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A GENERAL ATOMICS COMPANY

RE:0002-EQ

January 4, 2000

CERTIFIED MAIL 2216 445 151

RETURN RECEIPT REQUESTED

Mr. Jon L. Craig,, Director

Water Quality Division

DEPARTMENT OF ENVIRONMENTAL QUALITY

P.O. Box 1677

9~Clahoma City, OK 73101-1677

Re: Notice of Violation, Docket No. I-68000010-99-1, OPDES Permit OK0000191  
Sequoyah Fuels Corporation, Facility No. I-68000010

Dear Mr. Craig:

This letter is a response to a Notice of Violation dated December 7, 1999, relating to exceedances of OPDES permit limits for ammonia and nitrate at Sequoyah Fuels Corporation (SFC) Outfall 008. Attached is a response to the Notice of Violation.

The measures described in the attached response are expected to prevent the recurrence of violations of the OPDES permit limits. However, because of ammonia and nitrate impacts to groundwater in the Pond 2 area which could, in turn, impact storm water, the potential to exceed the permit limits remains. SFC will therefore attempt to complete decommissioning as soon as possible.

If you have any questions or require further information, you may contact Scott Munson, Environmental Manager, at 918/489-5511 (Extension 20).

Since ly,  
Craig L. arlin, D rector  
Regula ry Affairiv  
CLH:bt cc: Mr. Dwight Chamberlain, NRC Region IV v`  
Enclosures: As Stated Above  
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HIGHWAY 10 & I-40 PO BOX 610, GORE, OKLAHOMA 74435 (918) 489-5511 FAX: (918) 489-2291  
Reply to Notice of Violation

Sequoyah Fuels Corporation (SFC) OPDES OK0040631

Statement of Violation

The Discharge Monitoring Reports (DMR) submitted by SFC identified the following violations of the permit:

OUTFALL	MONTH	PARAMETER	PERMIT LIMIT	VIOLATION
008	6/99	Nitrogen, Ammonia	10.5 mg/1	396 mg/1
008	6/99	Nitrogen, Nitrate	32 mg/1	471 mg/1
008	9/99	Nitrogen, Ammonia	10.5 mg/1	22 mg/1

Reason for the violations

SFC believes that the violations were the result of the release of impacted groundwater from beneath the synthetic liner in an out of service impoundment (Pond 2) following very heavy rains during the last few days of June 1999. The impacted groundwater emerged from under the Pond 2 liner through several holes in the liner and flowed through a culvert which was installed to drain storm water from the top of the cover over this impoundment. Subsequent rainfalls during September 1999 washed residual ammonia and nitrate from impacted soils in the Outfall 008 drainage.

Corrective steps that have been taken and the results achieved

Upon receiving the laboratory results indicating that the permit limits had been exceeded SFC personnel conducted an inspection of the Outfall 008 drainage and discovered the likely source of the nitrate and ammonia was leakage of nitrate and ammonia impacted groundwater from under the Pond 2 liner. After recognizing the problem, SFC took immediate interim measures to prevent the continuation of the release of impacted water from beneath the Pond 2 liner. A steel plate was welded over the drain culvert to eliminate the flow pathway. Subsequent leakage from under the liner has been collected and treated per the OPDES permit. In addition, water which had collected on top of the liner at the southwest corner of Pond 2 was pumped to Pond 5, which is used to manage nutrient impacted storm water.

Inspections were conducted along the drainage west of the process area to determine if there were other potential sources of the impact other than the Pond 2 area. There were no apparent signs, such as discolored vegetation, which would indicate that there were other sources. In addition, water from

The Lake Tenkiller pipeline was diverted to the drainage at the north end of the facility and samples collected as water flowed along the western perimeter ditch to Outfall 008. The ammonia concentrations in the water samples collected were low until the flow reached the area west of Pond 2. The concentration of ammonia increased in the samples collected west of Pond 2 and near Outfall 008. This confirmed that the source of the impact was from Pond 2 and that some ammonia residue remained in the soil and was transferred to water flowing in the ditch. The residual soil concentrations were expected to decrease with time and the flushing action of additional rainfall events.

Since these corrective measures were taken, the nitrate and ammonia concentrations at Outfall 008 have continued to decrease. A table summarizing the sample results for 1999 storm water events is attached. Ammonia concentrations have decreased from a maximum of 396 mg/l in June 1999 to 1.9 mg/l from a sample collected in November 1999. Nitrate concentrations have decreased from a maximum of 471 mg/l in June 1999 to 5.7 mg/l from a sample collected in November 1999.

SFC has also used the measured concentrations and volume of water discharged at Outfalls 001 and 008 to estimate the 24-hour average concentrations for ammonia and nitrate at Outfall O 1 F. Outfall OIF is the combined discharge point which flows into the Headwaters of the Robert S. Kerr Reservoir. Estimates have been made for the three storm water events where the OPDES permit limits were exceeded. A calculation sheet is attached and indicates that none of the permit limits were exceeded at the combined discharge point.

Corrective steps that will be taken to avoid further violations

More permanent corrective actions have been taken to allow the drainage of storm water which collects on top of the liner and prevent the release of groundwater which collects beneath the liner. A pipe has been installed from the culvert, located at the southwest corner on the outside of the pond berm, several hundred feet into the bottom of Pond 2. A figure is attached and shows the location of the pipeline with respect to the culvert and Outfall 008. Compacted clay has been placed in the area where the berm had been breached to prevent the buildup of surface water in this area. The clay covers the area where holes were present in the liner. SFC also plans to continue to pump water from beneath Pond 2. The recovered water will be transferred to another impoundment for treatment prior to discharge. SFC will continue to take other actions, such as the continued collection and pumping of storm water runoff resulting from low-flow storm events to Pond 5, to minimize the potential for exceeding permit limits.

1999 Monitoring Information at Outfall 008

Event No.	Date	Peak Head	Peak Flow Rate	Total Event Flow	Nitrate	Ammonia	Fluoride	TSS	Uranium	Nitrate		
Ammonia		feet	gpm	gallons	mg/I	mg/I	mg/I	mg/I	Ng/I	Load, Ibs		
SWR99-1	1/1/99	0.44	144	90,900	4.1	3.3	0.4	23.8	57.2	3.1	2.5	
SWR99-2	1/30/99	1.00	1122	608,900	4.6	2.4	0.4	110	38.2	23.4	12.2	
SWR99-3	2/6/99	1.50	3092	444,500	5.4	3.8	0.4	56.5	360	20.0	14.1	
SWR99-4	3/8/99	1.04	1238	605,300	5.3	0.8	0.7	118	32.5	26.7	4.0	
SWR99-5	3/12/99	1.04	1238	1,708,600		2.9	0.2	0.3	22.8	21.1	41.3	2.8
SWR99-6	3/13/99	0.74	529	545,400	3.7	0.2	0.4	5.4	34.3	16.8	0.9	
SWR99-7	3/14/99	0.32	65	28,400	5.1	< 0.2	0.4	6.0	52.1	1.2	0.0	
SWR99-8	3/20/99	0.59	300	110,200	5.6	0.7	0.3	10.8	40.9	5.1	0.6	
SWR99-9	3/28/99	0.86	770	303,100	5.4	< 0.2	0.4	8.8	53.4	13.6	0.5	
SWR99-10	4/3/99	1.61	3690	901,600	4.8	0.4	0.3	25.6	39.8	36.1	3.0	
SWR99-11	4/5/99	0.66	397	81,300	5.5	0.9	0.4	30.5	59.7	3.7	0.6	
SWR99-12	4/14/99	0.44	14.4	182,900	5.1	0.4	0.3	16.0	26.6	7.8	0.6	
SWR99-13	4/25/99	0.40	114	73,000	5.4	0.4	0.3	16.4	43.5	3.3	0.2	
SWR99-14	4/26/99	0.81	663	976,300	3.7	0.3	0.3	16.4	30.2	30.1	2.4	
SWR99-15	5/4/99	1.12	1489	464,800	5.1	0.4	0.3	21	30.7	19.8	1.6	
SWR99-16	5/17/99	1.30	2162	688,300	4.1	0.3	0.3	27.5	17.6	23.5	1.7	
SWR99-17	5/21/99	1.29	2121	715,320	3.0	< 0.2	0.3	37.6	15.2	17.9	1.2	
SWR99-18	5/23/99	0.82	683	408,300	6.7	2.9	0.3	30.8	24.0	22.8	9.9	
SWR99-19	6/1/99	1.90	5583	1,024,200		4.0	1.7	0.3	41.0	18.5	34.2	14.5
SWR99-20	6/2/99	0.27	43	23,900	14.2	5.1	0.3	4.5	31.6	2.8	1.0	
SWR99-21	6/23/99	0.60	313	149,100	17.8	11.2	0.4	24.4	9.57	2.21	13.9	
SWR99-22	6/24/99	0.70	460	229,638	6.5	4.5	0.3	10.0	12.5	12.4	8.6	
SWR99-23	6/29/99	1.76	4611	1,510,000		5.0	4.3	0.3	23.6	20.3	62.9	54.1
SWR99-24	6/30/99	0.37	93	52,200	471	396	1.1	4.0	18.0	205.0	172.3'	
SWR99-25	9/8/99	0.92	911	284,450	31.7	22.0	0.4	21.2	12.2	75.2	52.2	
SWR99-26	9/11/99	0.90	862	277,700	16.2	10.2	0.4	18.4	10.7	37.5	23.6	
SWR99-27	9/12/99	0.92	911	296,200	13.0	8.4	0.3	10.0	11.1	32.1	20.7	
SWR99-28	11/1/99	0.78	603	165,403	9.0	5.5	0.4	9.2	11.2	12.4	7.6	
SWR99-29	11/23/99	0.80	642	350,600	5.7	1.9	0.5	42.5	44.6	16.7	5.6	

Location of Pipeline to Drain Storm Water that collects on Top of Pond 2 Liner

foil 01F Combined Pipeline I`

Area with

Discolored Vegetation

OUTFALL 008

CLARIFIER A

BASIN 4 BASIN 1  
BASIN 3 BASIN 2

POND 2

Culvert NORTH FLUORIDE  
Pipeline to Drain  
Top of Liner FLUORIDE SETTLING BASIN

CLARIFIER  
SOUTH FLUORIDE

SETTLING BASIN

FLU 0

\BURIE

Low Flow

Retaining Wall

Area to be  
Backfilled with  
Compacted Clay

FLUORIDE  
HOLDING  
BASIN NO. 1

Outfall 001 Pipeline  
Estimation of Discharge Concentration At Outfall 01 F Combined Discharge Point

Measured concentrations and volume of water discharged at Outfalls 001 and 008 have been used to estimate the 24 hour average concentration at Outfall 01 F for ammonia and nitrate in mg/I.

Permit limits: Ammonia - 10.5 mg/l Nitrate - 32 mg/I

Event SWR99-21 June 23, 1999

Outfall 001: Ammonia = < 0.2 mg/I  
Nitrate = 1.5 mg/I  
Total Volume = 1,963,000 gallons  
Outfall 008: Ammonia = 11.2 mg/I  
Nitrate = 17.8 mg/I  
Total Volume = 149,100 gallons

Outfall 01 F (Estimated) Ammonia:

$(0.2 \cdot 1963000) + (11.2 \cdot 149100)$

$1963000 + 149100 \quad \circ \quad 0.98 \text{mg/I}$

Nitrate:

$(1.5 \cdot 1963000) + (17.8 \cdot 149100)$   
 $1963000 + 149100 \quad \circ \quad 2.65 \text{mg/I}$

Event SWR99-24 June 30, 1999

Outfall 001: Ammonia = < 0.2 mg/I  
Nitrate = 1.3 mg/I  
Total Volume = 2,347,000 gallons  
Outfall 008: Ammonia = 396 mg/I  
Nitrate = 471 mg/I  
Total Volume = 52,200 gallons

Outfall 01 F (Estimated) Ammonia:

$(0.2 \cdot 2347000) + (396 \cdot 52200)$

$2347000 + 52200 \quad \circ \quad 881 \text{mg/I}$

Nitrate:

$(1.32347000) + (471 \cdot 52200)$

$$2347000 + 52200 = 11.52 \text{ mg/I}$$

Event SVVR99-25 September 8, 1999

Outfall 001: Ammonia = < 0.2 mg/I

Nitrate = 0.3 mg/I

Total Volume = 648,000 gallons

Outfall 008: Ammonia = 22 mg/I

Nitrate = 31.7 mg/I

Total Volume = 284,450 gallons

Outfall 01 F (Estimated) Ammonia:

$$(0.2648000) + (22284450) = 6.85 \text{ mg/I}$$

$$648000 + 284450$$

Nitrate:

$$(0.3 - 648000) + (31.7 - 284450)$$

$$648000 + 284450 = 988 \text{ mg/I}$$