Appendix E

Environmental Compliance Assessment

Final

Environmental Compliance Assessment

Missoula International Airport

Prepared for

Missoula County Airport Authority

MARCH 2008

CH2MHILL

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Environmental Compliance Assessment

Introduction

The Missoula International Airport (MSO) is currently preparing a Master Plan Update (MPU) being undertaken by the Missoula County Airport Authority (MCAA). The purpose of a MPU is to analyze the need for improvements and to recommend improvement projects to meet the needs within the specified 20-year outlook. In addition to the typical components of a MPU, including an inventory chapter, a 20-year aviation forecast, an alternatives analysis and an Airport Layout Plan (ALP), components were incorporated to supplement the comprehensive planning document, including an Environmental Compliance Assessment.

The purpose for this Environmental Compliance Assessment is to baseline environmental compliance with state and federal permits and regulations including the Montana Pollutant Discharge Elimination System Stormwater Discharge Permit, the Missoula International Airport Stormwater Pollution Prevention Plan, the United States Environmental Protection Agency (U.S. EPA) Code of Federal Regulations (CFR 40) for SPCC requirements, air quality requirements (40 CFR Part 61.145), and also selected Occupational Safety Health Administration (OSHA 29 CFR 1910.1001) requirements. In addition, this Environmental Compliance Assessment was also conducted to identify corrective measures, and other Best Management Practices (BMPs) that will promote Airport-wide education and awareness of environmental compliance regulations and requirements.

The results of the Environmental Compliance Assessment will be used by the Airport to evaluate the effectiveness of existing environmental management systems that address *past* contamination, compliance with *present* environmental regulations, and environmental planning for *future* actions. The Assessment is a snapshot in time, and any changes to operations made after the investigation alters the findings and recommendations. CH2M HILL does not guarantee that all environmental issues were identified during the Assessment; thus there is no guarantee that all compliance issues were baselined and assessed.

Methodology

The Assessment included a document review, an inspection of physical facilities, and operations personnel interviews. The documents that were reviewed included available environmental permits, plans, records, and reports including the Airport's July, 2007 Spill Prevention Control and Countermeasures (SPCC) Plan, Storm Water Pollution Prevention Plan, State of Montana stormwater discharge permit, and stormwater outfall discharge monitoring reports.

Following a review of available documents and reports, CH2M HILL conducted inspections of all physical facilities and infrastructure at the Airport including:

- Missoula International Airport Operations - Airport buildings including the passenger terminal, aircraft hangars, maintenance and storage hangars, deicing storage and other chemical storage facilities, ARFF, fuel storage, outdoor storage areas, stormwater outfalls, rental car operations, and the gas station.
- U.S. Forest Service - sewage lagoon
- Northstar Aviation – hangar and fuel farm
- Neptune Air Express – manufacturing hangar, maintenance buildings, and storage buildings
- MinuteMan Jet Center Hangar – mechanic building, aircraft hangar, maintenance buildings, storage and fuel farm
- Homestead Helicopters – hangar
- Life Flight (Metro Aviation) - hangar
- Washington Group – hangar

Summary of Findings

In general, the findings were minor in nature and included:

- **Non-compliance with the Airport's SWPPP** regarding training programs, authorizing reports, and preventative measures to control runoff.
- **Non-compliance with the Airport's SPCC Plan** regarding secondary containment, record keeping for training and inspections, and location specifications for mobile refuelers.
- **Hazardous Waste Management** regarding disposal of aerosol cans, waste characterization for material from parts cleaners and paint booth fillers, and universal waste disposal from spent electric light bulbs, batteries or canceled pesticides.
- Miscellaneous issues regarding **Emergency Response** hazardous waste reporting, **container labeling** and **asbestos management**.

A complete list of the positive and non-compliance findings are presented following this section. The Findings Report is organized by listing the environmental area where an issue is categorized (storm water, hazardous waste, etc.) a listing of issues that were investigated relating to that category, the regulatory reference for the issue, proposed action to bring the issue from non-compliance to compliance and finally a possible root cause, which gives an explanation of why the issue may have existed in the first place.

Appendix A provides photo documentation examples of the positive and non-compliance findings during the Airport-wide inspection. Also, various examples of proposed actions to bring non-compliance areas to compliance are provided.

Findings Report

1.0 Positives

The Environmental Compliance Assessment team noted these exceptionally positive areas:

- Clearly demonstrated commitment by all MSO Airport personnel, including tenants to "do the right thing."
- Willingness to consider different options to improve environmental performance at all locations at the Airport.
- Excellent spill prevention at the mobile fuel stations at the MSO maintenance building and near the rental car wash station.
- Excellent response to periodic COD exceedences with the planned construction of the de-icing pad.

2.0 Storm Water

The following findings relate to compliance with the Airport's Stormwater Pollution Prevention Plan and Montana Pollutant Discharge Elimination System, Stormwater Discharge Permit MTR 000295.

2.1 Training Program

The Stormwater Pollution Prevention Plan (SWPPP) specifies that a training program be implemented to inform personnel of their responsibilities and goals of the plan. The training is intended to include good housekeeping, spill prevention and response, materials management, visual inspections, and recordkeeping and reporting. There is no documentation that the training exists, nor are there records of inspections to ensure Best Management Practices (BMP) are implemented as outlined in the SWPPP. Also, not all of the tenants are included in the SWPP Plan.

Reference: Montana Pollutant Discharge Elimination System, Stormwater Discharge Permit MTR 000295, dated October 31, 2006 and Section 4.3 "Employee Training" SWPPP - Missoula International Airport, dated September 2006.

Proposed Action: Train airport personnel in accordance with the SWPP to ensure BMPs are implemented. Maintain records of training sign-in sheets or attendance logs. As inspections are completed, the SWPP Plan recommends that the records be analyzed to provide improved BMPs to prevent future spills and thus reduce or eliminate potential for stormwater pollutant discharges. Revise plan to include all tenants and their applicable BMPs.

Possible Root Cause(s): Training Plans Not Prepared

2.2 Discharge Monitoring Report

The semi-annual storm water Discharge Monitoring Reports (DMR) are signed by the Assistant Airport Director and sent to the state. Only the facility owner or operator, officer, or a designated person is authorized to sign a DMR. A letter delegating authority to someone other than the facility owner is not in the file.

Reference: Montana Pollutant Discharge Elimination System, Storm Water Discharge Permit MTR 000295, dated October 31, 2006 and SWPPP - Missoula International Airport, dated September 2006.

Proposed Action: The Airport Director must sign the DMRs or provide written authorization to sign the DMRs to other appropriate MSO personnel. This letter or memo should be kept in the file.

Possible Root Cause(s): Regulations Not Understood

2.3 Neptune Engine Test Stand

The engine test stand operation at Neptune results in generation of used oil, some of which may end up in nearby storm water outfall # 15. Oil was present on the ground and pavement around the engine test area. During engine testing, some oil is discharged into the air via the engine exhaust, or blown into the air by the prop wash. The oil that is exhausted or blown from the engine is deposited onto the gravel behind the engine, and on building walls. An underground oil/water separator is installed near the engine test stand to treat runoff and reduce oil impacts on storm water. However, there is a potential that not all oily run-off is captured and adequately treated by the oil/water separator.

Neptune indicated that a "barrier" has been installed under the gravel area to prevent subsurface soil contamination; this product was also alternatively described as a "stress absorbing fabric" incapable of providing a true impermeable barrier. Neptune also applies a surface washing chemical Petro-Green to promote biological degradation of the deposited petroleum. These efforts to control oily runoff from the engine test pad are commendable, including installation of the oil water separator, however, the operation is not in compliance with the regulatory intent of the general permit (Part IV.A) "to remove pollutants contained in storm water runoff" and the SWPPP, "Preventative Maintenance Program" (Section 3.4) requiring that operations be "kept clean and in neat order to reduce the possibility of storm water runoff contamination." Furthermore, the operation also presents potential future environmental contaminant risk and regulatory action due to the accumulated contamination of oil in the gravel.

Reference: Montana Pollutant Discharge Elimination System, Storm water Discharge Permit MTR 000295, dated October 31, 2006 and SWPPP - Missoula International Airport, dated September 2006.

Proposed Action: Re-evaluate the test stand operation and revise procedures and engineering controls with the goal "to remove pollutants contained in storm water runoff". The engineering controls needs to consider a design modification to capture airborne contaminants and eliminate deposition on the soil. Evaluate the effectiveness of the existing storm water run-off design to improve flow off the pad to the oil water separator. Design and implement engineering controls to eliminate contamination of gravel surrounding the test pad.

Possible Root Cause(s): Inadequate Engineering or Physical Controls

3.0 Spill Prevention Control and Countermeasures (SPCC)

The following findings relate to compliance with the United States Environmental Protection Agency (U.S. EPA) Code of Federal Regulations (CFR 40) for Spill Prevention Control and Countermeasures.

3.1 Secondary Containment

Numerous 55-gallon drums and small storage tanks were observed inside and outside of buildings, on pallets and on the ground. Those outside did not have secondary containment. It was difficult to determine if those inside had adequate secondary containment provided by the building itself. These containers held new oil, used oil, and Jet A fuel and other petroleum products that has been sumped from trucks and tanks and is awaiting re-use or disposal. The SPCC rules require secondary containment for these bulk storage containers. Containment can be a building, storage area, or sized containment structure. The absence of secondary containment for small bulk storage containers was noted in particular inside and outside of the Minuteman maintenance building, in the Airlines equipment storage areas, and in an area between the Minuteman and Aerotronics storage buildings.

Reference: 40 CFR Part 112.8(c)(2), and 112.7(c)

Proposed Action: Review all bulk storage containers 55-gallons and greater and evaluate appropriate methods for providing secondary containment. Determine if some of the storage areas can be consolidated, or eliminated. Ensure that sized secondary containment is provided for bulk storage containers. For containers that must be stored outside, consider use of methods to prevent stormwater contact.

Possible Root Cause(s): Regulations Not Understood

3.2 SPCC Records and Inspection

The current airport Spill Prevention Control and Countermeasures (SPCC) Plan requires that tenants provide training, perform inspections and keep records. Records were not available to confirm that annual awareness training was provided to oil-handling personnel, and that new hires that handle oil received training within two weeks of starting work. Records were not available to document inspections prior to draining accumulated liquids from secondary containment. Inspection forms included in the plan are not used by the tenants. The form used for secondary containment inspections should include a description of the floor and walls to ensure that they are free of cracks or defects that would allow oil to escape from the containment structure. The current plan does not reflect the installation and operation of oil/water separators that discharge to storm drains.

Reference: Missoula International Airport SPCC Plan, July, 2007, Training - 4.4.4.5; Records; Inspection Forms - Appendices A, C, and D; 40 CFR 112.7(e).

Proposed Action: Train the Missoula International Airport (MSO) staff and tenants on the requirements of the current plan. After the plan is revised, train the MSO

staff and tenant personnel on the new requirements.

Possible Root Cause(s): Plans or Procedures Not Implemented

3.3 SPCC Technical Requirements

An SPCC plan was prepared in July 2007 to address petroleum handling operations at Missoula International Airport (MSO). However, the SPCC plan does not meet some technical requirements required by the regulations. These include the lack of secondary containment drainage procedures and logging of results, the lack of specific tank integrity testing (i.e., API test methods), the lack of level monitoring and inspections for 55-gallon and other small storage containers, and the lack of specific volume calculations for the sized secondary containment structures. Further, the plan does not show used oil storage locations for numerous containers inside and outside of buildings or describe containment and spill prevention provisions for these bulk storage containers. Spill reporting obligations for Federal reporting are not correctly defined in the plan; for example, the term "immediate" is a literal definition, and is not 2 hours as indicated by the plan. Inspection forms in Appendices C3 and C4 are for construction sites, but construction activities are not described in the narrative portion of the plan. Appendix D2 is missing from the plan.

Reference: 40 CFR Part: 112.6(c)(4), 112.8(b) & (c); Montana Spill Reporting Policy, 5/07.

Proposed Action: Revise the SPCC plan to include each area that contains bulk storage containers. Obtain input from each tenant for inclusion into the plan. Provide awareness training and copies of the plan to each operator and tenants at MSO when final. Include reporting requirements for notification of a release of oil to surface waters and procedures for reporting to the National Response Center. Notification of spills to navigable waters is the responsibility of the owner, not the MTDEQ.

Possible Root Cause(s): Regulations Not Understood

3.4 Mobile Refueler Location

When not empty, mobile refuelers are subject to the general secondary containment requirements in the SPCC regulations. The current SPCC plan indicates that refuelers and mobile tanks will be staged in 2 locations; one near the Minuteman Ops Center and one outside the Neptune hanger. Other mobile refuelers were observed throughout the facility in areas that are not designated as areas that would prevent an impact to surface waters in the event of a spill. Specific provisions are required to be implemented to prevent discharged of petroleum products from reaching navigable water courses.

Reference: 40 CFR 112.7(c)(11). Federal Register / Vol. 71, No. 247 / Tuesday, December 26, 2006 (page 77284).

Proposed Action: Review the storage and staging areas for non-empty mobile refuelers and mobile storage tanks at the airport. Store non-empty mobile containers

within designated areas, and/or revise the SPCC plan as necessary. Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge that may be harmful.

The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. At a minimum, you must use one of the following prevention systems or its equivalent:

- Dikes, berms, or retaining walls sufficiently impervious to contain oil;
- Curbing;
- Culverting, gutters, or other drainage systems;
- Weirs, booms, or other barriers;
- Spill diversion ponds;
- Retention ponds; or
- Sorbent materials.

It will not always be necessary to install containment structures to comply with the regulations, in some situations it will be acceptable to have a spill kit on site and perform regular inspections of the equipment to make sure it is in good condition and not leaking.

Possible Root Cause(s): Regulations Not Understood

4.0 Hazardous Waste

The following findings relate to compliance with the United States Environmental Protection Agency (U.S. EPA) Code of Federal Regulations (CFR 40) for hazardous waste management.

4.1 Aerosol Can Disposal

Aerosol cans are considered hazardous waste if they are disposed of while still pressurized. Depending on the contents, they also may be a hazardous waste if they contain more than a trace of the original contents when disposed. Aerosol cans are extensively used in the airport facilities and are generally disposed in dumpsters after use. Aerosol cans should be properly managed prior to disposal in dumpsters.

Reference: 40 CFR 261.7

Proposed Action: Manage aerosol cans by puncturing after use and collecting residual contents into a small container. The spent can then be recycled for scrap or disposed. Commercial puncturing devices are available for this purpose. The collected drained material is typically managed as a hazardous waste.

Possible Root Cause(s): Regulations Not Understood

4.2 Waste Characterization

Waste characterization has not been conducted to determine if certain waste streams are hazardous. For example, skimmer sludge from two aqueous parts washers in the Neptune Main Hangar and Engine shop, paint booth filters, and a 5-gallon container used to consolidate paint waste have not been characterized. Safety Kleen provides solvent pickup and replacement service. At the time of the assessment, records were not available to demonstrate whether or not the solvent is a hazardous waste.

Reference: 40 CFR 262.11

Proposed Action: Perform hazardous waste characterization to determine if the waste streams need to be managed as hazardous waste in accordance with Administrative Rules of Montana (ARM). Inventory all waste streams and determine whether wastes are hazardous using knowledge of the constituents of the waste (from MSDSs); whether it is listed in 40 CFR 261; laboratory analysis; and/or knowledge of processes and/or materials used. Once the wastes are characterized, the hazardous waste quantities need to be documented to formally determine generator status (Conditionally Exempt Small Quantity Generator, Small Quantity Generator, or Generator). CH2M HILL has contacted Safety Kleen to obtain waste generation data on the Airport and tenants; these records will be used to ascertain hazardous waste generation status.

Possible Root Cause(s): Regulations Not Understood

4.3 Universal Waste Disposal

Universal wastes (spent electric tubes or bulbs containing heavy metals, spent batteries other than lead acid, suspended or cancelled pesticides and mercury containing wastes) are not properly managed to comply with federal and state regulatory requirements. In general, waste lamps are disposed in the trash, and accumulation areas for batteries or other materials that may become universal wastes are not properly accumulated and stored in closed containers. Also there are no records or systems in place to prove that universal wastes are not stored on airport property greater than one year.

Reference: 40 CFR 273.14(a) and 273.15

Proposed Action: Establish a program to collect, store, and mark universal wastes to ensure that they are properly managed or disposed. The airport has one year from the date on the container to properly dispose of universal wastes.

Possible Root Cause(s): Regulations Not Understood

5.0 Emergency Response, Labeling and Asbestos Management

The following findings relate to compliance with the United States Environmental Protection Agency (U.S. EPA) Code of Federal Regulations (CFR 40) for emergency response, used oil container labeling, asbestos management and an asbestos labeling requirement under the Occupational Safety Health Administration regulations.

5.1 Tier II Reporting

An annual Tier II report listing hazardous substances stored on site above certain thresholds must be submitted to the local fire department and the Department of Homeland Security by March 1st of each year. Fuels, de-icing materials, and possibly paint are present at individual locations in quantities that exceed the storage thresholds. It could not be determined if the reports were submitted on a timely basis and listing the appropriate substances.

Reference: 40 CFR 370.20; 370.21

Proposed Action: Review Tier II reporting obligations and ensure proper reports are submitted on time.

Possible Root Cause(s): Inadequate Administrative Controls

5.2 Container Labeling

All containers used to store used oil must be kept in good condition and labeled. The label must read "Used Oil". The containers appeared to be in good condition. However, the used oil containers observed during the assessment were not labeled.

Reference: 40 CFR 279.22

Proposed Action: Label all used oil storage containers. Ensure that all airport personnel are made aware of this requirement as part of training activities.

Possible Root Cause(s): Regulations not understood

5.3 Asbestos Abatement

Asbestos abatement projects in the tower building were completed in 2003 and 2006. A 10-day notification form to the EPA or the State did not exist in the file for these projects. EPA requires submittal of a 10-day notice to the State or EPA prior to the commencement of renovation, removal and demolition activities.

Reference: 40 CFR Part 61.145

Proposed Action: The Airport or MSO staff should check with the abatement contractor to determine if notification was made. If available, obtain a copy of the notification from the contractor and maintain in the project files. Ensure that all future projects involving asbestos abatement include notification and that a complete

set of project files are obtained from any contractor performing asbestos work.

Possible Root Cause(s): Regulations not understood

5.4 Asbestos Management

Any structure or part of a structure that will be wrecked or demolished must provide a Notice of Demolition to the state and EPA prior to the wrecking or demolition even if no asbestos is present. Three T-hangers are scheduled to be demolished. MSO staff should ensure the contractor and airport management personnel involved in these types of actions are aware of the demolition notification.

An asbestos survey was prepared by Raytheon for the tower building in 1995. Since that time asbestos removal and abatement projects have been performed. The survey has not been updated to reflect the current status of asbestos abatement.

Reference: 40 CFR 61.145(a)(2)(i) (Demolition)

Proposed Action: 1). Review demolition notification requirements and communicate to appropriate personnel. 2). Update the Raytheon survey to show where asbestos removal has been completed.

Possible Root Cause(s): Regulations/Requirements not identified.

5.5 Asbestos Labeling

Asbestos warning labels are present on Asbestos Containing Material (ACM) in the boiler room and chiller areas in the Administration building. These labels are stickers that were hand labeled and indicated that the material is ACM. The labels do not meet the specific label requirements and do not contain the required warning language. Conformant warning labels must be attached to ACM and/or PACM (Presumed Asbestos Containing Material).

Reference: OSHA 29 CFR 1910.1001(j)(4)(i), and (ii)

Proposed Action: Review labeling requirements and relabeled asbestos containing materials as required.

Possible Root Cause(s): Regulations not understood

Appendix A

Photographs

Neptune Engine Test Stand: Re-evaluate the test stand operation and revise procedures and engineering controls with the goal "to remove pollutants contained in storm water runoff". Also, suggest possible re-design and implementation of engineering controls to eliminate contamination of gravel surrounding the test pad.

Neptune Engine Test Stand: Re-evaluate the test stand operation and revise procedures and engineering controls with the goal "to remove pollutants contained in storm water runoff". Also, suggest possible re-design and implementation of engineering controls to eliminate contamination of gravel surrounding the test pad.

Neptune Engine Test Stand: Stormwater runoff controls off the engine test pad do not appear to fully direct stormwater to the underground oil/water interceptor; some staining of soil was evident.

Minuteman Tank Farm: Inspection forms should include an item to check condition of secondary containment. Any potential breaches of tank farm secondary containment should be repaired.

Airport Wide: Methods need to be developed to prevent discharges from non-empty mobile tanks that may be harmful to the environment. Many options exist including use or combination of dikes, berms, or retaining walls sufficiently impervious to contain oil; curbing; culverting, gutters, or other drainage systems; weirs, booms, or other barriers; spill diversion ponds; retention ponds; or sorbent materials. It will not always be necessary to install containment structures to comply with the regulations, in some situations it will be acceptable to have a spill kit on site and perform regular inspections of the equipment to make sure it is in good condition and not leaking.

Airport Wide: Fluid leaks from equipment should be controlled and managed to prevent them from entering the storm drains. Equipment maintenance is always best, however, regular clean-up may have to be employed.

Airport Wide: Waste generation points should be characterized to ensure the proper disposal pathway is utilized. Sludge off the skimmer of an aqueous parts washer may contain heavy metals in concentrations that may require disposal of the product as hazardous waste. The volume of the waste, no matter how minimal, still requires proper management and disposal.

Airport Wide: Non-empty, stationary, non-mobile tanks and containers greater than or equal to 55 gallons require secondary containment. It is also highly recommended that tanks and containers stored outside be covered to prevent contact with stormwater.

Airport Wide: Construction of overhangs over hazardous chemicals and used product storage areas is an excellent way to prevent rainwater contact with product and waste and thus reduce harmful stormwater discharges.

Airport Wide: A commendable effort was undertaken to control drips and leaks from containers. Another more effective option would be to use pallets with built-in secondary containment.

Airport Wide: Paint waste, particularly from aerosol paint cans, should be managed has hazardous waste and disposed of by licensed transporters. Aerosol paint cans should be punctured, residual contents drained into a drum. The spent paint can then may be disposed of in the trash.

Airport Wide: Good management practice suggests that parts washer lids be kept closed to prevent cleaning product from evaporating. This will reduce pollutants into the air and reduce potential harmful worker exposure.

Airport Wide: Burnt out lights, particularly fluorescent bulbs and lights with heavy metals, should not be disposed of in dumpsters. They should be recycled and spent bulbs not stored on the facility for longer than 1 year.

Airport Wide: It is always a good practice to ensure dumpsters lids are closed and secure to prevent rainwater contact with solid waste materials. This should be implemented as a best management practice under the stormwater pollution prevention plan.