STATEMENT OF BASIS

PERMITTEE:	United States Department of the Air Force
FACILITY:	Cheyenne Mountain Air Force Station
PERMIT NO.:	CO-0034762
RESPONSIBLE OFFICIAL:	Jason Cook Deputy Director, 721st Civil Engineer division 721 MSG/CE2, Cheyenne Mountain AFS 719-474-3180 E-mail: Jason.Cook@CheyenneMountain.af.mil
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PERMIT TYPE	Federal Facility, Permit Renewal

This statement of basis is for the renewal of the NPDES permit for the U.S. Air Force's Cheyenne Mountain Air Force Station (CMAFS). The previous permit was issued in 2005 with an effective date of July 01, 2005, and an expiration date of June 30, 2010. The application for permit renewal was dated December 16, 2010. There have not been any significant changes since the previous permit was issued that affect the discharges from CMAFS. It should be noted that much of the material presented in the Background Information section of this statement of basis is from the previous statement of basis and is included for information purposes. Some wording changes have been made for purposes of clarification.

Background Information:

NOTE: The Confidential Business Information folder of the permit file contains a flow diagram titled "Water Collection and Elimination Schematic, Cheyenne Mountain AS, Colorado," which helps in understanding the sources of water and where the water goes.

The CMAFS is located on the slopes of Cheyenne Mountain on the southwest edge of the City of Colorado Springs. The CMAFS complex was initially constructed as the North American Aerospace Defense Command Center (NORAD). A portion of the complex is located underground in a series of tunnels and chambers that house a self-contained command center. The underground facilities include a drinking water reservoir, drinking water chlorination system, diesel powered electric generators, cooling towers, and reservoirs for industrial (cooling) water. Water used in the underground complex normally comes from internal springs and seepage into the reservoirs and there normally is more water than is needed. During some wet years the direct infiltration into the industrial reservoirs could exceed the demand for water.

The electricity for the underground complex normally is purchased from commercial sources. However, some of the diesel generators are kept on standby status and all are operated periodically to insure their operating capability, for certain practice alerts, and when electricity is not available from the commercial source(s). When the diesel generators are operated, the cooling water from the generators normally is routed in a closed loop system to heat exchangers and returned to the diesel generators for reuse. Cooling towers are used to cool the water in the heat exchangers. The water in the cooling tower system is treated with a proprietary system called "Electro Chemical Water Treatment" that is manufactured by Silver Bullet Corp.

According to the manufacturer's literature, a "monatomic generator produces both hydrogen peroxide and negatively charged oxygen atoms. The hydrogen peroxide controls bacteria while the monatomic oxygen bonds to calcium ions keeping them dissolved and preventing them from depositing." The treatment process includes filtering at least a portion of the flow, with the filter backwash going to waste.

If the cooling towers cannot be used, the industrial water reservoirs can be used for cooling reservoirs. When this occurs, the cooling water from the closed loop cooling system is routed to the industrial reservoirs and mixed with the water in the industrial reservoirs. At the same time, water from the industrial reservoirs is pumped into the closed loop cooling system to replace the water routed to the industrial reservoirs. The use of the industrial reservoirs for cooling purposes can occur in emergency situations; when it is necessary to do repairs, maintenance, equipment modifications, etc. that involve the cooling towers, etc.; and during training drills on how to use the industrial reservoirs as cooling reservoirs. According to the permittee no chemicals are presently used in the closed loop cooling system. However, there is the potential for metals to be corroded from the cooling system.

The various wastewaters and drainage from the underground complex at CMAFS are either routed to the sanitary sewer system at nearby Fort Carson via a buried pipeline or discharged under the provisions of an NPDES permit. The exception is that some untreated spring water can be routed to outside storage tanks and excess flow is discharged to an unnamed tributary of Fountain Creek. A permit has not been required for this discharge because it consists of uncontaminated spring water with no chemicals added. There is a memorandum of understanding (MOU) between CMAFS and Fort Carson concerning the routing of wastewater from CMAFS to Fort Carson.

Waters and wastewaters going to the pipeline to the Fort Carson sanitary sewer system include the sanitary wastewaters from the underground complex and cooling tower blowdown, cooling tower basin cleaning wastes, infiltration water from the diesel storage reservoir, overflow from the drinking water reservoir, overflow from the industrial water reservoirs, and water collected in certain floor drains in the underground complex. All of these, with the exception of the sanitary wastewater, are collected in the Main Tunnel Pit 52 and pumped directly to an oil/water separator, which is located outside the underground complex. The effluent from the oil/water separator goes to the pipeline to Fort Carson. The sanitary wastewaters are routed separately to the pipeline.

The previous permit authorized the discharge from the interior storm drainage system (ISDS) at the CMAFS. After the ISDS leaves the underground complex there is a valve where the flow can be routed to either the oil/water separator via the industrial sewer (and on to Fort Carson) or to the exterior storm drainage system, which discharges to an unnamed tributary to Fountain Creek. The valve is located in a valve box locate near Building P106, just outside the North Portal. The normal operating procedure is to route the flow of the ISDS to the exterior storm drainage system (and subsequently to surface waters) except when activities and/or conditions within the underground complex have the potential to significantly increase the concentration of pollutants in the ISDS. When that occurs, the flow is directed to the oil/water separator and on to Fort Carson.

The ISDS receives some of the excess spring flow, infiltration collected under Building 2000 (not currently done), excess water from the industrial reservoirs, and water from miscellaneous seeps that come out of the stone walls at various places and flow into the ISDS via grates located at numerous points in the complex. This water is relatively clean and can meet permit limitations without treatment. However, an additional source of water comes from the periodic hosing down of the interior rock walls and ceilings of the tunnels and chambers. They are hosed down for safety purposes to remove loose rock. Each area is washed down at approximately yearly intervals. A tank truck is used to transport the water and the water is applied with a hose at about normal household tap pressure. The runoff from the washing operations flows to the storm drains in the ISDS. During the washing operations the road surfaces are also hosed off. Normally a street sweeper is used to keep the interior roads clean. The water from the washing operations has the potential to contain significant quantities of suspended solids, etc. When the washing operations occur, the operating procedure is to direct the flow of the ISDS to the oil/water separator and on to Fort Carson.

Initially, the primary reason for discharging these waters directly instead of routing them to Fort Carson was to try to keep to a reasonable minimum the amount of "clean water" routed to the Fort Carson sanitary sewer system. Another factor involves water rights. It is this writer's understanding that the Air Force does not get as much credit for water returned when water from the underground complex is routed to Fort Carson as compared to the water being discharged directly to surface waters at CMAFS. Apparently, if too much water is routed to Fort Carson, it might be necessary for the Air Force to provide downstream flow augmentation to meet downstream water rights. An increased emphasis has been placed on complying with water rights since the Supreme Court ruling in favor of the State of Kansas with regards to the Colorado - Kansas Water Compact.

The physical layout of the ISDS and exterior storm drainage system presents some problems in terms of access for sampling and compliance points. The point where the ISDS enters the exterior storm drainage system is buried. The exterior storm drainage system discharges to the unnamed tributary part way down the slope on the east side of the parking lot at the North Portal. Access to that point is difficult during dry weather and would be dangerous during inclement weather and/or when there was snow on the ground. There would also be a problem when there is outside surface runoff entering the exterior storm drain, possibly changing the quality of the discharge from what came from the ISDS. **Partially for these reasons it was decided to have interior outfalls instead of having the outfall at the final point of discharge to the unnamed tributary**.

There is a floor grate in the main tunnel near the Diesel Maintenance blast door. Visual observations of the discharge can be made at that point and a flow meter and sampling tap have been installed in the pipe just prior to the floor grate. (Note: On about July 17, 2006, the existing flow meter was replaced with one that records the flow in increments of 100 gallons. Thus the flow readings are to the last 100 gallons recorded on the flow meter.) From the floor grate to the valve box outside Building P106 there is not an acceptable monitoring point. Most of the flow enters the ISDS prior to the floor grate. Between the floor grate and the valve box there are several floor grates where flow can enter the ISDS. However, the flow into these floor grates is

minimal except when cleaning operations, etc, are occurring, and the flow of the ISDS is then diverted to the oil/water separator and on to Fort Carson.

In the previous permit, a combination of numerical effluent limitations, the requirement to develop and implement a pollution prevention plan (PPP), the prohibition of discharging certain waste streams, and restrictions on the use of the industrial reservoirs for cooling purposes were used to regulate the discharge from the ISDS. Because of the complexity of the system and access problems for monitoring purposes, there was no external Outfall 001 in the permit, but there were three internal compliance points in the permit. Internal Outfall 001A is located at the grate in the ISDS in the main tunnel near the Diesel Maintenance blast door. It includes the grate and the flow meter and sampling tap in the ISDS just upstream of the grate. Internal Outfall 001B is the valve box located on the ISDS just to the north of Building P106, which is located outside the North Portal. At the valve box the flow of the ISDS is either routed to the oil/water separator or routed to the exterior storm drainage system. Internal Outfall 001C is the discharge from the middle reservoir of the industrial reservoirs. If water were to be drained from the industrial reservoirs to the ISDS, it would come from the middle industrial reservoir and be pumped into the ISDS.

The previous permit required that there be no discharge of sanitary wastes, cooling tower blowdown, wastes from the cleaning of cooling tower basins, water from Pit 48, water from Pit 52, and there shall be no discharge of water from the closed loop cooling system except as the result of the industrial reservoirs being used as cooling reservoirs. The reason for not discharging the sanitary wastes, the cooling tower blowdown, and the wastes from the cleaning of cooling tower basins is obvious. Waters from Pits 48 and 52 have the potential for significant concentrations of pollutants and since there is no treatment of these waters if routed to the ISDS and discharged, these waters should be routed through the oil/water separator and on to Fort Carson for further treatment. The prohibition on the discharge of water from the closed loop cooling system, except as the result of the industrial reservoirs being used as cooling reservoirs, was included to provide a control over where the water is discharged and being able to impose effluent limitations at that point. Water from the closed loop cooling system can be routed to Fort Carson along with the other wastewaters that go there.

In the previous permit the numerical effluent limitations on Internal Outfall 001A were 30 mg/L as a 30 day average and 45 mg/L as a 7-day average on BOD_5 and total suspended solids (TSS), a daily maximum limitation of 10 mg/L on total petroleum hydrocarbons (THP), a pH limitation of 6.5 - 9.0, and the requirement that there be no discharge of floating solids or foam nor shall there be a visible sheen. The limitations on BOD_5, TSS, and TPH were based on the State of Colorado's Regulations for Effluent Limitations. The State's regulations include a 10 mg/L limitation on oil and grease. Because the analytical test for oil and grease tends to give low results when the pollutants are petroleum products such as gasoline and diesel fuel, a 10 mg/L limitation on total petroleum hydrocarbons was used instead of the limitation on oil and grease. The limitation on pH was based on the water quality standards of the receiving waters and the fact that the water quality standards do not allow for a mixing zone for pH. The requirement that there is to be no discharge of floating solids or foam nor shall there be a visible sheen is based on regional policy and best professional judgement as provided for in Section 402(a)(1) of the Clean Water Act. The effluent limitations and monitoring requirements at

Internal Outfall 001A did not apply when the valve at Internal Outfall 001B was closed so that there is no discharge from the ISDS to the exterior storm drainage system.

For Internal Outfall 001B, the previous permit required that the valve be closed whenever any of the following conditions occur:

1. When there are "washing" operations (i.e., hosing down of the interior rock walls and ceilings of the tunnels and chambers) occurring within the underground portion of the complex;

2. When there are known operations within the underground portion of the complex that are known to have a reasonable likelihood of causing the effluent limitations at Internal Outfall 001A to be exceeded; and/or,

3. A spill is known to have occurred within the underground portion of the complex and there is a reasonable potential for pollutants from that spill to reach the ISDS.

For Internal Outfall 001C, the previous permit required that the industrial reservoirs not be used as cooling reservoirs except on as needed basis. This requirement was intended to minimize the discharge of water from the closed loop cooling system to the industrial reservoirs to the extent practical. The permit required that when the industrial reservoirs had been used as cooling reservoirs, water shall not be discharged from the industrial reservoirs to the ISDS when the valve at Internal Outfall 001B is open until a sample of the water could meet the following effluent limitations: total petroleum hydrocarbons 10 mg/L, total residual chlorine (TRC) 0.100 mg/L, pH 6.5 to 9.0, and the water could pass an acute whole effluent toxicity test based on an acute 48-hour static replacement toxicity test using *Ceriodaphnia dubia*. A grab sample was to be taken from either the middle reservoir of the industrial reservoirs or Internal Outfall 001C and used to demonstrate that the water from the middle reservoir could meet the above effluent limitations. It is this writer's understanding that there are no provisions for collecting a sample from the pipe that conveys water from the middle industrial reservoir to the ISDS, so samples must be collected from the middle reservoir. Since the previous permit was issued there has not been a discharge from Outfall 001C while the valve at Internal Outfall 001B was open, i.e., routing the flow of the ISDS to the external storm drainage system.

The previous permittee was also required to continue to implement a pollution prevention plan (PPP) with the primary objective of minimizing the entry of pollutants into the ISDS when the valve at Internal Outfall 001B is open.

In addition to the discharge from the ISDS to the exterior storm drainage system via Outfall 001A, the previous permit authorized discharges from the drain lines from the exhaust stacks that are part of the ventilation system for the underground complex at CMAFS. Exhaust gases from the generators, vapors from the cooling towers, stale air, etc., are collected and blown out through the exhaust stacks. There are two exhaust stacks, a "north stack" and a "south stack". Normally only one exhaust stack is used at a time, with the south stack used most of the time. The exhaust stacks are vertical and approximately 12 feet in diameter. The exhaust comes into the stack from the side near the base of the stack. At the base of each exhaust stack there is a

sump for collecting any water that may collect in that portion of the ventilation system. It is this writer's understanding that the temperatures in a stack when it is being used is approximately 160^0 F, so there should not be any condensation of water from the exhaust gases. However, water can collect in the sumps during heavy precipitation and possibly from groundwater infiltration. Each sump has an overflow drain line that slopes downward and outward, ending at the ground surface in a vertical concrete wall a few feet high. The end of the drain line from the north stack has become covered by loose rock that slid down the slope. The Air Force indicated that it is considering uncovering the end of the drain line, but at this time there are no definite plans to do so. The drain lines from the north stack and south stack were designated Outfall 002 and Outfall 003, respectively.

Actual discharges from the drain lines have not been observed. In order to get an idea of how much water could potentially be discharge from a drain line due to precipitation, this writer did calculations using data from the National Oceanic and Atmospheric Administration's (NOAA) Western U.S. Precipitation Frequency Maps (Atlas 2 published in 1973). For the area of the CMAFS, a 1 in 100 year, 6-hour precipitation event is approximately 3.6 inches. For an area 12 feet in diameter, that would give approximately 254 gallons of water, assuming there were no evaporation losses. If that water were discharged over the 6 hour period, the average flow rate would be about 0.7 gallon per minute (gpm). A 1 in 100 year, 24-hour precipitation event is about 5 inches, which would result in about 353 gallons and an average discharge rate of about 0.25 gpm over the 24 hours. It is not known if this water would reach waters of the U.S. as surface flow.

The previous permit did not contain numerical effluent limitations for the potential discharges from Outfalls 002 and 003. If there were to be a discharge to waters of the U.S., the discharge would most likely be due to heavy precipitation. Part 1.3.5 of the permit specified that there were no numerical effluent limitations for Outfalls 002 and 003. Instead, Part 1.4. of the permit required the permittee to modify the PPP (developed and implemented under the previous permit for the ISDS) to include provisions for minimizing the potential for discharging pollutants, via Outfalls 002 and 003, from the sumps located in the air stacks. The permit also required the permittee to continue to implement the provisions of the PPP that apply to the ISDS. The permit required that at least annually, Outfalls 002 and 003 and the immediate areas down gradient from them shall be inspected for signs of sediment, oil and grease, and/or other pollutants having been discharged from either outfall. To the extent practical, the inspections should be conducted within a week after a rainfall event of 1 inch or greater.

Self-Monitoring Data

The self-monitoring data for Outfall 001A submitted to EPA for the period of July 2005 through March 2010 was somewhat confusing in that the all of the discharge monitoring report (DMR) forms had the “No Discharge” box in the upper right corner checked, but attachments included with the DMRs had the self-monitoring data for that period. The attachments included a daily log showing when there was a direct discharge (“over the hill”) and when the flow was diverted to the oil/water separator and on to Fort Carson. The daily logs showed that there was a direct discharge 764 days of the1735 days during that period. Monitoring for flow, pH, TSS,

total petroleum hydrocarbons, and BOD_5 occurred for both direct discharges and flows diverted to the oil/water separator. The range of reported values are given below:

Parameter	Minimum	Maximum
pH, s.u.	7	8.3
Total Suspended Solids, mg/L	N/D	5
Total Petroleum Hydrocarbons, mg/L	N/D	N/D
Oil and Grease, visual	None	None
BOD_5, mg/L	N/D	15.6 a/
Total Flow/Month, gallons b/	52,500	803,200
Average Flow/Day for Month, gpd b/	1,694	25,910

a/ Value reported for month when there was only one day of direct discharge. Sample may have been taken on day when flow was diverted to oil/water separator. Only two values were above no detect (N/D) for the 57 month period. The other value above N/D was 3.8 mg/L.

b/ Flow values include flow discharged directly plus flow diverted to the oil/water separator.

There was no reported discharge from Outfall 001C, the industrial reservoir, during the 57 month period. Likewise, for Outfalls 002 and 003, it was reported that the inspections found no signs of contaminants being discharged.

The application for permit renewal had "Believed Absent" checked for all organics for Outfalls 001, 002, and 003 on Form 2C.

Receiving Waters

The discharge from Outfall 001 and the potential discharges from Outfalls 002 and 003 go to unnamed tributaries of Fountain Creek, which is a tributary of the Arkansas River. The discharge from Outfall 001 and the potential discharge from Outfall 002 go to an unnamed tributary that flows to the east for approximately two miles and crossing under State Highway 115, approximately 1/4 of a mile to the south of O'Connell Blvd, and onto the Fort Carson Military Reservation (FCMR). On the FCMR the unnamed tributary combines with other unnamed streams and drainageways to form one stream that flows to the southeast into Fountain Creek in Section 6, T16S, R68W near the City of Fountain. The potential discharge from Outfall 003 would go to one of the unnamed tributaries in Limekiln Valley. The drainage from Limekiln Valley flows east onto the FCMR and near Prussman Blvd. it combines with the previously mentioned drainageway that flows into Fountain Creek

Based on simple measurements on a map, this author estimates that it is at least 10 stream miles from the point of discharge from Outfall 001 to the confluence of the unnamed tributary with Fountain Creek. All but the last 1/4 to 1/2 mile of the receiving waters are in Stream Segment 4 of the Fountain Creek Basin for purposes of stream classifications by the State of Colorado. Streams and reservoirs in Segment 4 are classified for Class 2 Aquatic Life Warm,

Class E Recreation, and Agriculture and are designated use-protected. The assigned water quality standards include the following:

Physical and Biological	Inorganic, mg/L	Metals, ug/L	
D.O. = 5.0 mg/L pH = 6.5-9.0 E. Coli = 126/100 mL	CN = 0.2 mg/L NO_2 = 10 NO_3 = 100 mg/L B = 0.75 mg/L	As(ch) = 100(Trec) Be(ch) = 100(Trec) Cd(ch) = 10(Trec) CrIII(ch) = 100(Trec) CrV(ch) = 100(Trec)	Cu(ch) = 200(Trec) Pb(ch) = 100(Trec) Ni(ch) = 200(Trec) Se(ch) = 20(Trec) Zn(ch) = 2000(Trec)

Temporary modification type (i): NH_3(ac/ch)=TVS (old). Expiration date of 12/31/2012.
(ac) = acute; (ch) = chronic; (Trec) = Total recoverable TVS = Table Value Standard

The last 1/4 to 1/2 mile of the unnamed tributary is in Stream Segment 5 of the Fountain Creek Basin for purposes of stream classification. This stream segment is classified for Class 2 Aquatic Life Cold, Class N Recreation, and Agriculture and is undesignated. The assigned water quality standards include the following:

Physical and Biological	Inorganic, mg/L	Metals, ug/L	
D.O. = 5.0 mg/L pH = 6.5-9.0 E. Coli = 630/100 mL	NH_3(ac/ch)=TVS CL_2(ac)=0.019 CL_2(ch)=0.011 CN=0.005 S=0.002 B=0.75 NO_2 = 0.5	As(ch) = 100(Trec) As(ac) = 340 Cd(ac/ch) = TVS CrIII(ac/ch) = TVS CrV(ac/ch) =TVS Cu(ac/ch) = TVS Fe(ch)=1000(Trec)	Pb(ac/ch) = TVS Mn(ac/ch) = TVS Hg(ch) = 0.01(tot) Ni(ac/ch) = TVS Se(ac/ch) = TVS Ag(ac/ch) = TVS Zn(ac/ch) = TVS)

(ac) = acute; (ch) = chronic; (tot = total; (Trec) = Total recoverable
TVS = Table Value Standard

Fountain Creek at that point is in Stream Segment 2a and is classified for Class Recreation E, Class 2 Aquatic Life Warm, Water Supply, and Agriculture and is undesignated.

Water Quality Considerations and Antidegradation Review

Based on available information, it is anticipated that the discharges authorized by this permit will not cause a violation of water quality standards in Stream Segments 4, 5 and 2a of Fountain Creek if the conditions of the permit are met. Section 31.8(2) of the State of Colorado's *Basic Standards and Methodologies for Surface Water*, specifies that undesignated waters are subject to the antidegradation review provisions of section 31.8(3) of the regulations. Stream segments designated as use-protected are not subject to the provisions of the antidegradation review process. The antidegradation regulations were effective December 22, 2000. Since the discharge potentially could reach Stream Segments 5 and 2a of the Fountain Creek Basin (in that order) and since those stream segments are undesignated, the discharges are subject to the antidegradation review provisions of section 31.8(3). The first step of the screening process for the antidegradation review involves determining if there is a new or

increased water quality impact from the discharges. The baseline water quality for purposes of making a comparison is to be based on the ambient water quality as of September 30, 2000. Since the wastewater sources are unchanged, the effluent limitations in the permit will remain the same, and it is unlikely that the discharges will reach Segments 5 and 2a except during wet weather runoff conditions, which will provide dilution, this writer believes that it is highly unlikely that there will be new or increased water quality impacts due to the discharges from this facility. Therefore, in accordance with the antidegradation regulations and guidance, an antidegradation review is not necessary.

Permit Limitations:

The NPDES regulations at 40 CFR Part 122.22(l) require that effluent limitations in a renewal permit, with certain exceptions, be at least as stringent as the effluent limitations in the previous permit. The effluent limitations for Internal Outfalls 001A, 001B, and 001C are basically the same as in the previous permit. One change is that the definition of total petroleum hydrocarbons has been specified as the following: "Total petroleum hydrocarbons for purposes of this permit shall include gasoline range organics plus diesel range organics as determined by SW-846 Method 8015C or an equivalent method." This was done because both gasoline range organics and diesel range organics possibly could be present. The test procedure is specified because 40 CFR Part 136 does not include test procedures for total petroleum hydrocarbons. The effluent limitations for 001A are given below.

Effluent Characteristic	Effluent Limitation		
	30-Day Average a/	7-Day Average a/	Daily Maximum a/
BOD_5, mg/L	30	45	N/A
Total Suspended Solids, mg/L	30	45	N/A
Total Petroleum Hydrocarbons, mg/L b/	N/A	N/A	10
The pH of the discharge shall not be less than 6.5 or greater than 9.0 in any sample.			
There shall be no discharge of floating oil nor shall there be a visible sheen.			

a/ See Definitions, Part 1.1 for the definition of terms.

b/ Total petroleum hydrocarbons for purposes of this permit shall include gasoline range organics plus diesel range organics as determined by SW-846 Method 8015C or an equivalent method.

The limitations on BOD_5 and total suspended solids are based on the State of Colorado's Regulations for Effluent Limitations. On a practical basis there is not a need for effluent limitations on BOD_5 except as a safeguard. The State's regulations include a 10 mg/L limitation on oil and grease. Because the analytical test for oil and grease tends to give low results when the pollutants are petroleum products such as gasoline and diesel fuel, a 10 mg/L limitation on total petroleum hydrocarbons is being used instead of the limitation on oil and grease. The limitation on pH is based on the water quality standards of the receiving waters and the fact that the water quality standards do not allow for a mixing zone for pH. Furthermore, there often

would not be any dilution water in the stream, so the effluent limitation has to be effective at the point of discharge. The requirement that there is to be no discharge of floating oil nor shall there be a visible sheen is based on regional policy and best professional judgement as provided for in Section 402(a)(1) of the Clean Water Act.

For **Internal Outfall 001B** the permit requires that the valve be closed (i.e., no discharge to surface waters) when certain conditions occur. The conditions are the same as in the previous permit and are given in Part 1.3.3 of the permit.

For **Internal Outfall 001C** there is to be no discharge from the industrial reservoirs until it can be demonstrated that the water is not acutely toxic to *Ceriodaphnia dubia*, the concentration of TPH is less than 10 mg/L and the pH is within the range of 6.5-9.0. The limitation on TRC from the previous permit was deleted because chlorine compounds are no longer used in the cooling water system. The requirement that there be no acute toxicity to *Ceriodaphnia dubia* will protect from possible toxicity is chlorine compounds were to be used. Ceriodaphnia were chosen as the test species because fish are not likely to be present in the receiving waters at the point of discharge.

For **Outfalls 002 and 003** the previous permit had no numerical effluent limitations, but instead depended on the development and implementation of a pollution prevention plan to minimize the discharge of pollutants. The renewal permit has the same requirements. The next section, Pollution Prevention Plan, has more details about what the permit requires regarding the pollution prevention plan.

Pollution Prevention Plan

The permit issued in 2000 required the permittee to develop and implement a pollution prevention plan (PPP) to minimize the entry of pollutants into the interior storm drainage system during periods when the valve at Internal Outfall 001B is open. The permit issued in 2005 required the permittee to continue to implement the PPP for the interior storm drainage system and to modify the PPP to include provisions for minimizing the potential for discharging pollutants, via Outfalls 002 and 003, from the sumps located in the air stacks. The provisions were to include, but not necessarily be limited to, measures that can be taken to minimize pollutants being discharged from the sumps as the result of repair activities and maintenance activities in the air stacks.

Part 1.4 of the permit requires the permittee to continue to implement the PPP for the interior storm drainage system and Outfalls 002 and 003 that was developed and implemented as a requirement of previous permits. The PPP must be amended whenever there is a change in design, construction, operation, or maintenance at the facility which has a significant effect on the discharge, or potential for discharge, of pollutants from the interior storm drainage system and/or Outfalls 002 and 003. The PPP is also to be amended whenever during an inspection or investigation by the permittee or Federal officials it is determined that the PPP is ineffective in eliminating or significantly minimizing the discharge of pollutants from the interior storm drainage system and/or Outfalls 002 and 003. The PPP shall be reviewed annually to determine

if it needs to be amended to meet the objectives of the PPP. If appropriate, the PPP shall be amended.

Self-Monitoring Requirements

The self-monitoring requirements in this renewal permit are very similar to the previous permit and are given in Parts 1.36 to 1.3.9 of the permit. For Internal Outfall 001A, the wording has been changed for general clarification and **to emphasize that only the monitoring results obtained when there is a discharge to the exterior storm drainage system shall be reported on the discharge monitoring report form**. In addition to reporting the monitoring results when there is a discharge to the exterior storm drainage system, the permit requires a monthly log to be maintained that at a minimum includes the following: (1) the dates when flow is being discharged to the exterior storm water drainage system; (2) all flow meter readings taken when flow is being directed to the exterior storm drainage system; and (3) the total volume of water discharged since the previous meter reading. (NOTE: a format similar to the log used during the previous permit is acceptable.) A copy of the log shall be reported along with the quarterly discharge monitoring report required in Part 2.4 of this permit. The frequency of monitoring for total petroleum hydrocarbons was changed from monthly to quarterly because prior monitoring during the previous permit was no-detect. The permit does require that a grab sample be collected and analyzed for total petroleum hydrocarbons if a sheen and/or floating oil are observed in the visual monitoring.

Endangered Species Act (ESA) Requirements.
Section 7(a) of the Endangered Species Act requires federal agencies to insure that any actions authorized, funded, or carried out by an Agency are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species. Federally listed threatened, endangered and candidate species found in El Paso County, Colorado include:

Species	**Status**
Arkansas darter (*Etheostoma cragini*)	C
Greenback cutthroat trout (*Oncorhynchus clarki stomias*)	T
Gunnison's prairie dog (*Cynomys gunnisoni*)	C
Least tern (interior population) (*Sternula antillarum*)	E
Mexican spotted owl (*Strix occidentalis lucida*)	T
Palid sturgeon (*Scaphirhynchus albus*)	E
Piping pliver (*Charadrius melodus*)	T
Preble's meadow jumping mouse (*Zapus hudsonius preblei*)	T
Ute ladies'-tresses orchard (*Spiranthes diluvialis*)	T
Western prairie fringed orchid (*Platanthera praeclara*)	T
Whooping crane (*Grus americana*)	E

EPA finds that this permit is Not Likely to Adversely Affect any of the species listed by the US Fish and Wildlife Service under the Endangered Species Act. This facility discharges into unnamed tributaries of Fountain Creek, which flows into the Arkansas River at Pueblo. It is unlikely that the discharges will reach Fountain Creek except during periods of wet weather runoff conditions. The permit limitations are protective of water quality and flow conditions are expected to remain basically the same as during the previous permit.

National Historic Preservation Act (NHPA) Requirements.
Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. EPA has evaluated its planned reissuance of the NPDES permit for the Cheyenne Mountain Air Force station to assess this action's potential effects on any listed or eligible historic properties or cultural resources. EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources because this permit is a renewal and will not be associated with any new ground disturbance or significant changes to the volume or point of discharge.

Miscellaneous

The permit will be issued for approximately five years, with the effective date and the expiration date of the permit determined at the time of issuance of the permit, but not to exceed five years.

Permit drafted by Bob Shankland
SEE, 8P-W-P, EPA Region 8

Permit reviewed by Bruce Kent
8P-W-P, EPA Region 8