WATER POLLUTION CONTROL GENERAL PERMIT

GNEV93001

In accordance with the provisions of the Federal Water Pollution Control Act, as amended, and the Nevada Revised Statutes, the

UNITED STATES DEPARTMENT OF ENERGY
National Nuclear Security Agency
Nevada Site Office
P. O. Box 98518
Las Vegas, Nevada 89193-8518

is authorized to discharge from the **sewage treatment works** located at and within the **Nevada Test Site** to receiving waters named the **water of the state**, such that the groundwater quality is not degraded and in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, and Part III of this permit.

The terms and conditions expressed in Part I, Part II, and Part III of this General Permit are effective and enforceable after midnight on

AUGUST 5, 2005 .

This General Permit and the authorization it conveys shall expire at midnight on

AUGUST 5, 2010 .

Signed this 5 th day of AUGUST, 2005.

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T. H. Murphy, Chief
Bureau of Federal Facilities
Division of Environmental Protection
Department of Conservation and Natural Resources
State of Nevada

PART I

I.A. INFLUENT LIMITATIONS

I.A.1. This permit prohibits discharge into a sewer main or a lagoon or basin of a waste containing constituents whose concentrations exceed those limits identified in Appendix I of this permit, or are elsewhere defined as hazardous waste. Without concurrence from Nevada Division of Environmental Protection (NDEP), discrete discharges into sewage lagoons neither designated nor authorized to receive them are prohibited.

I.A.2. This permit prohibits discharge into a sewer main or a lagoon of an industrial waste which is detrimental to the biota of the treatment works. Industrial waste discharged into a sewer main or lagoon shall not exceed the pretreatment standards established by the permittee or that are required to meet a facility's design and performance standards for the selected mode of treatment and mode of disposal.

I.A.3. This permit limits the monthly influent flow into each facility to the average maximum design flow which is listed in Part III of this permit.

I.A.4. The organic load, calculated from the measured BOD_5 and the metered influent flow rate and adjusted to include increments from septage, shall not:

a. exceed loadings which are demonstrated as technically achievable and appropriate for the design criteria of a partially-mixed aerated lagoon;
b. exceed 177 pounds per acre (199 kilograms per hectare) of lagoon surface per day for aerated lagoons;
c. exceed 34.7 pounds per acre (39 kilograms per hectare) of surface per day for facultative lagoons and basins; or
d. be limited in those lagoons which exclusively receive and treat only septage.

I.A.5. The organic load for those facilities without existing headwork meters shall be calculated from the measured BOD_5 and scheduled site fluid level measurements, and shall not exceed the loading limits established in Parts I.A.4.a, I.A.4.b, or I.A.4.c above. Site fluid level measurements take into account other facility and climatic specific data such as evaporation, precipitation and infiltration rates.

I.A.6. The hydrogen ion concentration of the influent fluids must measure between pH 6.0 and pH 9.0.

I.B. OPERATIONAL LIMITATIONS

I.B.1. The Standard of Performance for the collection, treatment, and disposal facilities shall be no discharge into the surface water of the state, except as expressed in and

authorized by this permit.

I.B.2. Any constituent listed in Appendix I of this permit and found, pursuant to Part I.C.3, in any lagoon shall not exceed its Regulatory Level. The National Nuclear Security Agency, Nevada Site Office (NNSA/NSO), upon discovery of an increase above the Regulatory Level, shall investigate the cause or causes of the increase by implementing a monthly sampling and analyses of the effluent and continue until they determine the cause or causes of the variance. The monthly sampling shall not be less than three consecutive months and not to exceed six months following receipt of the initial sample analyses for Appendix I parameters. Using these data NNSA/NSO shall identify the cause and take reasonable steps to control, reduce, or eliminate the cause or causes, in accordance with Best Practical Control Technology Economically Achievable. If the average parametric concentrations for three consecutive months is less than the Regulatory Levels, monitoring shall return to the routine conditions as described above. NNSA/NSO shall submit the analytical results in a Quarterly Monitoring Report (QMR) (cf. Part II.A.4). If, however, the average parametric concentrations still exceed the Regulatory Levels after six months, then NNSA/NSO must meet with NDEP to evaluate what action to take.

I.B.3 Any new lagoon intended to receive raw or untreated sewage will be designed for total containment or any existing lagoon will be considered to have achieved total containment as demonstrated by an acceptable hydrogeological model based on site-specific soil characteristics and on its design specifications and conform to NDEP's containment criteria in effect at the time of construction.

I.B.4. All new or existing lagoons, units, or components which are intended to receive, or do receive, raw or untreated sewage must conform to NDEP's containment criteria in effect at the time of construction.

I.B.5. Any dependable alternative method which enables measuring and recording the pond water rising above the freeboard limit is acceptable.

I.B.6. Pond water which rises above the crest of any cell is an unauthorized discharge into the watershed.

I.C. SAMPLING AND ANALYZING

I.C.1. Samples taken in compliance with the monitoring requirements specified below shall be taken at either the influent headwork (I.C.2) or from the pond near the lagoon's inlet for systems where there is no direct access to the influent flows (I.C.3), as appropriate.

I.C.2. Composite samples will be flow-weighted (8 hours during normal business hours) for

those facilities equipped with ultrasonic flow meter. Samples from systems without flow meters but which utilize automatic samplers shall be composited on a time-weighted (8 hours) basis. Any method of comparable reliability can be employed in place of continuous flow meter-driven automatic samplers. Those headworks which have no flow for the entire quarter can not be sampled; consequently, the no flow condition shall be recorded and reported. In the event there are two consecutive quarters of low flows at a facility impacting the ability to collect time or flow weighted samples, NNSA/NSO may propose alternative methods for measuring flow rates or obtaining representative samples.

a. For all systems, a composite sample from each influent headwork will be collected quarterly (every third month) and the composite sample shall be analyzed for:
   1. 5 day Biochemical Oxygen Demand (BOD_5); and
   2. Total Suspended Solids (TSS); and
   3. Hydrogen ion (pH).
b. In specific circumstances, conditions may warrant a waiver from some permit requirements. In those circumstances, NDEP may require monitoring not explicitly described in this permit which would provide for a demonstration of an equivalent level of environmental protection.

I.C.3. In the event of specific, accidental, or naturally caused discharges of potential contaminants, the NNSA/NSO shall collect a grab sample (or an equal volume composite for those facilities with two lagoons) from the pond adjacent to the influent pipe of each facility. Each sample shall be analyzed for the contaminants listed in Appendix I. Each sample (grab or composite) shall be sampled, bottled, preserved and handled according to the specific requirements described in each method as follows:

a. for organic and inorganic contaminants the EPA Publication SW-846, Toxicity Characteristic Leaching Procedure, Test Method 1311 named in 40 CFR Part 261.24, and
b. for gross alpha and gross beta, EPA Method 600/4-75-008, or its approved equivalent, and
c. for tritium, EPA Method 600/4-80-032, or its approved equivalent, and
d. for pH as a standard laboratory measurement.

I.C.4. All environmentally-related measurements acquired in compliance with the terms or conditions of this permit shall satisfy the quality assurance and quality control provisions of EPA Order 5360.1, such that all reported measurements are of known quality.

I.C.5. Test procedures for the analysis of sewage and non-hazardous industrial waste water shall conform to 40 CFR 136. Identification of solid waste, including industrial waste water, shall conform to 40 CFR 261.

I.C.6. Facilities for which a waiver of certain permit containment and/or monitoring requirements have been authorized may be required to collect samples more frequently than specified in this section. Any increased requirements will be identified in Part III of this permit for each specific facility.

I.D. MEASUREMENTS AND OBSERVATIONS

I.D.1. NNSA/NSO shall include all of the following requirements, measurements and observations in an approved Operations and Maintenance (O & M) Manual (cf. Part I.F.2).

a. For systems which do not contain automated influent flow monitoring each lagoon and basin will be fitted with a staff gauge, reliable to 8 centimeters, or an approved alternative method, which marks the distance from the bottom of the respective cell to its crest.

b. Each staff gauge, or an approved alternative method, in the final infiltration basin will be prominently marked with a line at an elevation equal to the crest of the basin's embankment and with a line (free board limit and maximum operating level) 60 centimeters below the crest of the embankment.

c. NNSA/NSO will establish a routine schedule to visit each facility, no less than every two weeks. During this visit, the depth of the liquid in each basin shall be read from the staff gauge, or an approved alternative method. For each basin, the depth of liquid as the distance from the free board limit shall be recorded and reported quarterly.

d. The NNSA/NSO uses standardized flow equations to determine the estimated influent flow rates on those facilities without metering devices at the head works. To establish the flow rate estimates for the quarterly monitoring report, NNSA/NSO must use the fluid levels in the lagoon which are read on a routine schedule and recorded.

e. All basins shall maintain a 60 centimeter freeboard.

f. As a part of a routine schedule, each discrete facility shall be inspected with respect to:
   1. weeds and other rooting growth in the earthen embankment;
   2. tunneling or burrowing by mammals, insects, or reptiles;
   3. erosion or sloughing of the interior or exterior slopes of the embankment;
   4. the presence of floating debris or mats of biomass; and
   5. the physical condition of any existing perimeter fencing. However, fencing to protect the built facilities from damage by large or burrowing animals or by unauthorized access is not required at this time.

g. Each discrete treatment and disposal facility shall be posted. The signs shall face outward, readable from each access road, prominently announcing the presence of sewage.

h. Each regular, routine, or special inspection by the operator shall be noted in the Journal of Operations, to include the name of the inspector, date, time, and

discrepancies discovered by the inspector or the inspection team, including the general condition of the treatment lagoons, infiltration basins, and the collection system. A concise summary of the noteworthy and significant Journal findings must be included as narrative attached to the QMR.

I.D.2. When the liquid in a basin has risen above the freeboard mark, the NNSA/NSO shall notify by telephone the NDEP Las Vegas Office at (702) 486-2850. Not later than ten (10) days following the telephoned notice, the NNSA/NSO shall deliver to the Las Vegas Office a written notice. The written notice shall, for each qualifying lagoon or basin, include:

a. the findings of the conditions which have caused the liquid level to encroach into the freeboard; and
b. the NNSA/NSO's tentative plan, with schedule, to reduce the demand on the specific system, or to enhance its treatment capacity, or to enhance its rate of disposal, such that its freeboard is recovered.

I.E. SOLID WASTE

I.E.1. For the removal of lagoon sediments, the NNSA/NSO shall dry, sample and analyze the sludge from an infiltration basin or a lagoon. If the lagoon receives domestic sewage only, analyze for those constituents identified in 40 CFR 503. If the facility receives one or more industrial wastewaters, analyze for its Toxicity Characteristic (see 40 CFR 261.24), using the Toxicity Characteristic Leachate Procedure (see 40 CFR 261, Appendix I) for the contaminants listed in 40 CFR 261.24, Table 1.

I.F. OTHER CONDITIONS

I.F.1. The collection systems, lagoons, or infiltration basins shall not cause objectionable odors at a distance of 100 meters. If odor complaints are received, an investigation shall be conducted to determine that the facility is functioning as designed.

I.F.2. The NNSA/NSO shall operate the facilities in accordance with the approved Operations and Maintenance (O&M) Manual. For each new facility and each modification of an existing facility, the permittee must submit a letter to NDEP describing the new facility or nature of the pending change in status, provide the design calculations or any changes in existing design calculations if applicable, the time-line for the transition status of the facility, the effective date of completion, and must be attended by appropriate revision of the O&M Manual. A copy of the revised portion(s) must be submitted to NDEP of Environmental Protection at the address given in Part II.A.4 within 90 days of the revision. The List of Discrete Facilities, Part III.B, shall be amended to account for new facilities or modification of existing facilities, such that the text of the O&M Manual is congruous with Part III.B.

For those sewage lagoons the permittee closes, the permittee must include a provision in the O&M Manual to test the sludge according to Part I.E.1 prior to sludge removal. The permittee must submit the results of these analyses to NDEP within 120 days of sampling in the Quarterly Monitoring Report (Part II A.4).

NNSA/NSO must include a set of requirements based on the facility usage (i.e., population and effluent flow) in the O&M Plan. These requirements must identify when the facility will switch back to sewage lagoon treatment system, and what steps must be taken to re-start the system. For the re-activation of a full containment sewage lagoon, the permittee must demonstrate the liner meets the State regulatory requirements and permeability limit in force at that time.

I.F.3. No waste waters containing petroleum products will be discharged into treatment works without first being processed through an oil/water separator. Other methods require NDEP concurrence.

I.F.4. The NNSA/NSO, with concurrence of NDEP, may designate and re-designate idle or inactive facilities to receive septage and portable toilet waste containing antifreeze. Portable toilet waste without antifreeze, and sewage from holding tanks must be discharged into a sewage treatment works with a head works meter.

I.G. RELEASES

I.G.1. The NNSA/NSO shall report by telephone each bypass, spill, upset, overflow, or release of treated or untreated sewage before the end of the next regular day of business to NDEP by telephone at (702) 486- 2850.

I.G.2. A written report for each separate event reported in compliance with Part I.G.1 shall be submitted to the Las Vegas Office of NDEP not later than ten (10) days after the telephoned report. The written report shall present the details of the entire event, including:

a. time, date, and location of the event;
b. the estimated or actual quantity released;
c. a map or diagram of the flow path, depicting affected channels, tributaries to rivers or lakes, or other bodies of water of the state;
d. the specific cause or causes of the event;
e. the actions taken to protect the public health or to mitigate damage to the resources of the impacted area; and
f. the action or changes necessary to prevent recurrence of the event.

I.H. SCHEDULE OF COMPLIANCE

I.H.1. The permittee shall achieve compliance with the Influent Limitations and Regulatory

Levels upon issuance of the permit.

I.H.2. No later than 14 calendar days following a date identified in a schedule for new construction or for physical modification of existing facility, the NNSA/NSO shall submit either a written notice of compliance or a written notice of noncompliance. In the latter case, the notice shall include the cause, the known or expected effect upon the ability to comply with the terms and conditions of the permit or schedule, and the actions necessary to meet the next scheduled obligation.

I.H.3. Any errors or omissions in the listings of Part III.B shall be corrected by submission of the corrected or the omitted information not later than 45 days after issuance of this permit or upon later discovery.

I.H.4. Alternative methods for flow monitoring, sample collection or treatment shall be submitted to NDEP for review and concurrence within 180 days subsequent to two (2) consecutive quarters of the inability to monitor the systems as authorized by this permit.

I.H.5. All discharges authorized herein shall be consistent with the terms and conditions of this permit. Any discharge in an unauthorized location constitutes a violation of the permit.

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PART II

II.A. RECORDING AND REPORTING

II.A.1. Recording of Results

For each measurement, observation, or sample taken pursuant to the conditions of this permit, the NNSA/NSO shall record the following information:

a. the exact place, date, and time each sample was taken or measurement or observation made;
b. the person(s) who collected the sample, did the field measurement, or made the field observation;
c. the date(s) on which each sample was analyzed;
d. the analytical, observational, and measurement methods used;
e. the validated results of all required sample analyses, measurements, and observations; and
f. the identification of the Nevada-certified wastewater laboratory which performed each analysis.

II.A.2. Additional Monitoring

If the NNSA/NSO monitors any chemical, physical, biological, or radiological parameter at the location(s) designated herein more frequently than required by this permit, using approved monitoring and analytical procedures, the results of such monitoring shall be recorded.

II.A.3. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. Regarding contested issues all records and information shall be retained for three years after the contested issue is resolved.

II.A.4. Records Transmittal

Monitoring data, measurements, sample analyses, and observations obtained and recorded during each quarter of the calendar year shall be summarized in a QMR. The QMR must be transmitted, for receipt no later than the 28th day of the month following the completed quarter, to:

Bureau Chief,
Bureau of Federal Facilities
Nevada Division of Environmental Protection
2030 East Flamingo Road, Suite 230
Las Vegas, Nevada 89119-0837

II.A.5. Availability of Reports

Except for data determined to be confidential under NRS 445A.665, all reports submitted in accordance with the terms of this permit shall be available for public inspection at the Las Vegas Office of NDEP. Discharge data is not considered confidential.

II.A.6. Signatory Requirements

a. All reports required by this permit and all responses to relevant requests from the Administrator shall be signed by either the chief executive officer of the agency or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency or a delegate of the senior executive officer. A person is a delegated signator only if:
   (i) the delegation is made in writing by the chief or the senior executive officer;
   (ii) the delegation specifies the individual by name or by function; and
   (iii) a copy of the written delegation is on file with this permit in the office of NDEP.
b. The person signing a report or response to a request subsequent to this permit shall make the following certification:
   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
c. Knowingly making a false statement on any required report or written response may be cause to seek criminal penalties, as provided by NRS 445A.705.

II.B. MANAGEMENT REQUIREMENTS

II.B.1. Change in Discharge

a. Any anticipated facility expansions or treatment modifications or reductions or closures which will result in new, different, or increased capability to discharge must be reported by notice to the permit-issuing agency. Any changes to a treatment facility must comply with NAC 445A.283 to 445A.292.
b. Pursuant to NAC 445A.263, the permit may be modified to specify and limit any pollutants not previously controlled.
c. Upon request by the NNSA/NSO and after public notice, the terms and conditions of this permit or any consequent schedule of compliance can be revised or modified, if a good and valid cause (strike, flood, materials shortage or other event over which the NNSA/NSO has little or no control or which is reasonably unexpected) exists for such action. Modification necessary to comply with new

and relevant regulations does not require a public participation process.

II.B.2. Facilities Operation

a. The NNSA/NSO shall at all times maintain in good working order all treatment or control facilities, all disposal devices, and all collection systems, including all lift or pump stations, installed or used by the NNSA/NSO to achieve compliance with the terms and conditions of this permit.
b. The NNSA/NSO shall at all times effectively operate all treatment or control facilities, all disposal systems, and all collection systems, including all lift or pump stations, installed or used by the NNSA/NSO to achieve compliance with the terms and conditions of this permit.
c. The collection, treatment, and disposal facilities shall be configured and maintained in conformance with the engineering drawings and materials specifications approved by and in the files at NDEP.
d. If there are changes due to upgrading the liner, expansions, or other changes to sewage lagoon design specifications, all the parameters related to the operations must be recalculated and submitted to the State in writing 30 days prior to start of construction.

II.B.3. Transfer of Ownership or Control

This permit is exclusive to the NNSA/NSO, Nevada Test Site facilities and can not be transferred, assigned, or converted.

II.B.4. Re-issuance or Re-application

Not earlier than 270 days and not later than 240 days prior to expiration of this permit, NDEP, on its own accord, will initiate the process of re-authorization and will inform the NNSA/NSO of its intent to re-issue a general permit or its decision to require individual permits. If the decision is to not re-issue, then not later than 180 days before expiration of this general permit, the NNSA/NSO shall submit completed application forms for each operating and each inactive, discrete sewage treatment facility on the NTS, using the application forms then in use. Each facility for which an individual application has been submitted and which is basically in compliance with the existing conditions is authorized to continue to operate under the conditions of this general permit until issued an individual permit or until re-authorized by a newly-issued, general permit.

II.B.5. Right of Entry

The Administrator recognizes that prescribed levels of security clearance are necessary for lawful entry into certain facilities or areas of facilities on the NTS. With respect to such prescribed levels of security clearance, the NNSA/NSO shall allow the Administrator or his authorized representative:

a. to enter upon the NNSA/NSO premises where a source is located or in which any records are required to be kept under the terms and conditions of this permit;

b. at reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit;
c. to inspect any monitoring equipment or monitoring method required in this permit; or
d. to perform any necessary sampling to determine compliance with this permit or to sample any source.

II.B.6. Adverse Impact

The NNSA/NSO shall take all reasonable steps to minimize any adverse impact to the water of the state ensuing from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring necessary to determine the magnitude and effect upon the impacted resources of the state.

II.B.7. For the period of time that the Agreement-in-Principal (AIP) (or equivalent instrument) provides funding for divisional staff to conduct routine oversight and to inspect the facilities covered by this permit, the fees required by NAC 445A.232 shall be deemed to have been paid. If the AIP or funding through the AIP is terminated, in accordance with the time periods contained in paragraph 25 of the AIP, this permit shall also be deemed terminated. The NNSA/NSO is then required to apply for and obtain an individual permit for each of the facilities as required by NAC 445A.228, and pay the associated fees to the State at the time of application. These actions must be completed prior to permit termination, unless an extension in writing has been granted by the administrator.

II.B.8. Toxic Pollutants

If a toxic effluent standard or prohibition is promulgated by the State Environmental Commission for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit or any consequent schedule of compliance, this permit or affected schedule shall be revised or modified in accordance with the toxic effluent standard or prohibition and the NNSA/NSO so notified.

II.B.9. Liability

Nothing in this permit shall be construed to preclude any legal action or relieve the NNSA/NSO from any responsibilities, liabilities, or penalties established pursuant to any applicable federal, state or local laws, statutes, regulations, or ordinances. The conditions agreed to in this permit hereby supersede all previous agreements.

II.B.10. Property Rights

The issuance of this permit does not convey any property rights, in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws, statutes, regulations, or ordinances.

II.B.11. Severability

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

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Part III

III.A. Sewage Treatment Facilities

The terms and conditions of this Water Pollution Control Permit apply to all facultative lagoons, sewerage systems, and septage disposal systems (except leachfields) within the confines of the Nevada Test Site. Any waste water treatment or disposal facility on the NTS that is designed for operation in accordance with the conditions of this permit is eligible for inclusion in this permit. For each new facility that the NNSA/NSO believes meets the criteria for coverage under this general permit, an appropriate application must be submitted to NDEP for consideration. NDEP shall determine whether each such proposed facility can be authorized under this permit or whether an individual permit will be required.

III.B. List of Discrete Facilities in Active Mode

III.B.1. Area 23, Mercury

UTM Zone 81 Northing 20 379 029, Easting 1 832 409

a. (i) basin one (1) full containment, facultative lagoon with a surface area of 1.67 acres (0.68 hectares) at maximum operating depth; slopes are 4:1, depths from invert to crest are 10 ft (3.05 m), volume of operating range = 241,757 cubic feet or 1,808,584 gallons;
(ii) basin two (1) full containment, secondary basin with surface area of 3.42 acres (1.38 hectares) at maximum operating depth; slopes are 4:1, depths from invert to crest are 11.5 ft (3.51 m),
(iii) one (1) infiltration basin with surface area of 2.74 acres (1.11 hectares) at maximum operating depth; slopes are 4:1,

c. maximum design flow: 73,407 gal/day (277,845.5 L/day)
d. maximum operating depths: basin 1: 5.7 ft (1.74 m) and basin 2: 9.5 ft (2.9 m)
e. maximum loading: 254.5 lbs/day (115.4 kg/day)
f. High Density Poly Ethylene liner
g. facultative mode for treatment; full containment
h. total evaporation mode for disposal
i. reportable monitoring parameters:
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, total suspended solids (TSS), and pH (Part I.C.2), monthly influent flow, metered (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.4);

III.B.2. Area 6, Yucca Lake Complex

UTM Zone 81 Northing 20 483 237, Easting 1 824 024

a. two primary lagoons: combined surface area of 0.55 acres (0.222 hectare) at maximum operating depth; depth of 11.1 ft. (3.38 meters) from bottom to crest; slopes are 3:1; volume of operating range = 52,200 cubic feet or 390,508 gallons (1,478,073 L);

b. two parallel infiltration basins: combined surface area of 0.655 hectare at maximum operating depth; depth from bottom to crest of 9.84 ft. (3.0 meters) (#1 or north basin) and 10.83 ft. (3.3 meters) (#2 or south basin); slopes are 3:1;
c. maximum design flow: 10,850 gal/day (41,067 L/day)
d. maximum operating depth of basins: 6.56 ft. (2.0 meters)
e. maximum loading: 19.05 lbs/day (8.66 kilograms/day)
f. lagoons lined with Claymax; basins lined with impermeable native soil
g. facultative mode for treatment; full containment
h. total evaporation mode for disposal
i. reportable monitoring parameters:
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, metered (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.4);

III.C. List of Discrete Facilities in Stand-by Mode

III.C.1. Area 23, Gate 100
UTM Zone 81 Northing 20 375 504, Easting 1 834 409
a. two primary lagoons: combined surface area at maximum operating depth: 0.15 acres (0.0625 hectare); depth is 5.25 ft. (1.6 meters) from bottom to crest; slopes are 3:1; volume of operating range = 6,207 cubic feet or 46,435 gallons (175,757 L);
b. one secondary basin: surface area of 0.107 hectares at maximum operating depth; depth from bottom to crest of 6.23 ft. (1.9 meters); slopes are 3:1;
c. maximum design flow: 1,548 gal/day (5859 L/day)
d. maximum operating depth of basin: 4.26 ft. (1.3 meters)
e. maximum loading: 5.35 lbs/day (2.43 kilograms/day)
f. geosynthetic clay liner on lagoons and basin
g. facultative mode for treatment; full containment
h. total evaporation mode for disposal
i. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, calculated (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.5);

III.C.2. Area 5, RWMS
UTM Zone 81 Northing 20 764 222, Easting 1 709 372
a. two primary lagoons; combined surface area of 0.0598 acres (0.0242 hectare) at maximum operating depth; depth of 8.5 ft. (2.59 meters) from bottom to crest; slopes are 3:1; volume of operating range = 3,508 cubic feet or 26,243 gallons (99,330 L/day);
b. two secondary basins: combined surface area of 0.1888 acres (0.0764 hectare) at maximum operating depth; depth is 2.35 meters (7.71 ft.) from bottom to crest; slopes are 3:1;

c. maximum design flow: 875 gal/day (3,312 L/day)
d. maximum operating depth of basin: 3.28 ft. (1.0 meters)
e. maximum loading: 2.10 lbs/day (0.955 kilograms/day)
f. geosynthetic clay covered by gunnite
g. facultative mode for treatment; full containment
h. total evaporation mode for disposal
i. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
-Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, metered (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.4);

III.C.3. Area 6, Device Assembly Facility
UTM Zone 81 Northing 20 466 127, Easting 1 824 114
a. one primary lagoon: surface area of 0.4818 acres (0.195 hectares) at maximum operating depth; depth of 7.2 ft. (2.19 meters) from bottom to crest; slopes are 3:1; volume of operating range = 31,665 cubic feet or 236,886 gallons (L);
b. one infiltration basin: surface area of 0.4818 acres (0.195 hectares) at maximum operating depth; depth of 7.22 ft. (2.2 meters) from bottom to crest; slopes are 3:1;
c. maximum design flow: 3,080 gal/day (11,658 L/day)
d. maximum operating depth: 5.25 ft. (1.6 meters)
e. maximum loading: 16.2 lbs/day (7.60 kilograms/day)
f. compacted native soil
g. facultative mode for treatment; full containment
h. evaporation/infiltration mode for disposal
i. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c), lagoon depths (Part I.A.5); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, calculated (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.5);

III.C.4. Area 6, LANL/Tweezer Road Camp
UTM Zone 81 Northing 20 485 602, Easting 1 844 534
a. two primary lagoons: combined surface area of 0.316 acres (0.128 hectare) at maximum operating depth; depth of 10.8 ft. (3.29 meters) from bottom to crest; slopes are 3:1; volume of operating range = 39,168 cubic feet or 293,016 gallons (1,109,066 L/day);
b. two parallel infiltration basins: combined surface area of 1.384 acres (0.560 hectare) at maximum operating depth; depth of 11.48 ft. (3.5 meters) from bottom to crest; slopes are 3:1;
c. maximum design flow: 5,070 gal/day (19,190 L/day)
d. maximum loading: 11 lbs/day (5.01 kilograms/day)
e. maximum operating depth of basins: 6.56 ft. (2.0 meters)

f. lagoons lined with Claymax; basins lined with compacted native soil
g. facultative mode for treatment; full containment
h. evaporation/infiltration mode for disposal
i. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, metered (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.4);

III.C.5. Area 12, Area 12 Camp

UTM Zone 81 Northing 20 577 090, Easting 1 790 635

a. four primary lagoons: combined surface area of 3.435 acres (1.39 hectares) at maximum operating depth; depth of 9 ft. (2.74 meters) from bottom to crest; slopes are 3:1; operating depth restricted to 2.95 ft. (0.9 meters); volume of operating range = 117,428 cubic feet or 878,479 gallons (3,325,043 L);
b. five secondary basins: combined surface area of 1.238 acres (0.501 hectare) at maximum operating depth; depths from bottom to crest are 6.4 ft. (1.95 meters) for #1, 6.89 ft. (2.1 meters) for #2, 6.23 ft. (1.9 meters) for #3, 6.23 ft. (1.9 meters) for #4, and 5.91 ft. (1.8 meters) for #5 ; slopes are 3:1;
c. maximum design flow: 16,800 gal/day (63,588 L/day)
d. maximum operating depth of basins: #1, 4.43 ft. (1.35 meters); #2, 4.92 ft. (1.5 meters); #3, 4.27 ft. (1.3 meters); #4, 4.27 ft. (1.3 meters); and #5, 3.94 ft. (1.2 meters)
e. maximum loading: 119.2 lbs/day (54.2 kilograms/day)
f. compacted native soil
g. facultative mode for treatment; full containment
h. total evaporation mode of disposal: primary lagoons to receive and dispose all influent without discharge to secondary basins
i. infiltration basins 4 and 5 are approved for septage disposal
j. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, metered (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.4);

III.C.6. Area 25, Central Support Area (CSA)

UTM Zone 81 Northing 20 422 501, Easting 1 749 057

a. one primary lagoon: surface area of 0.467 acres (0.189 hectare) at maximum operating depth; depth of 7.3 ft. (2.23 meters) from bottom to crest; slopes are 3:1; volume of operating range = 33,749 cubic feet or 252,476 gallons (955,622 L);
b. one infiltration basin: surface area of 0.467 acres (0.189 hectare) at maximum operating depth; depth is 6.56 ft. (2.0 meters) from bottom to crest; slopes are 3:1;
c. maximum design flow: 7,989 gal/day (30,238 L/day)
d. maximum loading: 16.2 lbs/day (7.37 kilograms/day)

e. maximum operating depth of basin: 4.59 ft. (1.4 meters)
f. compacted native soil
g. facultative mode for treatment
h. evaporation/infiltration mode for disposal
i. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c), influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, calculated, (Part I.A.3 and Part I.D.1d), and calculated organic loading rates (Part I.A.5);
j. Waiver Conditions: NDEP requires the NNSA/NSO to implement the following Administrative Controls as a part of the waiver conditions (Part I.C.6) to operate this facility:
- list the average population using the facility in the quarter;
- the influent quantity shall not exceed 239,000 gallons (904,615 L) per month, averaged over each calender quarter, reported quarterly;
- list estimates of the amount of industrial cleaning chemicals discharged to lagoons, not to exceed 25 gallons per calender month, reported quarterly.

III.C.7. Area 25, Reactor Control Point
UTM Zone 81 Northing 20 430 751, Easting 1 756 357
a. one primary lagoon: surface area of 0.151 acres (0.061 hectares) at maximum operating depth; depth of 6.09 ft. (1.86 meters) from bottom to crest; slopes are 3:1; volume of operating range = 11,600 cubic feet or 86,780 gallons (328,462 L);
b. one infiltration basin: surface area of 0.161 acres (0.065 hectare) at maximum operating depth; depth of 5.91 ft. (1.8 meters) from bottom to crest; slopes are 3:1;
c. maximum design flow: 1,903 gal/day (7,203 L/day)
d. maximum loading: 5.3 lbs/day (2.41 kilograms/day)
e. maximum operating depth of basin: 4.27 ft. (1.3 meters)
f. compacted native soil
g. facultative mode for treatment; full containment
h. evaporation/infiltration mode for disposal
i. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
- Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, calculated (Part I.A.3 and Part I.D.1.d), and calculated organic loading rates (Part I.A.5);

III.C.8. Area 25, Engine Test Stand 1,
Currently approved as a de-watering site to receive only septage and portable toilet waste, with and without antifreeze.
UTM Zone 81 Northing 20 441 551, Easting 1 744 147
a. one primary lagoon: surface area of 0.144 acres (0.0581 hectare) at maximum operating depth; depth of 5.1 ft. (1.55 meters) from bottom to crest; slopes are 3:1; volume of operating range = 5,955 cubic feet or 44,549 gallons (168,618 L);
b. one infiltration basin: surface area of 0.144 acres (0.0581 hectares) at maximum

operating depth; depth of 4.92 ft. (1.5 meters) from bottom to crest; slopes are 3:1;

c. maximum design flow (allowable only when NNSA/NSO requests the facility be removed from stand-by mode): 1,428 gal/day (5,405 L/day)
d. maximum loading (**only when facility is removed from stand-by mode**): 4.99 lbs/day (2.27 kilograms/day)
e. maximum operating depth of basin (only when facility is removed from stand-by mode): 2.95 ft. (0.9 meters)
f. compacted native soil
g. facultative mode for treatment; full containment
h. evaporation/infiltration mode for disposal
i. reportable monitoring parameters (**only when facility is removed from stand-by mode**):
   - Quarterly: Physical inspections (Part I.D.1.f) and basin water depth (Part I.D.1.c); influent quality BOD_5, TSS, and pH (Part I.C.2), monthly influent flow, calculated (Part I.A.3 and Part I.D.1.d), and calculated organic loading rates (Part I.A.5);

III.D. Definitions relevant to this General Permit.

III.D.1. "Adverse impact" means intensive or chronic harm to the public health and welfare or to the natural resources of the state.

III.D.2. "Aquifer" means a geological formation, group of formations or part of a formation capable of yielding a significant amount of water, (NAC 445a.812 "Aquifer" defined).

III.D.3. "Basin" means an artificial impoundment of sewage for disposal by infiltration, by percolation, by evaporation, by transpiration, or any combination thereof; a basin is not fitted with an outfall pipe or effluent flume.

III.D.4. "Composite" sample means a homogeneous combination of discrete samples which better represents the resource or medium being monitored than would a single sample of the resource. A "time-weighted composite" sample means a combination of no fewer than four (4) equal volume grab samples obtained at equal time intervals for either (8) hours or for the duration of discharge, whichever is shorter. A "flow-weighted composite" means a combination of no fewer than 4 individual samples whose volume is proportional to the flow rate during the 24-hour period of compositing.

III.D.5. “Design flow” is the amount of influent to the lagoon or basin which it was designed to contain during the legally-permitted daily operation.

III.D.6. "Equal volume composite" means a set of grab samples from several locations within a single pond or from a single location in several ponds which are combined by equal volume proportions into a single sample.

III.D.7. “Facultative lagoon” is any treatment pond, around 4 to 10 feet deep, with an aerobic layer overlying an anaerobic layer. Principal oxygenation is via algae photosynthesis and surface (non-mechanical) re-aeration.

III.D.8. "Grab" sample means any discrete, single or individual sample collected in less than 15 minutes.

III.D.9 "Lagoon" means an artificial impoundment for the treatment of sewage, from which the treated sewage is discharged through a pipe or flume.

III.D.10. "Pond" is a body of water within an impoundment.

III.D.11. "Regulatory Levels" refers to regulatory concentrations when exceeded, requires a corrective response. Regulatory Levels are used by regulatory agencies to express a health or physical hazard.

III.D.12. "Total containment" means the facility has a liner system that has been engineered with the specific intent to significantly minimize the rate of loss of its liquid contents to the subsurface.

III.D.13. "Upset" is an unplanned, unexpected, or unintentional divergence from compliance with the terms and conditions for a brief period, due to circumstances which the NNSA/NSO could not expect and could not prevent. It does not include non-compliance which results from, inadequate preventive maintenance, inattentive management, inadequate or defective design, operator error; neglect, careless or improper operation, or other preventable causes of non-compliance.

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Appendix I: Constituents of Potential Concern

Organic Contaminants	Regulatory Level (mg/L)	Inorganic Contaminants	Regulatory Level (mg/L)
Benzene	0.5	Arsenic	5.0
Carbon Tetrachloride	0.5	Barium	100
Chlorobenzene	100.0	Cadmium	1.0
Chloroform	6.0	Chromium	5.0
Cresol, Total	200.0	Lead	5.0
1,2-Dichloroethane	0.5	Mercury	0.2
1,1-Dichloroethylene	0.7	Selenium	1.0
2,4-Dinitrotoluene	0.13	Silver	5.0
Hexachlorobenzene	0.13		
Methyl Ethyl Ketone	200.0		
Nitrobenzene	2.0		
Pentrachlorophenol	100.0	**Radioactive Parameters & pH Limit**	
Pyridine	5.0	Gross Alpha	15 pCi/L
Tetrachloroethylene	0.7	Gross Beta	50 pCi/L
Trichloroethylene	0.5	Tritium	20,000 pCi/L
Vinyl Chloride	0.2	Hydrogen ion activity	in the range of 6.0 to 9.0 SU

Sources: 40 CFR 261.24, Table 1, 40 CFR 133.102, and NDWS (NAC 445A.144).