10
Electrical Equipment Cabinet	Total PCBs	Not Detected	<10
Circuit Breaker Unit Ref 364	Total PCBs	Not Detected	<10
MPT Exit Door Inside	Total PCBs	Not Detected	<10
MPT Exit Door Blast Door Pump	Total PCBs	Not Detected	<10
MPT Exit Door Outside Handle	Total PCBs	Not Detected	<10
NPT CAB Power Distribution Box	Total PCBs	Not Detected	<10
NPT CAB Instructor Power Distribution	Total PCBs	Not Detected	<10
NPT CAB Instructor Audio Controls	Total PCBs	Not Detected	<10

Table T1: Air Sampling Results – PCBs

Analyte	Result (mg/m^3)
Aroclor 1016	<0.0021
Aroclor 1221	<0.0021
Aroclor 1232	<0.0021
Aroclor 1242	<0.0021
Aroclor 1248	<0.0021
Aroclor 1254	<0.0021
Aroclor 1260	<0.0021

Appendix 17: Trainer 2 Results, Sampled on 4 October 2023

Table T2: PCB Swipe Sampling

Location	Analyte	Result (µg/100 cm^2)	Standard (40 CFR Part 761) (µg/100 cm^2)
Battery Charger Access – Surface	Total PCBs	Not Detected	<10
Battery Charger Access – Underside	Total PCBs	Not Detected	<10
Right Console Keyboard Above T1/T2/T3	Total PCBs	Not Detected	<10
Right Console Display Screen	Total PCBs	Not Detected	<10
Left Console Keyboard Above T1/T2/T3	Total PCBs	Not Detected	<10
Left Console Display Screen	Total PCBs	Not Detected	<10
Wing 3 LCPA Panel - Surface	Total PCBs	Not Detected	<10
Wing 3 LCPA Panel - Underside	Total PCBs	Not Detected	<10
Electrical Equipment Cabinet	Total PCBs	Not Detected	<10
Circuit Breaker Unit Ref 364	Total PCBs	Not Detected	<10
MPT Exit Door Inside	Total PCBs	Not Detected	<10
MPT Exit Door Blast Door Pump	Total PCBs	Not Detected	<10
MPT Exit Door Outside Handle	Total PCBs	Not Detected	<10
NPT CAB Power Distribution Box	Total PCBs	Not Detected	<10
NPT CAB Instructor Power Distribution	Total PCBs	Not Detected	<10
NPT CAB Instructor Audio Controls	Total PCBs	Not Detected	<10

Table T2: Air Sampling Results – PCBs

Analyte	Result (mg/m^3)
Aroclor 1016	<0.0021
Aroclor 1221	<0.0021
Aroclor 1232	<0.0021
Aroclor 1242	<0.0021
Aroclor 1248	<0.0021
Aroclor 1254	<0.0021
Aroclor 1260	<0.0021