

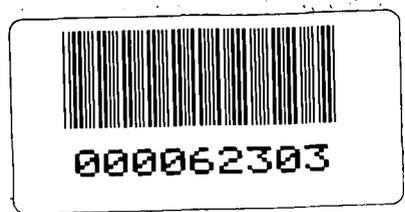
DOE ORDER #
96RF03736

IF100

LIST	LTR	ENC
Bengal, P.		
Benson, C. A.		
Buddy, M. S.		
Burdellik, W. J.		
Evans, C. S.		
Findley, M.		
Guinn, L.		
Hopkins, J.		
Jenkins, K.		
Jierree, C.		
Konwinski, G.		
Law, J. E.	X	X
Ledford, J. A.		
Lovseth, T. P.		
Luker, R.S.		
Mast, E. C.		
McAnally, J. L.	X	X
Motyl, K. M.	X	X
Parker, A. M.	X	X
Peterman, B. D.		
Primrose, A. L.		
Power, A.		
Rukavina, F.		
Steffen, D. E.		
Tyson, A. M.		
Zeile, H.		
DUNN, R. P.	X	X
DUNSTAN, L. A.	X	X
FIEHWAG, R.	X	X
HUFEMAN, E.M.	X	X



Rocky Flats Environmental Technology Site
O. Box 464
Golden, Colorado 80402-0464
Phone: (303) 966-2678
Fax: (303) 966-8244



June 19, 1996

96-RF-03736
96-RM-ER-0085-DOE



David A. Brockman
Assistant Manager
Strategy, Integration & Guidance
DOE, RFFO

Attn: J. Stover

MONTHLY DISCHARGE MONITORING REPORT - NPDES Permit No. CO-0001333 - JLM-106-96

Action: Transmit to EPA and CDPHE

The May 1996 Discharge Monitoring Report (DMR), required by the Rocky Flats Plant National Pollutant Discharge Elimination System (NPDES) Permit, is attached.

Spray irrigation was discontinued from Pond B-3 (Outfall 001) in March 1990, and the Reverse Osmosis Pilot Plant (Outfalls 003 & 004) are out of service. We will no longer report on these locations.

To preclude emergency pond discharges from the May 24-26 precipitation event of 2.5+”, water was moved into the construction site at Pond A-4 as a direct discharge from Pond A-3 and as a transfer from Pond B-5. No pond discharges occurred during or within 24 hours of this storm event. Approximately 6.5 million gallons were discharged/transferred into Pond A-4. De-watering of the construction site occurred via direct discharge of Pond A-4 starting on May 30, 1996 at the direction of the State Engineer's Office.

During the month of May, 1996, Pond A-3 (Outfall 002) pump discharged from May 1 through May 5 and May 29 through May 31 to below Pond A-4 as part of the construction activities for Pond A-4. Pond A-3 direct discharged into Pond A-4 from May 26 through May 28 as a result of the above mentioned precipitation event. Pond A-4 (Outfall 005) direct discharged from May 30 through May 31. Pond B-5 (Outfall 006) discharged continuously from May 1 through May 6 and May 30 through May 31. Water was transferred from Pond B-5 to Pond A-4 beginning May 26 and ending May 28. No discharges occurred from Pond C-2 (Outfall 007) during the reporting period. There was continuous discharge from Pond B-3 (Outfall 001) and the Sewage Treatment Plan (Outfall STP) during the reporting period

RMRS CC (080)	X	X
CORRES. CONTROL	X	X
TRAFFIC		

CLASSIFICATION	
UCNI	
UNCLASSIFIED	X X
CONFIDENTIAL	
SECRET	

AUTHORIZED CLASSIFIER
SIGNATURE

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER

CLASSIFICATION OFFICE
DATE

IN REPLY TO RFP CC NO:

ACTION ITEM STATUS
 OPEN CLOSED
 PARTIAL

LTR APPROVALS:

ORIG & TYPIST INITIALS:

ADMIN RECCRD

SW-A-004270

1/21

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In the DMR for April, 1996, and in separate notification dated May 10, 1996, the Site reported that two results Building 995 outfall for Carbonaceous Biochemical Oxygen Demand (CBOD5) were unquantifiable (the April 30 and May 1 samples), and the cause, at that time, was attributed to a non-systematic error. One subsequent sample at the same location, collected May 7, was also unquantifiable. Site personnel investigated the treatment plant performance, influent waste sources, and other possible causes, including the authorized release of a small quantity of ethylene glycol, as indicated in the April cover letter. The investigation identified the ethylene glycol as the likely cause of high CBOD5 readings at Building 995 outfall, citing lack of administrative controls as the root cause. The investigation further determined that, unlike previous authorized releases of ethylene glycol, the discharges from April 26 through May 7 were over longer periods of time resulting in the plant overload. Calculations of treatment plant performance indicate that a peak of ethylene glycol flowed through this facility, exceeding the capacity for treatment in the aeration basins, resulting in high CBOD5 values in the effluent. As in the April DMR, we are reporting two possible exceedances of the daily maximum for CBOD5 as no numeric result for this parameter are available from samples collected May 1 and May 7.

Corrective actions have been taken to prevent a recurrence of excessive CBOD5 due to authorized releases into the sanitary system. All non-routine discharges were halted and are being reviewed before release resumes, and the authorization process is being formalized as a Work Instruction, which requires management review and approval. Employee training for Environmental Program Managers and Environmental Technical Advisors on the control of discharges to the STP has been scheduled for June 27, 1996, at the Site's Environmental Compliance Forum meeting. Authorized discharges will continue to be tracked and evaluated to prevent adverse impacts to the wastewater treatment plant.

Attached with this DMR is the *Final Report for Off-Normal CBOD5 at RF WWTP: April 30 - May 8, 1996*, to provide U. S. Environmental Protection Agency with all information concerning this event to date. It was prepared using the standard Department of Energy (DOE) occurrence reporting format and will be used as a lessons learned tool for this and other DOE sites.

It is necessary that the Principal Executive Officer sign and date the letter and the DMR forms. Per verbal request of the EPA, forms for those discharge points which were not active are included with the notation of "No Discharge." Additional monitoring data as required by the NPDES Federal Facilities Compliance Agreement is attached on a separate sheet.

The NPDES permit requires that the report be postmarked no later than June 28, 1996, and be sent to the following:

Mr. Don Terrell
8-ENF-T
Water Management Division
U. S. E. P. A., Region VIII
999 - 18th Street, Suite 500
Denver, CO 80202-2466

Colorado Department of Public Health and
Environment
Attention: Mr. Robert Shukle
Monitoring and Enforcement Section
WQCD - PE - B2
4300 Cherry Creek Drive South
Denver, CO 80222-1530

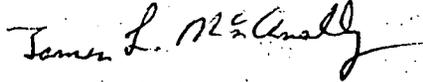
If you have any questions or desire additional information, please contact K. M. Motyl at

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extension 2172.

I certify that, to the best of my knowledge and that of my staff, the information used to fill out the DMR is complete and accurate.



James L. McAnally, President
RMRS, L.L.C.

LAD:dql

Orig. and 1 cc - David A. Brockman

Attachments:
As Stated

cc:
J. Dion - DOE
J. Hill - Kaiser-Hill - w/o Attach.
G. H. Setlock - Kaiser-Hill - " "
D. A. Ward - SSOC - " "

May 1996

Sewage Treatment Plant Effluent Metals Data

Metal, total	Result, ug/l
	<u>05/07/96</u>
Antimony	<23.0
Arsenic	<1.0
Beryllium	<1.0
Cadmium	<0.2
Copper	4.7 B
Iron	63.2 B
Lead	<10.0
Manganese	27.5
Mercury	<0.2
Nickel	<20.0
Silver	<0.2
Zinc	14.3 B

B - Absolute value of the analyzed result is less than the Contract Required Detection Limit (CRDL).

Sewage Treatment Plant Effluent Volatile Organic Compound Data

VOC	Result, ug/l
	<u>05/07/96</u>
Benzene	<10
Bromoform	<10
Carbon Tetrachloride	<10
Chlorobenzene	<10
Chlorodibromomethane	<10
Chloroethane	<10
Chloroform	4 J
Dichlorobromomethane	<10
1,1-Dichloroethane	<10
1,2-Dichloroethane	<10
1,1-Dichloroethylene	<10
1,2-Dichloropropane	<10
1,3-Dichloropropylene	<10
Ethylbenzene	<10
Methyl bromide	<10
Methyl chloride	<10
Methylene chloride	<10
1,1,2,2-Tetrachloroethane	<10
Tetrachloroethylene	<10
Toluene	<10
1,2-Trans-dichloroethylene	<10
1,1,1-Trichloroethane	<10
1,1,2-Trichloroethane	<10
Trichloroethylene	<10
Vinyl chloride	<10

J - Compound found, but below Practical Quantitation Limit (PQL). Quantitation is estimate.

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Final Report for

Off-Normal CBOD₅

at RF WWTP:

April 30 - May 8,

1996

Prepared: June 19, 1996

**RMRS** Rocky Mountain
Remediation Services, L.L.C.
... protecting the environment
Liquid Waste Operations
Bldg T371G / x9878
AND
Sitewide Actions / Surface Water
Bldg T893A / x2172

Description of Occurrence

On May 7, 1996 the Bldg. 881 Analytical Laboratory reported that the results of the Carbonaceous Biochemical Oxygen Demand 5-day (CBOD₅) tests for the Waste Water Treatment Plant (WWTP) effluent samples taken on April 30 1996 and May 1, 1996 were unquantifiable, see Table 1. The CBOD₅ analysis is a 5-day duration test that is performed each week to demonstrate compliance with the National Pollutant Discharge Elimination System (NPDES) permit effluent limit of 25 mg/l (daily maximum) and 10 mg/l (30-day average). CBOD₅ is an indicator of residual organic following treatment of sanitary waste. The upper quantification limit, as currently analyzed, for the effluent CBOD₅ analysis is 25-30 mg/l. As seen in Table 1, the influent CBOD₅ analyses for the same days were 102 (April 30, 1996) and 114 (May 1, 1996) mg/l, both within the normal operating range.

Routine influent and effluent CBOD₅ samples were again collected on May 7, 1996 and May 8, 1996, and sent for laboratory analysis. On May 14, 1996 (5-day CBOD₅ are analyzed over the subsequent 6 day period) the results for the May 7, 1996 sample were again reported as unquantifiable. The results for May 8, 1996 were reported as 16 mg/l, which is under the permit limit. All indications continued to show the WWTP to be operating within normal ranges. In an attempt to rule out analytical error on the unquantifiable results, a duplicate effluent CBOD₅ sample was collected (as part of normal weekly sampling) for analysis by an off-site laboratory. On May 21, 1996 the off-site laboratory reported a result of 4 mg/l for the May 15, 1996 sample. Also on May 21, 1996, the Bldg. 881 Laboratory reported effluent CBOD₅ results of 3 and 4 mg/l for the May 14, 1996 and May 15, 1996 samples, respectively.

Routine analysis of Pond B3 water during this event showed CBOD₅ concentrations in the pond of 19.5 mg/l and 12.7 mg/l (for the samples taken on April 30 and May 7, respectively), both concentrations are near the upper end of the range of the CBOD₅ measurements at Pond B-3. See Table 1 for sampling dates and locations and the results of the analysis.

Table 1
CBOD₅ Sampling Results

Sampling Locations	Sampling Date			
	4/30/96	5/1/96	5/7/96	5/8/96
STP Influent *	102.2	114.7	128.7	210
STP Effluent *	NSE	NSE	NSE	16.9
Pond B-3 **	19.5		12.7	

* Influent and Effluent CBOD₅ samples collected twice each week, typically on Tuesday and Wednesday. Samples are 24-hour composites (9:00AM to 9:00AM) that begin collecting samples the day before the stated date.

** Pond B-3 CBOD₅ samples are collected once each week, typically on Tuesday. Pond B-3 samples are "grab" samples taken from the effluent of Pond B-3 as it transfers to Pond B-4.

NSE Non-systematic error

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A potential cause for an unquantifiable result would be a concentration of CBOD₅ in excess of the upper quantification limit of 25 mg/l (effluent CBOD₅ concentrations are normally 5-8 mg/l). Immediately after receiving the laboratory notification, WWTP operations personnel reviewed WWTP operations and conditions for evidence of a plant "upset" that might cause insufficient organic digestion. No upset conditions were revealed by a review of the operating logs for the period in question, or by a review of real-time plant indicators that might indicate a continuing problem (see Attachment 1 for a summary of plant indicators). A review of the laboratory quality assurance data also revealed no abnormalities. Recognizing that the abnormal CBOD₅ results might be related to a non-routine discharge to the sanitary sewer, a moratorium was placed on all such discharges, pending completion of an investigation.

Operating Conditions of Facility at Time of Occurrence

Normal plant conditions with one of two redundant treatment trains in service.

The operating personnel at the WWTP normally observe plant operating conditions throughout each shift, recording certain parameters as part of each shift requirements. Included in the recorded observations is a measure of the oxygen uptake rate (O.U.R.) in the influent wastewater. The operator's log for the period of April 26 through May 15 shows a normal range of O.U.R. measurements - 0.2 to 1.3 mg/l/min. The observations did not suggest that the load on the plant had increased beyond the capacity of the plant.

Immediate Actions Taken and Results

1. Plant operations were reviewed and conditions monitored, with no abnormal conditions being noted.
2. A formal hold was placed on non-routine discharges to the WWTP.
3. On May 9, 1996 the Kaiser Hill team provided a notification of unquantifiable CBOD₅ results to DOE-RFFO and the EPA.
4. After report of the unquantifiable CBOD₅ result for the WWTP effluent on May 7, 1996, a duplicate sample was taken on 5/15/96 for analysis by an off-site laboratory.

Direct Cause

Management Problem: Inadequate Administrative Control

Contributing Cause

Management Problem: Limited Resources

Root Cause

Management Problem: Inadequate Administrative Control

Description of Cause

On 4/8/96, a non-routine discharge to the sanitary sewer system of seven 55-gallon drums of 50 weight-percent ethylene glycol was approved under the site's Internal Wastestream Program (IWP). Ethylene glycol is routinely accepted by Wastewater Treatment Plants, which digest the chemical as organic matter. The approval document (see Attachment 2) specified that one drum per day could be discharged. One drum per day was ultimately discharged on 4/26, 4/29, 4/30, 5/1, 5/2, 5/6 and 5/7. See Attachment 3 for an event chronology.

The direct and root cause are inadequate administrative control. The direct derivation method cause analysis was utilized. As documented on Attachment 1, the ethylene glycol discharges were formally evaluated and approved in accordance with the IWP. As indicated on the form, discharge of one 55-gallon drum per day of 50 weight-percent mixture was authorized. While the plant can (and did on previous occasions) comfortably accommodate this amount of ethylene glycol in one day, this volume must be metered in throughout the day to stay within the plant's capabilities. The IWP did not formally require an evaluation of discharge rate for the waste stream, and thus none was specified on the discharge permit. As a result, the generators dumped the entire drum (on each of the seven occasions) directly into the sewer system inside of a few minutes, sending a very concentrated slug into the treatment plant. As shown on Attachment 4, the resulting feed concentration into the plant exceeded its digestive capabilities for approximately 2 hours for each discharge. Had the calculations been performed, the discharge permit could have been written more specifically to authorize, for example, the discharge of only 10 gallons every two hours, and the feed concentration would then have been maintained below 200 mg/l for the duration of the event. Investigation revealed that in each instance, the ethylene glycol drums were delivered into the sanitary collection system in a single 55-gallon "shot". Calculation of the theoretical influent CBOD₅ concentration vs. time for each of these events was charted and is included as Attachment 4. Plant design would normally accommodate a range of 450 to 530 mg/l CBOD₅. This level is based on the blower speed and calculated oxygen transfer rate in the aeration basin. For the plant configuration at the time of the ethylene glycol discharges, the calculated theoretical CBOD₅ treatment capability was 532 mg/l as indicated on Attachment 4. As can be seen on the chart, this limit may have been exceeded for up to a period of ~1.6 hours.

Based on results from a treatment model calculation using a decay factor, it is possible effluent CBOD₅ concentrations for the "unquantifiable" days approached 38 mg/l, for each of the seven glycol discharge events (the treatment model calculation report is presented in Attachment 5). The WWTP effluent discharges to surface water Pond B-3 (this pond only receives water from the WWTP), and flows through a series of additional detention ponds prior to being discharged off the site. Despite the high effluent levels of CBOD₅, routine analysis of Pond B-3 water during this event showed a maximum CBOD₅ concentration in the pond of 19.5 mg/l and 12.7 mg/l (for the samples taken on April 30 and May 7, respectively). Both concentrations are near the upper end of the range of CBOD₅ measurements at Pond B-3.

Evaluation by Facility Manager

See Final Evaluation and Lessons Learned (field 29)

Corrective Actions

1. Because the unquantifiable CBOD₅ results are in potential non-compliance with NPDES permit limitations (both the daily maximum of 25 mg/l and the 30-day average maximum of 10 mg/l), a number of corrective actions have been identified, and a thorough review of all activities, both routine and non-routine, including laboratory procedures and analytical ranges, has been initiated.
2. Re-Evaluate the Internal Wastestream Program (IWP) and approval processes, including the adequacy of the program guidance documents; schedule a comprehensive set of corrective actions to address any identified deficiencies. (K. Motyl and R. Dunn, RMRS, by July 15, 1996)
3. Determine what additional management controls/support are needed to prevent a recurrence. (K. Motyl, RMRS, by July 15, 1996)
4. Brief WWTP operations personnel on lessons learned from this event. (F. Huffman, RMRS, by July 15, 1996)

Impact on Environment, Safety, and Health

There were no impacts to safety or health. The only environmental impact resulted from slightly elevated levels of organic contaminant discharged into surface water detention Pond B-3. Once in Pond B-3, natural processes occur (similar to digestive processes within the WWTP) to eliminate the excess organic material (i.e., the ethylene glycol). Since only slightly elevated levels of CBOD₅ were discharged, and Pond B-3 CBOD₅ measurements were within the normal range after this event, there was no significant environmental impact.

Programmatic Impact

There has been no programmatic impact. Implementation of the corrective actions will prevent future recurrences of this type of event.

Impacts on Codes and Standards

None.

Final Evaluation and Lessons Learned

The Site will require adequate controls over internal wastestreams delivered to its permitted treatment facility. Internal Wastestream Program will grow in importance as the Site moves into deactivation activities that will likely generate an increased number of internal wastestreams. The IWP needs to be strengthened to formally require an evaluation of influent contaminant concentration and waste stream discharge feed rates as part of the authorization process. This must be formally incorporated into the program guidance documents to ensure the requirements are consistently implemented. Management should provide routine re-evaluation of the technical and administrative basis of the program to ensure that proper guidance and controls are offered to the originators of the wastestream.

Attachment 1

NORMALLY MEASURED PERFORMANCE PARAMETERS
AT THE ONSITE SEWAGE TREATMENT PLANT
4/15/96 TO 5/19/96

Date	Effluent CBOD5 (mg/l)	Influent CBOD5 (mg/l)	Pond B-3 CBOD5 (mg/l)	pH Effluent (S.U.)	Flow Rate (gal x 1000)	Chlorine Usage (lbs)	Chlorine Concentration (mg/l)	Average Effluent Turbidity (NTU)	Secondary Clarifier Turbidity (NTU)	Average Blower Speed %	Dissoved O2 Aeration Basin (mg/l)	Mixed Liquor Suspended Solids (mg/l)	Influent Conductivity (ms/cm)
4/15/96				6.9	181	4	1.18	1.492	2.5	28.9	0.4	2777	655
4/16/96	3.1	53.7	1.8	7	156	6	1.31	2.241	7.1	24.7	0.3	2052	656
4/17/96	5.9	50.5		7.1	152	6	1.25	2.11	9.8	27.5	0.5	2941	627
4/18/96				7.1	116	6	1.29	1.676	4.1	32.5	0.2	2764	643
4/19/96				6.7	42	4	1.88	1.314	8.7	29.45	1.05	3426	512
4/20/96				7	66	3	1.42	0.711	5.9	20.1	0.4	4381	533
4/21/96				7	100	5	1.33	0.404	2.2	19.2	0.3	3871	510
4/22/96				7.4	152	7	1.07	0.359	1.5	19	0.2	2969	623
4/23/96	1.8	48.2	2.8	7	186	7	1.21	1.123	6	24.9	0.7	1949	652
4/24/96	4.3	71.5		6.9	164	10	1.01	2.113	7.8	26.4	0.4	2626	663
4/25/96				7	136	7	1.02	1.713	3.8	27	0.2	3417	685
4/26/96				6.9	120	6	1.67	1.915	5	28	0.3	3079	633
4/27/96				6.9	100	6	1.25	1.053	3.8	27.6	0.3	3918	569
4/28/96				6.9	112	6	1.09	0.607	2.8	26	0.2	3245	507
4/29/96				6.8	174	7	1.1	1.084	2.2	26	0.2	3195	550
4/30/96	NSE	102.2	19.5	6.8	220	8	1.4	2.34	5.6	26.1	0.36	2654	574
5/1/96	NSE	114.7		6.7	240	9	1.41	2.518	6.4	31.62	0.65	1740	494
5/2/96				6.9	294	9	1.13	2.408	5.9	28.2	0.22	2244	448
5/3/96				6.7	204	6	1.2	1.21	5	27.4	0.8	2686	402
5/4/96				6.8	128	5	0.85	0.54	1.7	26.43	0.53	2873	497
5/5/96				6.8	128	5	1	0.348	1.4	23.83	0.45	2871	498
5/6/96				6.7	228	9	1.11	0.824	1.4	31.13	0.5	2315	613
5/7/96	NSE	128.7	12.7	6.8	196	7	1.45	1.974	5.8	32.87	0.75	2115	723
5/8/96	15.9	210		7	242	9	1.37	2.682	2.6	32.42	0.65	2771	622
5/9/96				7.1	176	8	1.43	1.99	5.1	27.1	0.41	3172	532
5/10/96				7	212	9	1.03	1.425	4	27.68	0.58	2462	540
5/11/96				6.8	148	7	1.03	1.102	2.6	26.77	0.57	2515	221
5/12/96				6.7	160	6	1.08	0.638	2.5	24.7	0.5	2241	465
5/13/96				7.4	218	8	1.19	0.783	2.8	25.5	0.4	2127	625
5/14/96	3.9	59.9	1.9	7.2	232	8	1.29	1.616	4.4	27.87	0.53	1939	890
5/15/96	4.1	76.3		7.3	186	7	1.34	1.309	3.4	27.8	0.5	2391	594
5/16/96				7.2	152	6	1.48	1.027	2.16	28.6	0.5	2230	580
5/17/96				7.2	116	6	1.11	0.774	2.9	29.18	0.4	2312	949
5/18/96				7.2	104	6	1.17	0.536	2.2	24.9	0.53	2800	515
5/19/96				7.1	120	6	1.25	0.364	3.2	22.4	0.7	2068	462
Period Average	5.6	91.6	7.7	7.0	162	7	1.24	1.32	4.1	26.85	0.46	2,718	579
Normal Range				6.0 - 9.0		7 - 10	0.5 - 1.5	1 - 3	2 - 10	18-35%	0.1 - 1.5	2000 - 3000	200 - 1500

Note: The bolded and italicized dates are those dates with non-systematic errors for daily values for CBOD5.
Pond B-3 CBOD5 results are reported in the monthly DMR, but there is no limitation for this parameter.
Influent CBOD5 are not a permit requirement and are provided as additional information.

Request for authorization to discharge non-domestic wastewaters to the Waste Water Treatment Plant (WWTP)

(NO HAZARDOUS WASTES SHALL BE DISCHARGED)

Section I - to be completed by requestor Date: ~~11/11~~ April 3, 1996

Building 776 Location Room 150 Quantity 300 gallon

Requested discharge date(s) open Location(s) of discharge Bldg 776

Routine discharge (as defined in WSRUC) Non-routine

Description of discharge and reason for request to discharge to sanitary collection system (include MSDSs)

7 Drums of water/antifreeze mixture 50%
Drum # - G02986, G03386, G03383, G03387, G03385, G03384 - 9602341
Drum # G03398 - address
* See attached sample data - from the cooling system of the diesel generator motor.

Section II - to be completed by requestor

Requestor's name Mike Greene Phone/pager 7821 / 1566

Contact person Same Phone/pager

Environmental Coordinator Contact Same

Area Operations Manager A.C. Bernard x.3385

Section III - to be completed by Surface Water Division (SWD)

Contaminants of concern

Organics Inorganics Metals Radionuclides Oil and Grease

Other

Attach laboratory analysis results.

Section IV - to be completed by WWTP Management

Date received

Areas of Concern

Reason(s) for denial

Authorization to Discharge - Discharge at a rate of 1 - 55 gal drum per day

Operational restrictions for discharge not more than 1-55 gallon drum per day

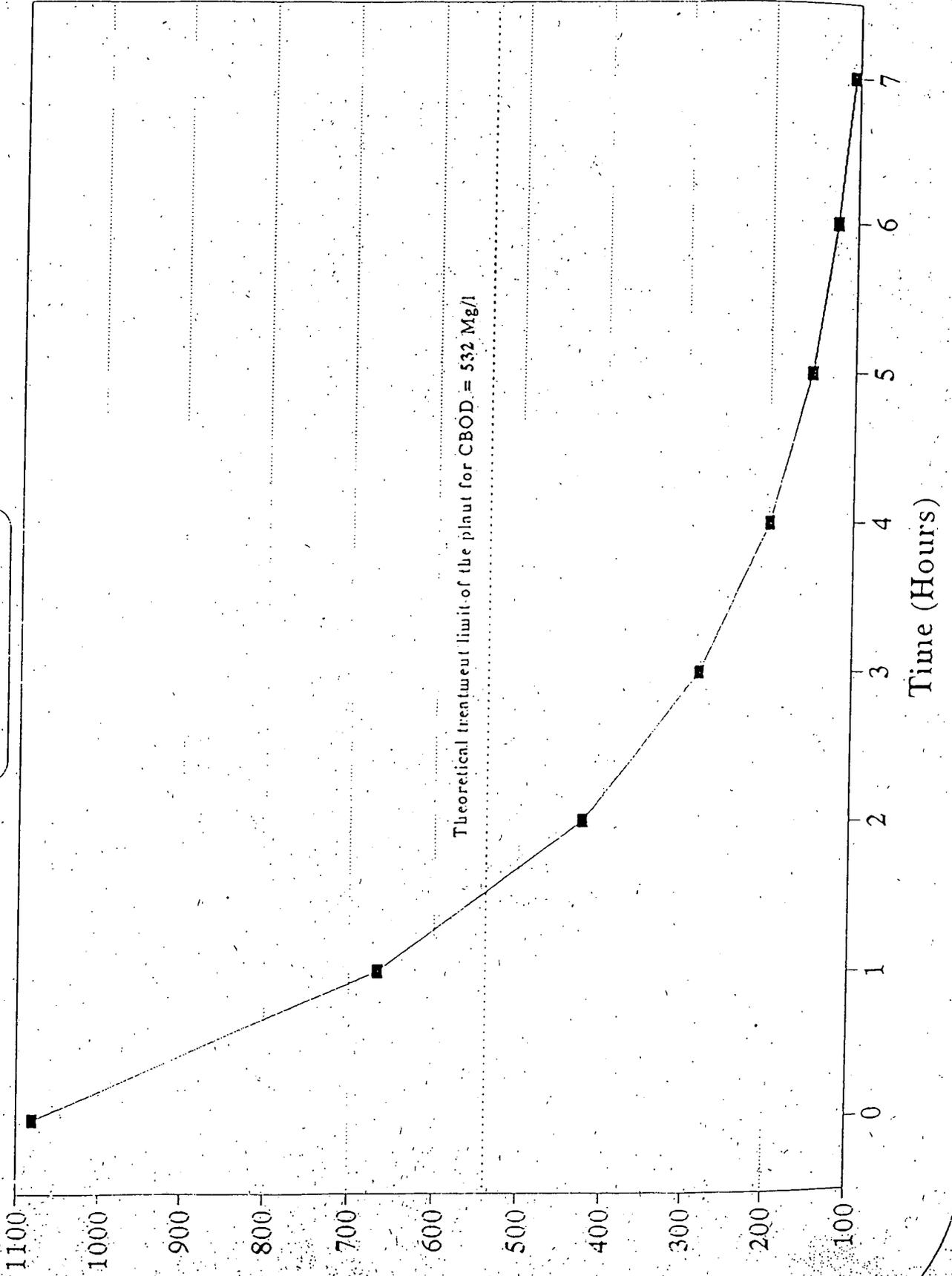
SW [Signature] Date 4/8/96 SW [Signature] Date 4/8/96

Attachment 3

Event Chronology

<u>Date</u>	<u>Description</u>
4/26/96	<ul style="list-style-type: none">• 1st drum of 50% ethylene glycol discharged
4/29/96	<ul style="list-style-type: none">• 2nd drum of 50% ethylene glycol discharged
4/30/96	<ul style="list-style-type: none">• 3rd drum of 50% ethylene glycol discharged• discharge of domestic water from storage tank begins
5/1/96	<ul style="list-style-type: none">• 4th drum of 50% ethylene glycol discharged
5/2/96	<ul style="list-style-type: none">• 5th drum of 50% ethylene glycol discharged
5/4/96	<ul style="list-style-type: none">• completed discharge of domestic water
5/6/96	<ul style="list-style-type: none">• 6th drum of 50% ethylene glycol discharged
5/7/96	<ul style="list-style-type: none">• 7th drum of 50% ethylene glycol discharged (~9:00 A.M.)• received notification of "unquantifiable" CBOD results for effluent samples taken on 4/30/96 and 5/1/96 (~10:30 A.M.)• terminated all non-routine discharges to the WWTP (~12:00 noon)
5/14/96	<ul style="list-style-type: none">• received notification of "unquantifiable" CBOD result for effluent sample taken on 5/7/96, and for a normal (i.e. in-specification) result for the sample taken on 5/8/96
5/15/96	<ul style="list-style-type: none">• take duplicate effluent sample for analysis by off-site laboratory
5/21/96	<ul style="list-style-type: none">• received notification that CBOD results (on-site laboratory) for effluent samples taken on 5/14/96 and 5/15/96 were within specification at 3.9 and 4.1 ppm, respectively• received notification that the off-site CBOD result for the 5/15/96 sample was 4.0 ppm.

Ethylene Glycol Reduction Curve



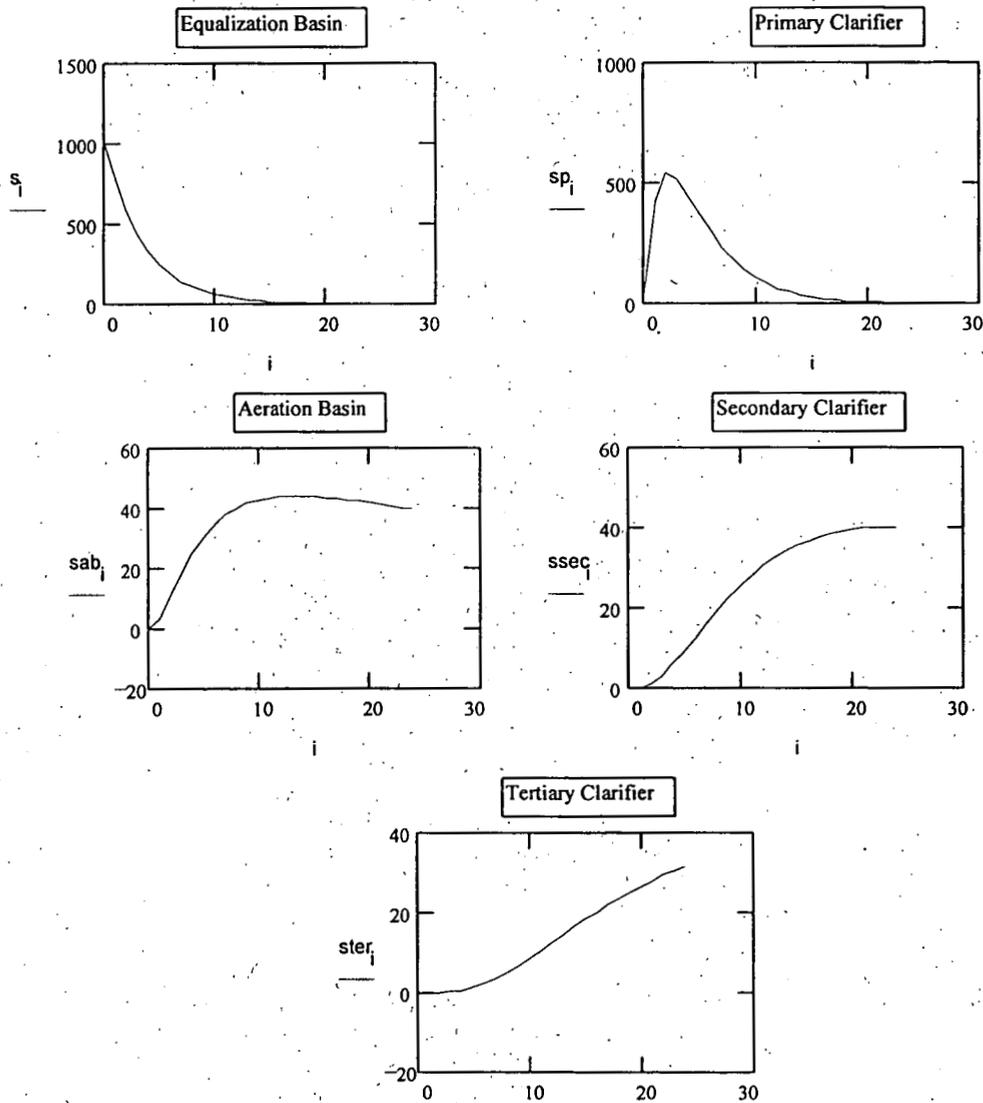
ATTACHMENT 5

EVALUATION OF ETHYLENE GLYCOL AT THE WASTEWATER TREATMENT PLANT

Treatment Model with Degradation

A model using a decay factor was developed to evaluate the dilution of ethylene glycol throughout the unit processes at the wastewater treatment plant. Values are in ppm starting with a slug release of 255 pounds to the equalization basin at time zero. A decay factor was used under normal plant operating conditions to represent the biological degradation of ethylene glycol in the aeration basins. It was developed empirically by matching the normal influent CBOD concentration to observed effluent levels from the plant. During the time ethylene glycol was flowing through the WWTP, biological degradation was removing a certain portion of the carbonaceous biochemical oxygen demand (CBOD). It is reasonable to assume that most of the ethylene glycol was removed by this process, but not all. The following results show that there is still an impact on plant performance with the influx of high CBOD.

Time variation of Ethylene Glycol Concentration in the WWTP Unit Processes



Where i (X-axis) = time, in hours and s (y-axis) = the concentration in ppm

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
 NAME USDOE-ROCKY FLATS PLANT
 ADDRESS P O BOX 928
GOLDEN CO 80402

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)
 (2-16) (17-19)
C00001333
 PERMIT NUMBER

Attachment #3
 96-RF-03736
 Page 1 of 7
 Form Approved.
 OMB No. 2040-0004
F - FINAL
 DISCHARGE FROM GENERIC TRIBUT PT
 Continuous discharge 5/1/96 - 5/31/96
 *** NO DISCHARGE 1-1 ***

FACILITY _____
 LOCATION _____
 ATTN: JAMES R HARTMAN David A. Brockman

MONITORING PERIOD
 FROM YEAR 96 MO 05 DAY 01 TO YEAR 96 MO 05 DAY 31
 (20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (46-53)	MAXIMUM (54-61)	UNITS (54-61)	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)			
PH	*****	*****	*****	*****	6.7	*****	7.2	0	7/7	grab
00400 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	6.0	*****	9.0	0	DAILY GRAB	
SOLIDS, TOTAL SUSPENDED	*****	*****	*****	*****	*****	<4	<5	0	2/7	comp
00530 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	30	45	0	TWICE/COMPOS WEEK	
OIL AND GREASE	*****	*****	*****	*****	*****	*****	no discharge	N/A	N/A	N/A
FREON EXTR-GRAV METH	*****	*****	*****	*****	*****	*****	10	0	DAILY GRAB	
00556 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	DAILY MX	0	2/7	comp
PHOSPHORUS, TOTAL (AS P)	*****	*****	*****	*****	*****	3.3	5.1	0	2/7	comp
00665 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	30DA AVG	DAILY MX	0	TWICE/COMPOS WEEK	
CHROMIUM, TOTAL (AS CR)	*****	*****	*****	*****	*****	<0.005	0.005	0	1/7	comp
01034 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	50	100	0	WEEKLY COMPOS	
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	*****	*****	*****	*****	0.21	0.41	MGD	N/A	Contin. record	
50050 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	REPORT 30DA AVG	REPORT DAILY MX	MGD	0	CONTINRCORDR UOUS	
CHLORINE, TOTAL RESIDUAL	*****	*****	*****	*****	*****	0.01	0.01	0	7/7	grab
50060 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	REPORT 30DA AVG	REPORT 7 DA AVG	0	DAILY GRAB	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER David A. Brockman Asst. Mgr., DOE, RFFO TYPED OR PRINTED	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE			
			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
IF THERE IS A VISIBLE SHEEN OF OIL AND GREASE REPORTED, A GRAB SAMPLE MUST ALSO BE TAKEN AND REPORTED ON THIS DMR. IF NO VISIBLE SHEEN WAS REPORTED THEN OIL AND GREASE, 00556, SHOULD BE REPORTED AS NO DISCHARGE FOR THE MONTH.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME USDOE-ROCKY FLATS PLANT
 ADDRESS P O BOX 928
GOLDEN CO 80402

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)

C00001333
 PERMIT NUMBER

STP A
 DISCHARGE NUMBER

MAJOR

Form Approved.

OMB No. 2040-0004

F - FINAL DISCHARGE FROM SEWAGE TREATMENT PLANT
 Continuous discharge 5/1/96 - 5/31/96

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
96	05	01		96	05	31

*** NO DISCHARGE ***

NOTE: Read instructions before completing this form.

ATTN: ~~JAMES XXXXXXX~~ David A. Brockman

PARAMETER (32-37)	X	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)	
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM				UNITS
COLIFORM, FECAL GENERAL 74055 1 0 0		*****	*****		*****	< 1	< 1	(13) #/100	0	2/7	grab
EFFLUENT GROSS VALUE		*****	*****	****	*****	200	400	#/ ml		TWICE/GRAB	
BOD, CARBONACEOUS 05 DAY, 20C 80082 1 0 0		*****	*****	****	*****	5.2	**	(19) mg/l	2	2/7	comp
EFFLUENT GROSS VALUE		*****	*****	****	*****	10	25	MG/L		TWICE/COMPOS	
OIL AND GREASE VISUAL 84066 1 0 0		*****	0	(94)	*****	*****	*****		0	7/7	visual
EFFLUENT GROSS VALUE		*****	0	YES=1 INST MAX NO=0	*****	*****	*****	****		DAILY VISUAL	
					**Possible exceedance of daily maximum as no quantifiable data reported for 5/1/96 & 5/7/96.						

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
 David A. Brockman
 Asst. Mgr., DOE RFFO

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE
 DATE
 AREA CODE NUMBER YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

IF THERE IS A VISIBLE SHEEN OF OIL AND GREASE REPORTED, A GRAB SAMPLE MUST ALSO BE TAKEN AND REPORTED ON THIS DMR. IF NO VISIBLE SHEEN WAS REPORTED THEN OIL AND GREASE, 00556, SHOULD BE REPORTED AS NO DISCHARGE FOR THE MONTH.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
 NAME USDOE-ROCKY FLATS PLANT
 ADDRESS P O BOX 928
GOLDEN CO 80402

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)
 (2-16) (17-19)

MAJOR 5/5/96 and 5/29/96-5/31/96

C00001333 002 A
 PERMIT NUMBER DISCHARGE NUMBER

Form Approved. OMB No. 2040-0004.

FACILITY _____
 LOCATION _____
 ATTN: ~~XXXXXXXXXXXX~~ David A. Brockman

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
96	05	01	TO	96	05	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

F - FINAL DISCHARGE FROM POND 10-3-94
 Direct discharge into Pond A-4, 5/26/96
 *** NO DISCHARGE 1-1 *** 5/28/96
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT / PERMIT REQUIREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
PH	SAMPLE MEASUREMENT	*****	*****		7.6	*****	8.3	(12) SU	0	7/7	grab
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	****	6.0 MINIMUM	*****	9.0 MAXIMUM	SU			DAILY GRAB
NITROGEN, NITRATE TOTAL (AS N)	SAMPLE MEASUREMENT	*****	*****		*****	1.1	1.3	(19) mg/l	0	7/7	grab
00620 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	****	*****	10 30DA AVG	20 DAILY MX	MG/L			DAILY GRAB
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	1.1	1.9	(03) MGD	*****	*****	*****		N/A	7/7	instan
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30DA AVG	REPORT DAILY Mx	MGD	*****	*****	*****	****			DAILY INSTAN
CHROMIUM, TOTAL (As Cr)	SAMPLE MEASUREMENT	*****	*****	****			<5.0	ug/l	0	1/31	grab
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	****			50 DAILY MX	ug/l		once/ month	grab
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER David A. Brockman Asst. Mgr., DOE/RFFO	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
NO CHANGE FROM REQUIREMENTS PRIOR TO FFCA - SEE PAGE 8 OF THE PERMIT. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OTHER THAN TRACE AMOUNTS. COMPOSITE SAMPLING FOR NITRATES IS ALLOWED.
 SEE PERMIT.

PERMITTEE NAME/ADDRESS (include Facility Name/Location if different)
 NAME USDOE-ROCKY FLATS PLANT
 ADDRESS P O BOX 928
GOLDEN CO 80402
 FACILITY _____
 LOCATION _____
 ATTN: ~~JAMES K. HARTMAN~~ David A. Brockman

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)

C00001333
 PERMIT NUMBER

001 A
 DISCHARGE NUMBER

MAJOR

Form Approved.

F - FINAL OMB No. 2040-0004
 FROM POND Approval expires 10-31-94

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
96	05	01	TO	96	05	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

Continuous discharge 5/1/96 - 5/31/96
 *** NO DISCHARGE 1-1 ***

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
BOD, 5-DAY (20 DEG. C) 00310 1 0 1 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	8.7	19.8	(19) mg/l	N/A	1/7	grab
	PERMIT REQUIREMENT	*****	*****	****	*****	REPORT 30DA AVG	REPORT DAILY MX	MG/L			WEEKLY GRAB
SOLIDS, TOTAL SUSPENDED 00530 1 0 1 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	<6	7	(19) mg/l	N/A	1/7	grab
	PERMIT REQUIREMENT	*****	*****	****	*****	REPORT 30DA AVG	REPORT DAILY MX	MG/L			WEEKLY GRAB
NITROGEN, NITRATE TOTAL (AS N) 00620 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	1.6	1.4	(19) mg/l	0	1/7	grab
	PERMIT REQUIREMENT	*****	*****	****	*****	10 30DA AVG	20 MX 7D AV	MG/L			WEEKLY GRAB
CHLORINE, TOTAL RESIDUAL 50060 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	0.06	(19) mg/l	0	7/7	grab
	PERMIT REQUIREMENT	*****	*****	****	*****	*****	0.5 DAILY MX	MG/L			DAILY GRAB
BOD, CARBONACEOUS 05 DAY, 20C 80082 1 0 1 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	4.6	12.7	(19) mg/l	N/A	1/7	grab
	PERMIT REQUIREMENT	*****	*****	****	*****	REPORT 30DA AVG	REPORT DAILY MX	MG/L			WEEKLY GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER David A. Brockman Asst. Mgr., DOE/RFFO	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT, SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE	
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here).

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
 NAME USDOE-ROCKY FLATS PLANT
 ADDRESS 0 BOX 928
GOLDEN CO 80402

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)
 (2-16) (17-19)

C00001333
 PERMIT NUMBER

005 A
 DISCHARGE NUMBER

MAJOR

Form Approved. OMB No. 2040-0004
 Approval expires 10-31-94

F - FINAL POND A-4
 Continuous discharge 5/30/96 - 5/31/96
 *** NO DISCHARGE ***

FACILITY _____
 LOCATION _____
 ATTN: ~~JAMES XXXXXXXXXX~~ David A. Brockman

MONITORING PERIOD							
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	96	05	01		96	05	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE		*****	1.4	(03) MGD	*****	*****	*****		N/A	2/2	instan
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	REPORT DAILY MX	MGD	*****	*****	*****	****			DAILY INSTAN
CHROMIUM, TOTAL (AS CR)		*****	*****		*****	*****	<5	(28) ug/l	0	1/31	grab
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	****	*****	*****	50	DAILY MX UG/L			ONCE/ GRAB MONTH
DURATION OF DISCHARGE		*****	*****		*****	*****	2	(84) day/mo	N/A		see permit
81381 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	****	*****	*****	REPORT DAILY MX	DAYS/ MONTH			SEE NOT AP PERMIT
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER David A. Brockman Asst. Mgr., DOE/RFFO	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT, SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)	TELEPHONE		DATE		
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO
TYPED OR PRINTED						

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
 NAME **USDOE-ROCKY FLATS PLANT**

ADDRESS **P O BOX 928**
GOLDEN **CO 80402**

FACILITY _____
 LOCATION _____
 ATTN: **JAMES R HARTMAN** **David A. Brockman**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)
 (2-16) (17-19)

C00001333
 PERMIT NUMBER

006 A
 DISCHARGE NUMBER

MAJOR

Transfer to Pond A-4 5/26/96-5/28/96

Form Approved.

F - FINAL OMB No. 2040-0004
 POND B-5 Approval expires 10-31-94
 Continuous discharge 5/1/96-5/6/96 and 5/30/96-5/31/96
 *** NO DISCHARGE ***

MONITORING PERIOD							
YEAR	MO	DAY	TO	YEAR	MO	DAY	
96	05	01		96	05	31	
(20-21)		(22-23)		(24-25)		(26-27)	
		(28-29)		(30-31)			

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (54-61)	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
FLOW RATE	*****	1.8	(03) MGD	*****	*****	*****	*****	N/A	7/7	instan	
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	REPORT DAILY MX MGD	*****	*****	*****	*****	*****		DAILY INSTAN	
CHROMIUM, TOTAL (AS CR)	*****	*****	*****	*****	*****	*****	*****	(28)			
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	5.0 ug/l	0	2/31 grab	
DURATION OF DISCHARGE	*****	*****	*****	*****	*****	*****	*****	84			
81381 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	8 days/mo	N/A	see permit	
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	REPORT DAILY MO MAX MONTH		SEE NOT AP PERMIT	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
David A. Brockman
Asst. Mgr., DOE/RFFO
 TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE			
AREA CODE	NUMBER	YEAR	MO	DAY	

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
 NAME USDOE-ROCKY FLATS PLANT
 ADDRESS P O BOX 928
GOLDEN CO 80402

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)
 (2-16) (17-19)

C00001333
 PERMIT NUMBER

007 A
 DISCHARGE NUMBER

MAJOR

Form Approved.
 OMB No. 2040-0004
 Approval expires 10-31-94

F - FINAL
 POND C-2

FACILITY _____
 LOCATION _____
 ATTN: ~~JAMES K. HARTMAN~~ David A. Brockman

MONITORING PERIOD							
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	96	05	01		96	05	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE ~~xxx~~ ***
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
FLOW RATE	*****			(03)	*****	*****	*****			
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	REPORT DAILY MX	MGD	*****	*****	*****	***		DAILY GRAB
CHROMIUM, TOTAL (AS CR)	*****	*****			*****	*****		(28)		
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****	*****	50			ONCE/ GRAB MONTH
DURATION OF DISCHARGE	*****	*****			*****	*****		(84)		
81381 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****	*****	REPORT DAYS/ MO MAX			SEE NOT AP PERMIT
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
 David A. Brockman
 Asst. Mgr., DOE/RFFO
 TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE _____ DATE _____
 AREA CODE NUMBER YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS. (Reference all attachments here)

21/21

JANETE