



Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

NPDES Permit No. **NM0028355**

**AUTHORIZATION TO DISCHARGE UNDER THE
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended,
 (33 U.S.C. 1251 et. seq; the "Act"),

Los Alamos National Security, LLC
 Management Contractor for Operations
 Los Alamos, New Mexico 87544

and

U.S. Department of Energy
 Los Alamos Area Office
 Los Alamos, New Mexico 87544

are authorized to discharge from a facility located at Los Alamos,

to receiving waters named: Perennial portion of Sandia Canyon in Waterbody Segment No. 20.6.4.126, and Mortandad Canyon, Canada del Buey, Los Alamos Canyon, ephemeral portion of Sandia Canyon, Ten Site Canyon, and Canon de Valle, in Waterbody Segment No. 20.6.4.128 of the Rio Grande Basin,

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Parts I [Requirements for NPDES Permits], II [Other Conditions], III [Standard Conditions for NPDES Permits], and IV [Sewage Sludge Requirements] hereof.

This permit modification supersedes and replaces Part I – Requirements for NPDES Permits of NPDES Permit No. NM0028355 issued on August 12, 2014.

This permit modification shall become effective on

This permit and the authorization to discharge shall expire at midnight, September 30, 2019.

Issued on

Prepared by

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PART I - REQUIREMENTS FOR NPDES PERMITS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL 001

Discharge Type: Continuous
 Latitude 35°52'26"N, Longitude 106°19'09"W (TA-3-22)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge Power Plant waste water from cooling towers, boiler blowdown drains, demineralizer backwash, R/O reject, floor and sink drains, and treated sanitary re-use to Sandia Canyon, and the discharge creates a perennial portion of Sandia Canyon, Segment Number 20.6.4.126 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	CONCENTRATION		LOADING		FREQUENCY	SAMPLE TYPE
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	***	***	Report	Report	Continuous	Record
TSS	30	100	Report	Report	1/Month	24-hr Composite
E. Coli (#/100 ml) (*1)	126	410	***	***	2/Month	Grab
Total Residual Chlorine	***	0.011 (*2)	***	***	1/Week	Grab
Total Recoverable Aluminum	***	0.9889 (*3)	***	***	1/Year	Grab
Dissolved Copper	***	0.0073 (*3)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
Temperature (°C) (*4)	20° C	20° C	***	***	1/Week	Grab
6T3 Temperature (°C)	(*5)	(*5)	***	***	1/Hour	Grab (or Continuous Record)
Total PCB (µg/l) (*6)	0.00064	0.00064	Report	Report	1/Year	24-hr Composite
pH (Standard Unit)	Range from 6.6 to 8.8		***	***	1/Week	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	MONTHLY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY TESTING (*7) (7-day Static Renewal)				
Ceriodaphnia dubia	Report	Report	1/5 Years	24-Hr Composite
Pimephales promelas	Report	Report	1/5 Years	24-Hr Composite

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge from Outfall 001.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

FOOTNOTES

- *1 Geometric mean. Effluent limitations and monitoring requirements only apply when effluent from Outfall 13S is rerouted and discharged at Outfall 001.
- *2 Effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *3 Effluent limitations take effective on the date of three years from the effective date of the permit.
- *4 Monitoring and reporting requirements for temperature end when 6T3 Temperature limitations become effective.

- *5 6T3 Temperature of 20° C (68° F) shall not be exceeded for six or more consecutive hours in a 24-hour period on more than three consecutive days. The effluent limitation and monitoring requirements of 6T3 takes effective on the date one-day before the permit expiration date.
- *6 EPA published congener Method 1668 Revision and detection limits shall be used. [The permittee is allowed to develop an effluent specific MDL in accordance with Appendix B of 40 CFR Part 136 (instructions in Part II.A of this permit).] Human health-based limitations.
- *7 Critical dilution 100%, and the dilution series are 32%, 42%, 56%, 75%, 100%. See Part II, Section G. Whole Effluent Toxicity (7-Day Chronic Testing).

OUTFALL 13S

Discharge Type: Continuous
 Latitude 35°51'08"N, Longitude 106°16'29"W (TA-46-347)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated sanitary waste water to Sandia Canyon in Segment Numbers 20.6.4.126 via outfalls utilizing treated effluent as specified in Outfall 001 and Category 03A, or to Canada del Buey in Segment Numbers 20.6.128 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	Continuous	Record
BOD	30	45	73	109	1/Month	24-hr Composite
TSS	30	45	73	109	1/Month	24-hr Composite
E. Coli (#/100 ml) (*1)	548	2507	***	***	2/Month	Grab
Total Residual Chlorine	***	0.011 (*2)	***	***	1/Week	Grab
Total PCB (µg/l) (*3,*4)	0.00064	0.000642	Report	Report	1/Year	24-hr Composite
Total Recoverable Aluminum	***	3.514 (*5)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

<u>EFFLUENT CHARACTERISTICS</u>	<u>DISCHARGE MONITORING</u>		<u>MONITORING REQUIREMENTS</u>	
<u>WHOLE EFFLUENT TOXICITY TESTING (*6)</u>	<u>MONTHLY AVG MINIMUM</u>	<u>48-HOUR MINIMUM</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u>

(48-hr Static Renewal) <u>Daphnia pulex</u>	Report	Report	1/ 2-Years	24-Hr Composite
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FOOTNOTES

- *1 Logarithmic mean. If the wastewater is discharge at other outfall, it shall comply with effluent limitations and monitoring requirements for E. coli as established for Outfall 13S.
- *2 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *3 If the wastewater is discharge at other outfall, it shall comply with effluent limitations and monitoring requirements for PCBs as established for Outfall 13S. EPA published congener Method 1668 Revision and detection limits shall be used for reporting purposes. The permittee is allowed to develop an effluent specific MDL in accordance with Appendix B of 40 CFR Part 136 (instructions in Part II.A of this permit).
- *4 Human health-based limitation.
- *5 Effluent limitations take effective on the date of three years from the effective date of the permit.
- *6 1st sample in the 1st year of the permit and 2nd sample in the 3rd year of the permit. The WET test should occur between November 1 and March 31. If discharges are not expected to occur during this sampling period, the test should be taken as soon as possible. Critical dilution 100%, and the dilution series are 32%, 42%, 56%, 75%, 100%.
See Part II, Section H. Whole Effluent Toxicity (48-Hr Acute Testing).

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements shall be taken at the following location(s): at the flow measuring device in Canada del Buey only when a discharge occurs at the outfall.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALL 051 - Radioactive Liquid Waste Treatment Facility

Discharge Type: Intermittent
 Latitude 35°51'54"N, Longitude 106°17'52"W (TA-50-1)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated radioactive liquid waste to Mortandad Canyon in segment number 20.6.4.128 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u> (mg/L, unless stated)		<u>LOADING</u> (Lbs/day, unless stated)		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*5)
COD	125	125	***	***	1/Month	Grab
TSS	30	45	73	109	1/Month	Grab
Total Toxic Organics (*1)	1.0	1.0	***	***	1/Month	Grab
Ra 226+228 (pCi/l)	30	30	***	***	1/Week	Grab
Total Chromium	1.34	2.68	***	***	1/Week	Grab
Total Lead	0.076	0.115	***	***	1/Week	Grab
Total Copper	0.014	0.014	***	***	3/Week	Grab
Total Zinc	0.191	0.191	***	***	3/Week	Grab
Total Hardness	Greater than or equal to 50 mg/l				3/Week	Grab
Total Residual Chlorine	***	0.011 (*2)	***	***	1/Week	Grab
Total Cadmium	Report	Report	***	***	2/Term (*3)	Grab
Total Mercury	Report	Report	***	***	2/Term (*3)	Grab
Total Nickel	Report	Report	***	***	2/Term (*3)	Grab
Total Selenium	Report	Report	***	***	2/Term (*3)	Grab

Perchlorate	Report	Report	***	***	1/Week	Grab
Total PCB (µg/l)	Report	Report	***	***	2/Term (*3)	Grab
Total Recoverable Aluminum	Report	Report	***	***	1/Term	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
Chromium III	Report	Report	***	***	1/Term	Grab
Chromium VI	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	MONTHLY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Whole Effluent Lethality (PCS 22414) (48-Hr NOEC) (*4)	100%	100%	1/3 Months	3-Hr Composite

FOOTNOTES

- *1 The limits and monitoring for Total Toxic Organics do not include 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD), Pesticides, or Polychlorinated biphenyls.
- *2 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *3 At least two samples from different discharge events shall be taken during the term of the permit if discharges occur. EPA published congener Method 1668 Revision and detection limits shall be used for reporting purposes. The permittee is allowed to develop an effluent specific MDL in accordance with Appendix B of 40 CFR Part 136 (instructions in Part II.A of this permit).
- *4 Monitoring and reporting requirements begin on the effective date of this permit. 100% limitation becomes effective on March 1, 2016. Critical dilution 100%, and the dilution series are 32%, 42%, 56%, 75%, 100%. Also see Part II, Section I. Whole Effluent Toxicity (48-Hour Acute Limits).
- *5 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following the final treatment and prior to or at the point of discharge from TA-50-1 treatment plant.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALL 05A055 - High Explosives Waste Water Treatment Plant

Discharge Type: Intermittent

Latitude 35°50'49"N, Longitude 106°19'51"W (TA-16-1508)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated waste water from the high explosives waste water treatment facility to a tributary to Canon de Valle in segment number 20.6.4.128 of the Rio Grande Basin

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*4)
COD	125	125	***	***	1/Quarter	Grab
TSS	30	45	***	***	1/Quarter	Grab
Total Toxic Organics (*1)	1.0	1.0	***	***	1/Quarter	Grab
Oil and Grease	15	15	***	***	1/Quarter	Grab
Trinitrotoluene	0.02	Report	***	***	1/Quarter	Grab
Total RDX	0.20	0.66	***	***	2/Month (*2)	Grab
Perchlorate	Report	Report	***	***	1/Year	Grab
Total Recoverable Aluminum	Report	Report	***	***	1/Term	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	MONTHLY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY TESTING (*3) (48-Hour Static Renewal)	Report	Report	1/5 Years	3-Hr Composite
Daphnia pulex	Report	Report	1/5 Years	3-Hr Composite

FOOTNOTES

- *1 The limits and monitoring for Total Toxic Organics do not include 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD), Pesticides, or Polychlorinated biphenyls.
- *2 One sample should be taken before the 15th of the month and another taken after the 15th of the month.
- *3 The WET test should occur during the period of November 1 to March 31 after the effective date of the permit. If no discharge is expected during this period, testing should be taken as soon as possible. Critical dilution 100%, and the dilution series are 32%, 42%, 56%, 75%, 100%. See Part II, Section H. Whole Effluent Toxicity (48-Hour Acute Testing).
- *4 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALL 04A022

Discharge Type: Intermittent

Outfall 03A022: Latitude 35°52'14"N, Longitude 106°19'01"W (TA3-2274)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge storm water, roof drain water, and once-through cooling water for emergency use only to Mortandad Canyon, in segment number 20.6.4.128 of the Rio Grande Basin. (Cooling tower blowdown is not authorized for discharge at this outfall.)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*2)
TSS	30	100	***	***	1/Quarter	Grab
Total Residual Chlorine	***	0.011	***	***	1/Week (*1)	Grab
Total Recoverable Aluminum	Report	Report	***	***	1/Term	Grab
Dissolved Copper	Report	Report	***	***	1/Term	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

Footnote

- *1 When discharge of once-through cooling water for emergency purposes only.
- *2 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALL 03A181

Discharge Type: Intermittent

Outfall 03A181: Latitude 35°51'50.8"N, Longitude 106°18'05"W (TA55-6)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge storm water, cooling tower blowdown and other wastewater to Mortandad Canyon, in segment number 20.6.4.128 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*3)
TSS	30	100	***	***	1/Quarter	Grab
Total Phosphorus	20	40	***	***	1/Quarter	Grab
Total Residual Chlorine (*1)	***	0.011	***	***	1/Week	Grab
Dissolved Copper	***	0.0115 (*2)	***	***	1/Year	Grab
Total Recoverable Aluminum	***	2.724 (*2)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

FOOTNOTES

- *1 Effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC applies when discharges of cooling tower blowdown occur only.
- *2 Effluent limitations take effective on the date of three years from the effective date of the permit.
- *3 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALL 03A113

Discharge Type: Intermittent

Outfall 03A113: Latitude 35°52'03"N, Longitude 106°15'43"W (TA-53-293 & 952)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge cooling tower blowdown and other wastewater to Sandia Canyon, in segment number 20.6.4.128 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*3)
TSS	30	100	***	***	1/Quarter	Grab
Total Residual Chlorine (*1)	***	0.011	***	***	1/Week	Grab
Total Phosphorus	20	40	***	***	1/Quarter	Grab
Dissolved Copper	***	0.0218 (*2)	***	***	1/Year	Grab
Total Recoverable Aluminum	***	6.904 (*2)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

FOOTNOTES

- *1 Effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *2 Effluent limitations take effective on the date of three years from the effective date of the permit.
- *3 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALLS 03A027

Discharge Type: Intermittent

Outfall 03A027: Latitude 35°52'26"N, Longitude 106°19'08"W (TA3-2327)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge cooling tower blowdown and other wastewater to Sandia Canyon, in segment number 20.6.4.126 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*4)
TSS	30	100	***	***	1/Quarter	Grab
Total Residual Chlorine (*1)	***	0.011	***	***	1/Week	Grab
Total Phosphorus	20	40	***	***	1/Quarter	Grab
E. Coli (#/100 ml) (*2)	548	2507	***	***	2/Month	Grab
Total PCB (µg/l) (*2)	0.00064	0.000642	Report	Report	1/Year	Grab
Total Recoverable Aluminum	***	0.9889 (*3)	***	***	1/Year	Grab
Dissolved Copper	***	0.0073 (*3)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
Chromium VI	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.6 to 8.8		***	***	1/Week	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	MONTHLY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Whole Effluent Toxicity Testing (7-day Static Renewal) (*5)				
Ceriodaphnia dubia	Report	Report	1/5 Years	3-Hr Composite (*6)
Pimephales promelas	Report	Report	1/5 Years	3-Hr Composite (*6)

FOOTNOTES

- *1 Effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *2 Effluent limitations and monitoring requirements only apply at Outfall when effluent from Outfall 13S is rerouted and discharged at the Outfall. E. coli limitations are geometric mean. Total PCB effluent limitations established at Outfall 13S applies when effluent from Outfall 13S is rerouted and discharged at Outfall 03A027.
- *3 Effluent limitations take effective on the date of three years from the effective date of the permit.
- *4 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.
- *5 Critical dilution of 23% (with a dilution series of 10%, 13%, 17%, 23%, and 31%) applies to Outfall 03A027. Also see Part II. Section G. Whole Effluent Toxicity (7-Day Chronic Testing). The WET test should occur during the first period of November 1 to March 31 after the effective date of the permit. If no discharge occurs during this period, the test should occur as soon as possible.
- *6 "3-hour composite sample" means a sample consisting of a minimum of one (1) aliquot of effluent collected at a one-hour interval over a period of up to 3 hour discharge.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALLS 03A048

Discharge Type: Intermittent

03A048: Latitude 35°52'11"N, Longitude 106°15'45"W (TA-53-964 & 979)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge cooling tower blowdown and other wastewater to Los Alamos Canyon, in segment number 20.6.4.128 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*3)
TSS	30	100	***	***	1/Quarter	Grab
Total Phosphorus	20	40	***	***	1/Quarter	Grab
Total Residual Chlorine (*1)	***	0.011	***	***	1/Week	Grab
Total Arsenic	0.013	0.013	***	***	1/Year	Grab
Dissolved Copper	***	0.0233 (*2)	***	***	1/Year	Grab
Total Mercury (µg/l)	***	0.77 (*2)	***	***	1/Year	Grab
Dissolved Mercury (µg/l)	***	1.4 (*2)	***	***	1/Year	Grab
Total Recoverable Aluminum	***	7.592 (*2)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
Chromium VI	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

FOOTNOTES

- *1 Effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *2 Effluent limitations take effective on the date of three years from the effective date of the permit.
- *3 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the preprinted Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALL 03A160

Discharge Type: Intermittent

Outfall 03A160: Latitude 35°51'47"N, Longitude 106°17'49"W (TA35-124)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge cooling tower blowdown and other wastewater to Ten Site Canyon, in segment number 20.6.4.128 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>	<u>MONTHLY AVERAGE</u>	<u>DAILY MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*3)
TSS	30	100	***	***	1/Quarter	Grab
Total Phosphorus	20	40	***	***	1/Quarter	Grab
Total Residual Chlorine (*1)	***	0.011	***	***	1/Week	Grab
Total Arsenic	0.013	0.018	***	***	1/Year	Grab
Total Copper	0.021	0.032	***	***	3/Week	Grab
Total Cyanide (µg/l)	Report	Report	***	***	1/Month	Grab
Total Recoverable Aluminum	***	4.290 (*2)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
Chromium VI	Report	Report	***	***	1/Term	Grab
pH (Standard Unit)	Range from 6.0 to 9.0		***	***	1/Week	Grab

FOOTNOTES

- *1 Effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *2 Effluent limitations take effective on the date of three years from the effective date of the permit.

- *3 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the preprinted Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

OUTFALL 03A199

Outfall 03A199: Latitude 35°52'33"N, Longitude 106°19'19"W (TA3-1837)

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge cooling tower blowdown and other wastewater to Sandia Canyon, in segment number 20.6.4.126 of the Rio Grande Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	<u>CONCENTRATION</u>		<u>LOADING</u>		<u>FREQUENCY</u>	<u>SAMPLE TYPE</u>
	(mg/L, unless stated)		(Lbs/day, unless stated)			
	<u>MONTHLY</u>	<u>DAILY</u>	<u>MONTHLY</u>	<u>DAILY</u>		
	<u>AVERAGE</u>	<u>MAXIMUM</u>	<u>AVERAGE</u>	<u>MAXIMUM</u>		
Flow (MGD)	***	***	Report	Report	1/Day	Estimate (*3)
TSS	30	100	***	***	1/Quarter	Grab
Total Residual Chlorine (*1)	***	0.011	***	***	1/Week	Grab
Total Phosphorus	20	40	***	***	1/Quarter	Grab
Total Recoverable Aluminum	***	0.9889 (*2)	***	***	1/Year	Grab
Dissolved Copper	***	0.0073 (*2)	***	***	1/Year	Grab
Adjusted Gross Alpha	Report	Report	***	***	1/Term	Grab
Total Mercury	***	0.77 µg/l (*2)	***	***	1/Year	Grab
Dissolved Mercury	***	0.77 µg/l (*2)	***	***	1/Year	Grab
pH (Standard Unit)	Range from 6.6 to 8.8		***	***	1/Week	Grab

FOOTNOTES

- *1 Effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *2 Effluent limitations take effective on the date of three years from the effective date of the permit.
- *3 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. The daily flow value may be estimated using best engineering judgment.

SAMPLING LOCATION(S)

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): following final treatment and prior to or at the point of discharge.

NO DISCHARGE REPORTING

If there is no discharge event at this outfall during the sampling month, place an "X" in the NO DISCHARGE box in the Discharge Monitoring Report.

FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

B. COMPLIANCE SCHEDULES

All effluent limitations with a compliance schedule established in Part I., section A. above, must comply with the following reporting requirements and compliance schedules:

1. Provide semi-annual progress reports by August 31 for the period of January – June, and by February 28 for the period of July – December;
2. Identify sources or causes of exceedance of permit limitations by six months from the effective date of the permit;
3. Identify corrective measures or study plan by one year from the effective date of the permit;
4. Comply with the final effluent limitations by the date specified in Part I. section A. of the permit.

C. REPORTING OF MONITORING RESULTS (MAJOR DISCHARGERS)

Monitoring information shall be submitted as specified in Part III.D.4 of this permit and shall be submitted monthly.

1. Reporting periods shall end on the last day of the month.
2. The permittee is required to submit regular monthly reports as described above no later than the 28th day of the month following each reporting period.

The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). Any noncompliance which may endanger health or the environment shall be made to the EPA at the following e-mail address: R6_NPDES_Reporting@epa.gov, as soon as possible, but within 24-hours from the time the permittee becomes aware of the circumstance. This language supersedes that contained in Part III.D.7 of the Permit. Additionally, oral notification shall also be to the New Mexico Environment Department at (505) 827-0187 as soon as possible, but within 24 hours from the time the permittee becomes aware of the

circumstance. A written report of overflows which endanger health or the environment shall be provided to EPA and the New Mexico Environment Department, within 5 days of the time the permittee becomes aware of the circumstance.

D. APPLICATION

A complete copy of application with original officer signature for permit renewal shall be sent to EPA and either a paper copy or an electronic copy shall be sent to New Mexico Environment Department (NMED) at the mailing address listed in Part III of this permit.

E. EFFLUENT CHARACTERISTIC ANALYSIS (Outfalls 051, 05A055 and 04A022)

During the term of this permit, if a discharge occurs at Outfall 051, Outfall 05A055 or Outfall 04A022, at the minimum of an one-time discharge effluent grab sample shall be taken for effluent characteristic analysis from the associated outfall as soon as practical. Effluent sample(s) shall be analyzed for pollutants listed in the New Mexico Water Quality Standards, 20.6.4 NMAC, section 900.J(2) Table of Numeric Criteria, which have at least one of the following criteria: irrigation, livestock watering, wildlife habitat, acute/chronic aquatic life, or persistent human health-organism only (HH-OO) criteria. The permittee shall report analytical results to EPA within 30 days when full results become available.