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Advanced Materials Laboratory Hazards Assessment Document

Project Leader: Zeferino Banda
Author: Brent Barnett

Prepared by
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EXECUTIVE SUMMARY

This hazards assessment provides an evaluation of the chemical and radiological hazards at the AML as mandated by the Department of Energy (DOE) Order 5500.3A, Planning and Preparedness for Operational Emergencies.

The hazards assessment process developed scenarios and estimated consequences for those chemical and radiological materials determined to be hazardous. The results were used to develop the following information for use in Sandia National Laboratories/New Mexico (SNL/NM) Emergency Management Program for the AML.

- The greatest distance at which a postulated facility event will produce consequences exceeding the Early Severe Health Effects threshold is 23 meters. (This event involves the release of 2.5 liters of nitric acid.)

- The highest emergency classification is a General Emergency.

- The recommended protective response actions for a release of nitric acid in the AML are evacuation and accounting for personnel.

- The Emergency Planning Zone is a nominal area that conforms to physical/jurisdictional boundaries such as fence lines and streets.

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KEY to ABBREVIATIONS

AACL	Administrative Access Control Laboratory
ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ALOHA	Aerial Locations of Hazardous Atmospheres
AML	Advanced Materials Laboratory
CAMEO	Computer-Aided Management of Emergency Operations
CFR	Code of Federal Regulations
CRD	Confidential Restricted Data
CTF	Coyote Test Field
D_{ESHE}	Distance at which Early Severe Health Effects are reached
DOE	Department of Energy
DOT	Department of Transportation
EAL	Emergency Action Level
EMG	Emergency Management Guide
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ERPG	Emergency Response Planning Guidelines
ESHE	Early Severe Health Effects
FEMA	Federal Emergency Management Agency
GVW	Gross Vehicle Weight
KAFB	Kirtland Air Force Base
kV	Kilovolt
LANL	Los Alamos National Laboratory
LEPC	Local Emergency Planning Committee
MSDS	Material Safety Data Sheets
NFPA	National Fire Protection Agency
NOAA	National Oceanic and Atmospheric Administration
PAG	Protective Action Guide
ppm	Parts Per Million
SNL/NM	Sandia National Laboratories/New Mexico
SOP	Standard Operating Procedures
TLV	Threshold Limit Value
TWA	Time Weighted Average
UNM	University of New Mexico

1.0 INTRODUCTION

The purpose of the hazards assessment process is to document the impact of the release of hazards at the Advanced Materials Laboratory (AML) Facility that are significant enough to warrant consideration in Sandia National Laboratories' (SNL) operational emergency management program. This hazards assessment is prepared in accordance with the Department of Energy (DOE) Order 5500.3A[1] requirement that facility-specific hazards assessments be prepared, maintained, and used for emergency planning purposes.

This hazards assessment provides an analysis of the potential airborne release of chemicals associated with the operations and processes at the AML. The AML facility is leased by SNL from the University of New Mexico (UNM). The purpose of the facility is to provide a technical and teaching interface between SNL and UNM. Other tenants in the facility include the New Mexico Engineering Research Institute and the Alliance for Transportation Research, both located on the first floor. Los Alamos National Laboratories (LANL) is located on the second floor. The focus of the hazards assessment is the airborne release of materials as this requires the most rapid, coordinated emergency response on the part of the AML, SNL/NM, UNM, the City of Albuquerque, Bernalillo County, State of New Mexico, collocated facilities, and surrounding jurisdiction to protect workers, the public, and the environment.

A key objective of DOE's emergency management program is to ensure that all DOE facilities and operations develop and maintain emergency planning, preparedness and response capabilities, as well as effective public and interagency communications, to minimize consequences to workers and the general public from events involving the release of hazardous materials. If planning and preparedness for emergencies is to be adequate and appropriate, then the hazards that are specific to each facility and operation must first be identified and understood. The hazards assessment herein provides the technical basis for such planning.

The AML facility is a two story building located at 1001 University SE. Center 1800 leases the top and bottom flooors of the Southern wing for lab and office space. The 45,000 square meter laboratory opened in August of 1992 and is equipped with a broad range of state-of-the-art equipment for materials synthesis, processing and characterization. The area of concern are the laboratories that occupy the second story in the Southern wing of the building.

All chemical and radioactive materials within the AML have been identified. The entire inventory was screened according to the potential of each chemical to affect onsite and offsite individuals. Those materials that were determined hazardous were fully characterized, accident scenarios developed, and consequences estimated. The resultant consequences were utilized to determine the appropriate emergency planning zone (EPZ), emergency classes, and emergency action levels (EAL).

2.0 SITE AND FACILITY DESCRIPTION

2.1 AML/UNM Site

The AML facility is located South of the University of New Mexico's Main Campus. The AML is one block north of Stadium Drive on the West side of University in Southeast Albuquerque.

2.2 Weather and Climate

Albuquerque temperatures are characteristic of high-altitude, dry, continental climates. Sunshine is a predominant feature of SNL/NM and occurs approximately 75 percent of daylight hours. Maximum daytime temperatures during the winter of 1988 averaged near 10°C; summer daytime maximum temperatures averaged less than 32°C except in July when the maximum average reached 34°C.[2] Temperature extremes below -27°C or above 41°C occur infrequently.[3]

The average annual precipitation for Albuquerque is 21 centimeters; half of this precipitation occurs from July through September in the form of convective thundershowers. Winters are typically dry with less than 5 centimeters of precipitation normally recorded in a given month. This includes occasional snowstorms with accumulations of 20-to-30 centimeters of snow. The maximum observed precipitation in 24 hours occurred in September, 1983, when 5.7 centimeters of rain was recorded. The total annual precipitation of 33 centimeters for 1988 was 12 centimeters above the 30-year average of 21 centimeters. The average annual relative humidity recorded from 1951 to 1980 was about 43 percent, with the average humidity dropping to less than 20 percent in April, May, and June.

Strong winds, often accompanied by blowing dust, occur mostly in late winter and early spring. Wind speeds reach a maximum velocity of 28 knots on an average of 46 days per year. Every two years, a one-minute duration gust of 52 knots is expected.[4] The average hourly wind velocity at the Albuquerque International Airport recorded from 1951 to 1980 ranged from 6.7 knots in December to 9.6 knots during April.[5]

Tornado occurrences within the state of New Mexico vary from a minimum annual frequency of 0.2 to a maximum of 1.1.[6] Statistically, the highest frequency has been observed in the eastern half of the state. For the western half of the state, generally demarcated by the Rio Grande and the mountain ranges that parallel it on the east side, tornado frequencies are 0.3 or less. In the Albuquerque area, which lies west of the Sandia and Manzano Mountains, only two tornadoes have been reported in more than a 20-year span. These occurred within the center of the city of Albuquerque in the years 1985 and 1987 and are officially listed in the climatological records of the National Weather Service as "small tornadoes." Damage was light and no official wind readings are available.

In addition, one funnel cloud has been observed in the same 20-year period. This was reported in the Four Hills area of Albuquerque and it did not cause any reported damage. Based on the climatological records available, Albuquerque can be classified as a region of low occurrence with an annual frequency of 0.1 or less.

2.3 Air Quality

Albuquerque is situated in the Rio Grande Valley, which is flanked by the Sandia and Manzano Mountains on the east and the Puerco Plateau on the west. This protects the Rio Grande Valley from

many passing storms and reduces much of the air flow that would carry air pollution away from the metropolitan area.[7] During many winter nights, the air in the metropolitan area becomes very stable and still, creating a temperature inversion which traps the pollutants emitted into the colder air at ground level. During the winter months, Albuquerque occasionally exceeds the ambient standards for carbon monoxide. Air quality has been improving, with fewer violations of the standards being reported over the past few years basically because of implementation of the Albuquerque/Bernalillo Air Pollution Control Program.[8]

2.4 Geology: Surface and Subsurface Features

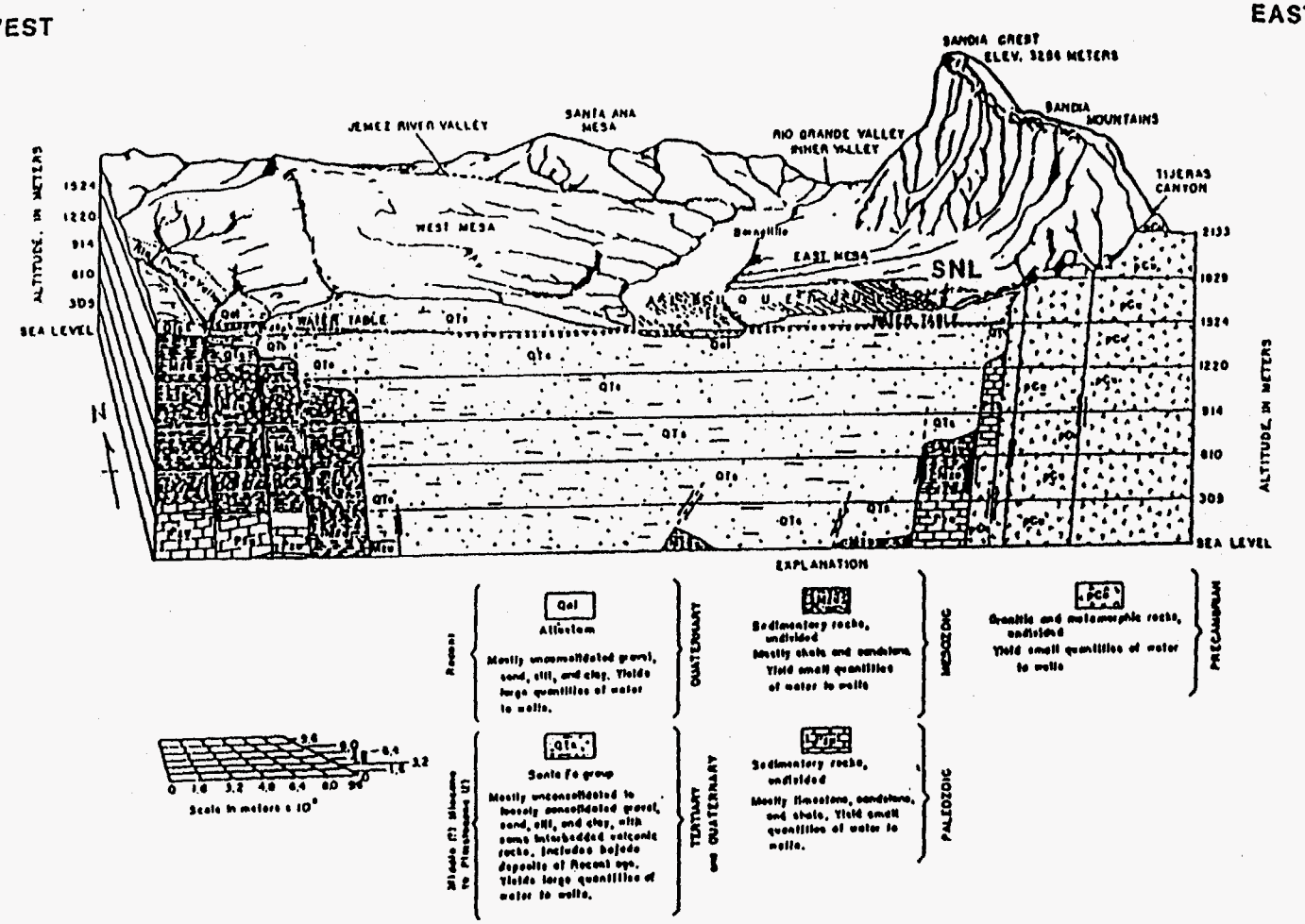
Albuquerque is located in the Rio Grande Rift Valley of the Basin and Range physiographic province. The Rio Grande Rift is a structural feature that trends north-south from southern Colorado to El Paso, Texas.[9] The SNL/NM area is situated on the East Mesa in the east-central portion of the Albuquerque-Belen basin segment of the rift (Illustration 2.4-1). The basin is bounded on the east by the fault-block Sandia and Manzano Mountains, which consist of Precambrian granites, schist, gneisses, quartzite, and metavolcanics; on the west by the Lucero uplift and Puerco plateau; on the north by the Nacimiento uplift; and on the south by the Socorro Channel.

Large-scale faulting, deepening of the basin and tilting of the mountains in the late Miocene period have resulted in a differential vertical movement of 6,000 to 7,000 meters on the eastern basin border.[11] Both concurrent with and subsequent to the structural changes, the basin began to fill due to a complex mixture of eolian, channel, debris flow, levee, and flood plain-type mechanisms[12] resulting in a complex sequence of gravel, sand, silt, clay, and caliche deposits known as the Santa Fe Formation. The basin, which consists primarily of Tertiary and Quaternary deposits, is estimated to be 1,200 to 1,500 meters thick (Illustration 2.4-2).

The Rio Grande Rift between Albuquerque and Socorro is the most seismically active area in New Mexico. Seismic records date back to 1849, when the first reported earthquake occurred in Socorro; however, complete instrumental records are available only after 1962.[10] Instrumental data since 1960 indicate a maximum probable local magnitude shock (M_L) within a 100-year period of 4.2 to 4.9 on the Richter scale.[11]

The Albuquerque area is located in Seismic Risk Zone 2B (Illustration 2.4-3) in which moderate damage from earthquakes (corresponding to Intensity VII of the Modified Mercalli Intensity Scale of 1931) may be expected to occur.

The largest recorded earthquakes in the Albuquerque-Socorro area have been measured at 4.7 on the Richter scale. An earthquake of this magnitude occurred on January 4, 1971, with the epicenter in the Albuquerque area. Minor damage to buildings was reported by the University of Albuquerque (now St. Pius High School).



From ERDA, 1977.

Illustration 2.4-1 Tectonic Map of the Middle Rio Grande Depression

Two other earthquakes with magnitudes of approximately 4.7 on the Richter scale occurred on November 28, 1970, and January 4, 1990, near the town of Bernardo, New Mexico, 65 miles south of Albuquerque. Damage to the Bernardo area was the only damage reported.

The fault zones along the eastern and western sides of the Albuquerque-Belen Basin were active in Miocene times and appear to have become stable since the mid-Pleistocene. Present seismic activity shows little correlation with the Albuquerque area fault zones, but is concentrated more with the mountains west of Socorro, 120 kilometers south of Kirtland Air Force Base (KAFB).[12]

Numerous small volcanic centers occur along a line paralleling the axis of the Albuquerque basin to the west of the metropolitan area. The volcanoes include five small cones and 13 nubbins, the largest of which protrude about 180 feet above the ground surface. At least eight flows (andesite and basalt) occurred in the volcanic field, which was active only for a short period approximately 190,000 years ago.

2.5 Water Resources

2.5.1 Surface Water

The East Mesa has a generally west-southwestward ground surface slope ranging from about 47 meters per kilometer near the mountains to 3.8 meters per kilometer near the river. The distance from the foot of the mountains to the river varies from 4.8 kilometers in the northern part of the mesa to 14.5 kilometers in the southern part of the mesa.[13]

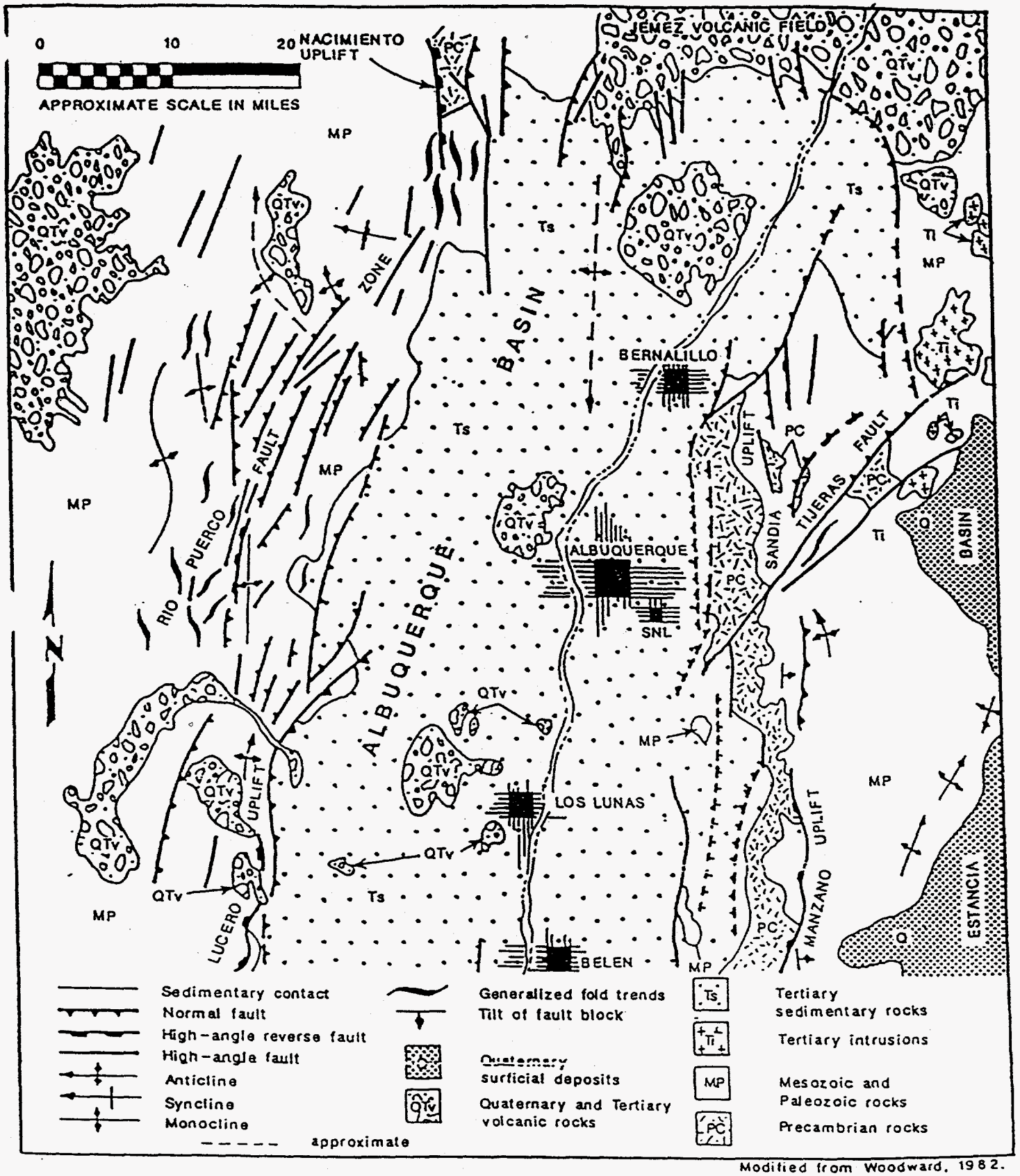
Tijeras Arroyo, the major drainage of the East Mesa area, originates in the mountains and joins the Rio Grande at approximately 16 kilometers south of Albuquerque, cutting across the eastern part of KAFB. In addition, numerous small drainages emerge from the mountains onto the mesa. In general, very little of this surface water reaches the Rio Grande[14] because most surface water runoff enters the permeable deposits of the Quaternary-Tertiary alluvium or is evaporated or transpired.

During heavy precipitation, the elevated interfluvial regions drain by sheet flow into small gullies and rivulets. This water is carried by natural or artificial flow paths into Tijeras Arroyo and eventually reaches the Rio Grande. Occasional flooding is likely within these gullies and arroyos. The Army Corps of Engineers has estimated that a 100-year flood will reach a crest of approximately 1572 meters.

2.5.2 Subsurface Water

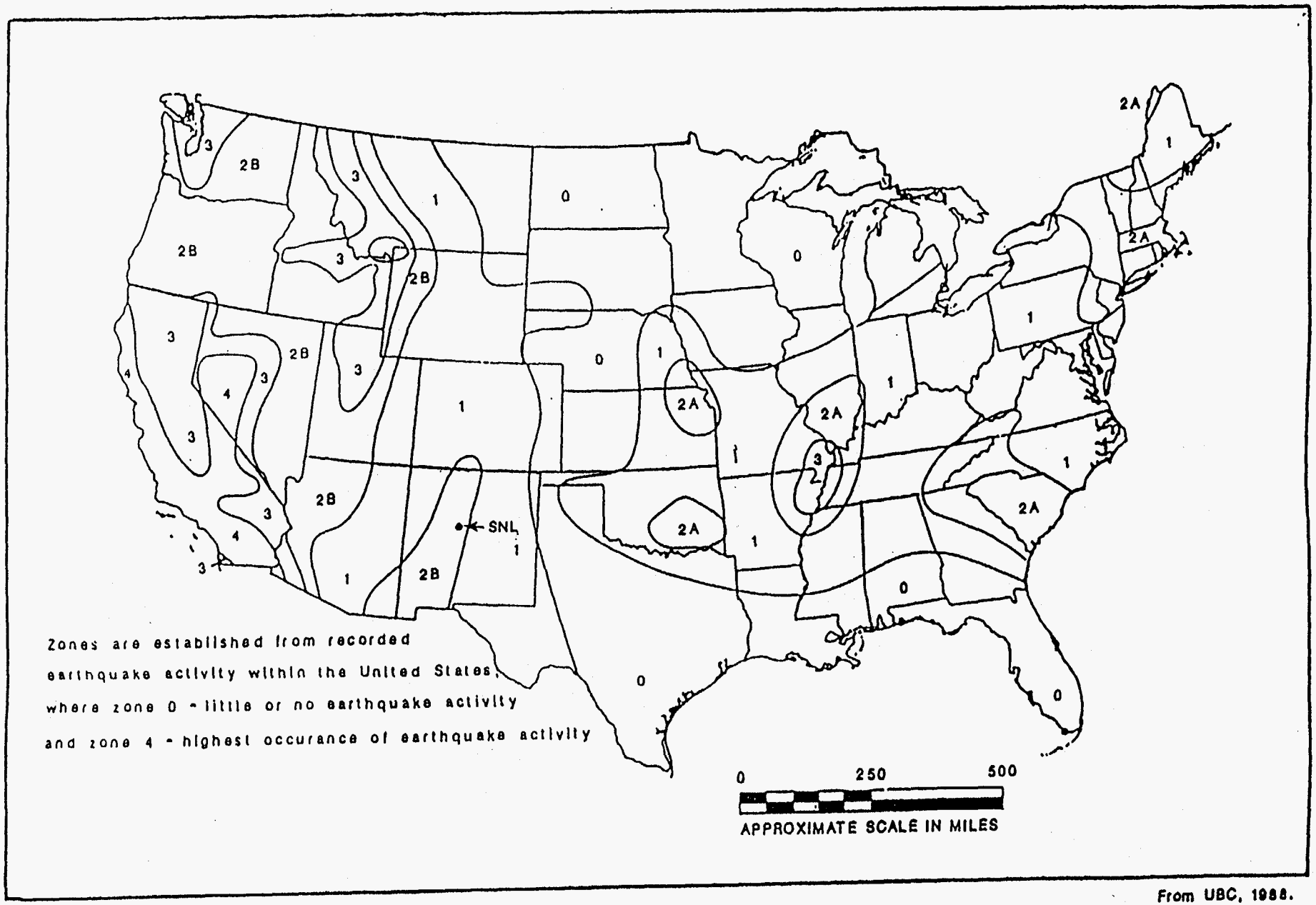
The major subsurface reservoir beneath the Albuquerque area is composed of basin fill material of the Rio Grande (for deposits and alluvial material of Quaternary and Tertiary age) with a depth to bedrock of nearly 1.6 kilometers throughout most of the basin (Illustration 2.4-1). The alluvial aquifer is bounded on the west by the Lucero uplift and on the east by the Sandia-Manzano Mountains.[15]

Groundwater in the alluvial aquifer generally occurs under unconfined conditions and flows in a southward direction under an overall gradient of approximately two meters per kilometer. The transmissivity of the alluvial aquifer is estimated to be 2,480 square meters per day, and storativity (quantity of water that the aquifer will release from or the quantity that will be taken into storage per unit surface area of the aquifer per unit of head) is approximately 0.2 . The groundwater flow velocity is approximately six meters per year.[16]



Modified from Woodward, 1982.

Illustration 2.4-2 The Basin, Albuquerque, NM



From UBC, 1988.

Illustration 2.4-3 Seismic Risk Zone 2B, SNL/NM

The alluvial aquifer is recharged principally by the Rio Grande. The aquifer also receives recharge at the base of the mountains where small canyons open onto alluvial fans and the alluvium is relatively coarse. Relatively little water percolates into the aquifer through the unsaturated zone, as most runoff from precipitation ultimately flows into drainages and into the Rio Grande, or is lost through evapotranspiration.

The greatest water level changes from 1960 to 1978 in the Albuquerque area were recorded on the east side of the Rio Grande. In the future, water levels will continue to decline on both the east and west sides of Albuquerque due to increased population. Total decline of the water table by the year 2000 will probably not exceed 37 meters of fresh-water saturation in the aquifer beneath the Albuquerque area.[17]

2.6 Flora and Fauna

The vegetation in this area is typical of an arid grassland. While more than 50 grasses may be found within this grassland association and the surrounding area, only a small number of species are abundant. The homogeneous nature of the vegetation does not support a high diversity of wildlife. Small mammals, reptiles, and birds are the most abundant species found. The New Mexico Energy, Minerals and Resources Department[18] lists two state endangered species of cacti as potentially occurring in the area—the grama grass cactus and Wright's fish-hook cactus. The New Mexico Game and Fish Department's *Handbook of Species Endangered in New Mexico* lists four endangered animal species that may occur in Bernalillo County.

2.7 Demography

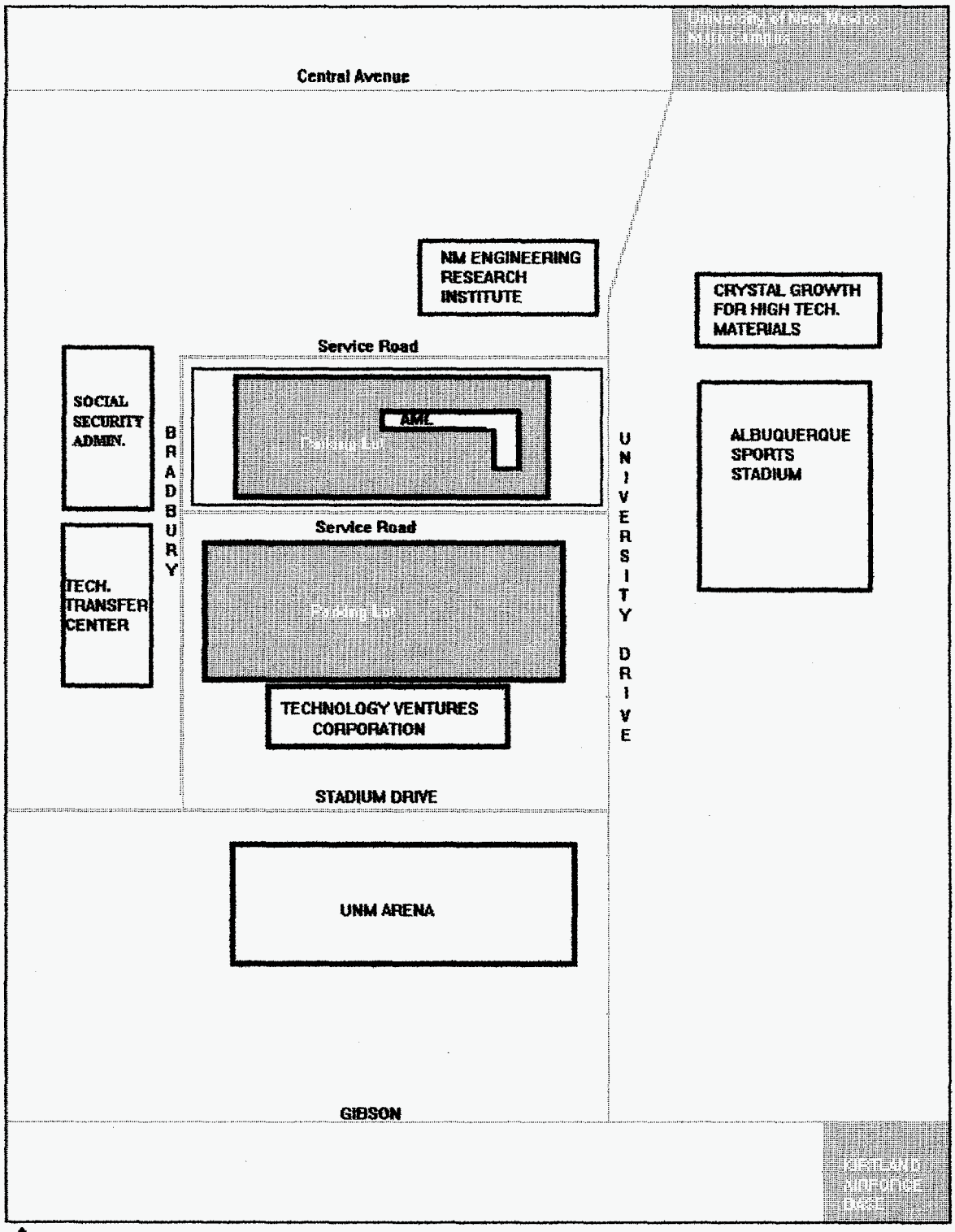
The AML is located in Albuquerque, New Mexico in Bernalillo County. The population of Bernalillo County in 1990 was 480,577.[19] Albuquerque had a population of 384, 736 in 1990.[20] To the south of Albuquerque is the Isleta Indian Reservation, which had a population of 2,915 in 1990,[21] and Valencia County. Valencia County is a rural and sparsely populated area. The most recent population figure for Valencia County is 45, 235.[22]

2.8 Description of AML and Boundaries

The Advanced Materials Laboratory Facility is located at 1001 University SE in Southeast Albuquerque. Visitors are required to sign in at the front desk on the lower floor. However, the general public can gain access to the lower floor of the southern wing where the office areas are located and the laboratories that reside on the upper floor of the building.

The AML contains office areas, laboratories, and meeting rooms for presentations.

The AML facility/ site boundary is defined as 30 meters which is the distance from the southern exterior wall to the service road (Illustration 2.8-1). This is consistent with Sandia's employment of a conservative 30 meter facility boundary for all facilities analyzed in the hazards assessment process. The 30 meter facility/site boundary was established in consonance with emergency planning practices and is described in detail in Section 3.1.1.1, Chemical Hazard Dispersion Modeling. The 30 meter facility/site boundary is utilized in Section 6.0 for determining the emergency classification.



⇑ N

Note: The Facility/Site Boundary is denoted by the blue line that surrounds the parking lot of the AML.

Illustration 2.8-1 Facility/Site Boundary

2.9 Facility Mission

The mission of the UNM/SNL Advanced Materials Laboratory is:

- to promote collaboration among Sandia, UNM, and US industry in materials and process research development, and application;
- to further Sandia, DOE, and UNM missions in science and engineering education;
- to transfer materials and process technology to US industry;
- to work on projects that will benefit the Nation and the state of New Mexico.

2.10 Description of AML

The AML is a two story structure that contains both office areas and laboratories. The first floor of the AML contains office areas, conference rooms, and laboratories. The second floor contains offices and laboratories. Illustrations 2.10-1 and 2.10-2 show the layout of the offices, conference rooms, and laboratoris on the first and second floors of the AML.

2.11 AML Processes and Operations

Processes and operations in the AML support the facility mission of providing a technical interface between SNL and UNM. The AML participates in the following processes:

Synthesis
- class 100 and 1000 clean rooms for chemical preparation
- aerosol synthesis
- synthesis in hydrothermal and supercritical fluids
- noble gases

Processing
- fine powders
- processing of materials, films, and fibers
- electroceramic films from solution
- chemical sensors
- advanced battery materials

Characterization and Analysis
- ion microprobe
- electron-spin resonance spectroscopy
- NMR
- RAMAN spectroscopy
- X-ray photoelectron spectroscopy
- thermal analysis (DTA, DSC, DMA)
- Auger electron spectroscopy
- imaging ellipsometry
- dynamic light scattering
- electron microscopy

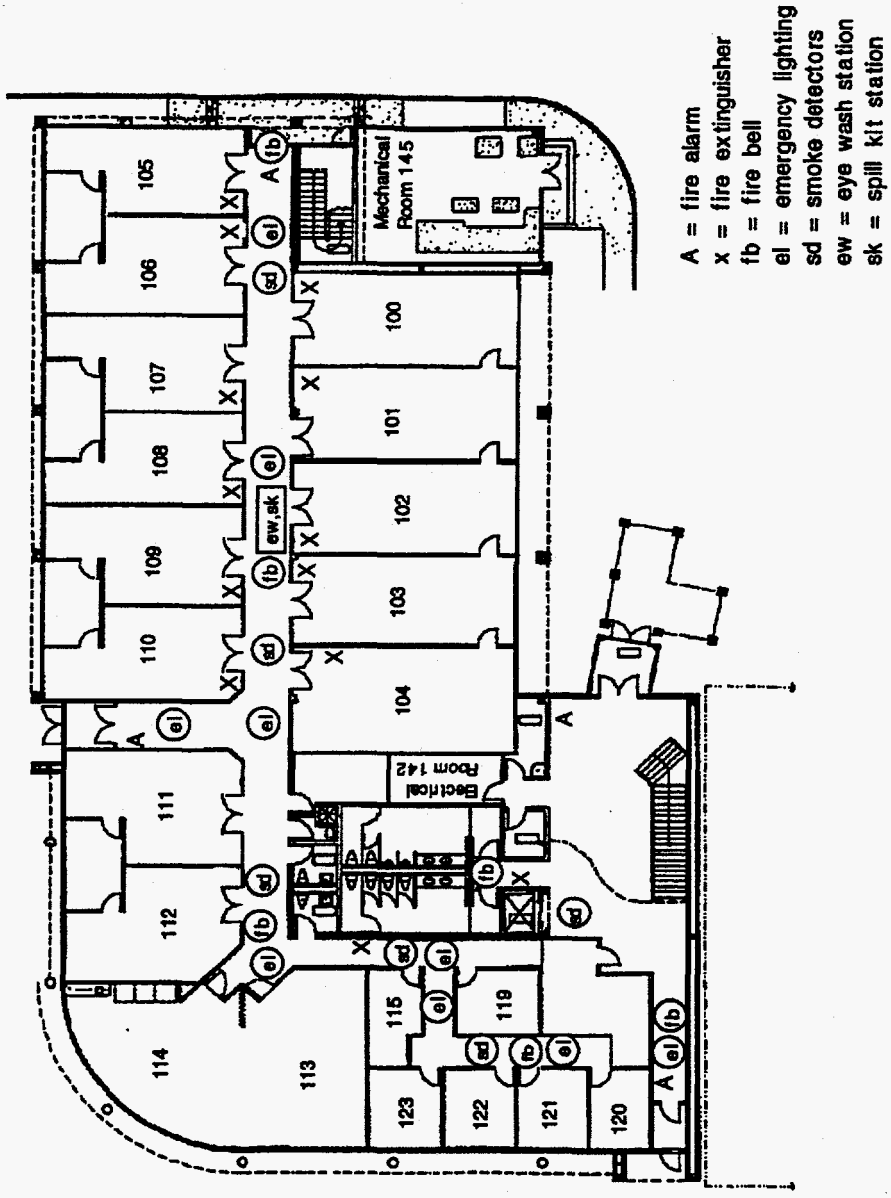


Illustration 2.10-1 Floor plan of the First Floor of the AML

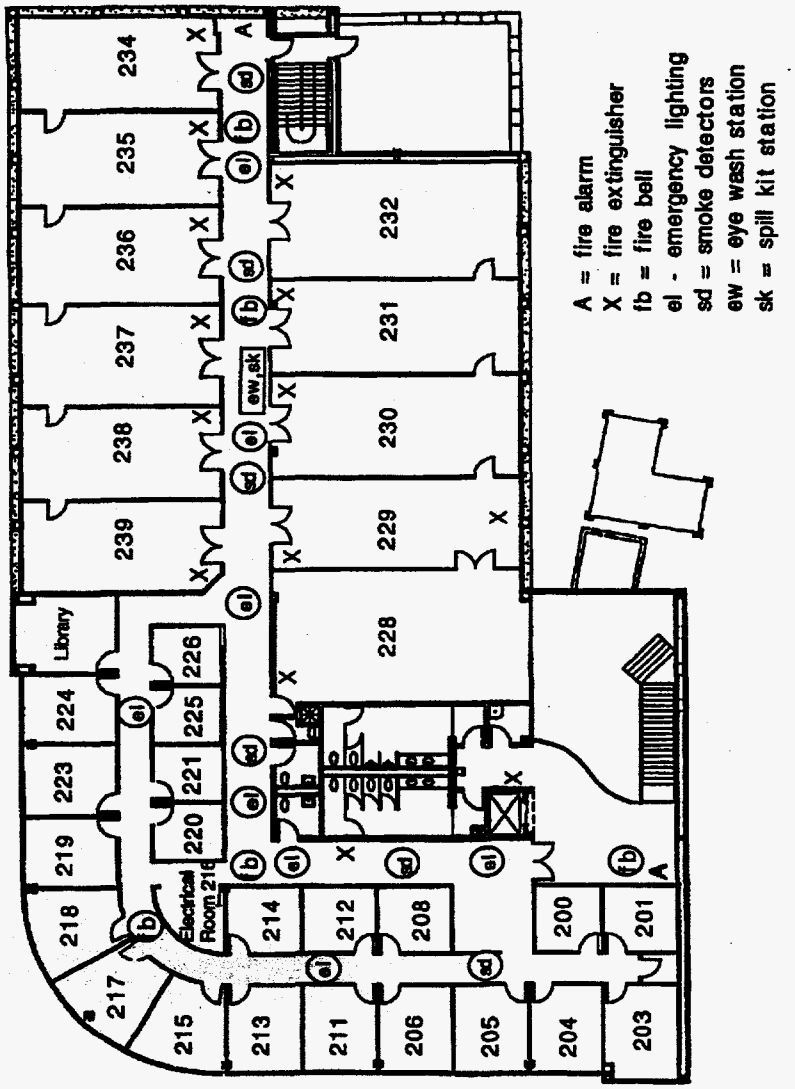


Illustration 2.10-2 Floor plan of the Second Floor of the AML

2.11.1 Thin Film Characterization Laboratory-AML/228

The Thin Film Characterization Laboratory-AML/228 is located on the second floor of the AML. The chemical of concern located in this lab is:

- nitric acid, 100% - 2 liters

Principle Hazards
The principle hazards associated with the lab include a high voltage electrical hazard; pressure hazards due to the presence of compressed gas cylinders; and vacuum hazards due to the presence of a Schlenk line. A Schlenk line is a vacuum system in which glass-lined tubes are used to move chemicals from a container to an experiment, and then if necessary, to a disposal container.

Safety Features
The lab features a chemical fire extinguisher located on the East wall of the laboratory next to the door. It also includes access to a safety shower and eye wash in the hallway South of the lab door. A drench hose is located in the lab on the sink on the North wall. A spill kit is located in the Ceramic Precursor Synthesis Laboratory on the West wall adjacent to the Thin Film Characterization Laboratory entrance.

Critical Equipment
The Schlenk line vacuum manifold is to be manually shutdown in the event of a loss of power.

2.11.2 Ceramic Precursor Synthesis Laboratory-AML/229

The Ceramic Precursor Synthesis Laboratory-AML/229 is located on the second floor of the AML. The chemicals of concern located in this lab are:

- bromine - 150 milliliters
- hexane - 16 liters

Principle Hazards
The principle hazards associated with the lab include a high voltage electrical hazard; pressure hazards due to the presence of compressed gas cylinders; and vacuum hazards due to the presence of a Schlenk line, dry box, and stills.

Safety Features
The lab features a chemical fire extinguisher located on the East wall of the laboratory next to the door. It also includes access to a safety shower and eye wash in the hallway South of the lab door. A drench hose is located in the lab on the sink on the North wall. A spill kit is located in the lab on the South wall by the back exit.

Critical Equipment
The Inert Atmosphere Box is to be shutdown in the event of a loss of power or gas. The Schlenk line vacuum manifold is to be shutdown in the event of a loss of power.

2.11.3 Ceramics Processing Laboratory-AML/232

The Ceramics Processing Laboratory -AML/232 is located on the second floor of the AML. The chemicals of concern located in this lab are:

- hydrofluoric acid, 49% - 4.73 liters
- nitric acid, 70% - 500 milliliters
- nitric acid, 90% - 1 liter
- nitric acid, 100% - 2 liters

Principle Hazards
The principle hazards associated with the lab include a high voltage electrical hazard and a pressure hazard due to the presence of compressed gas cylinders.

Safety Features
The lab features an A,B,C fire extinguisher located on the East wall of the laboratory next to the door. It also includes access to a safety shower and eye wash in the hallway North of the lab door. There is also a drench hose and eye wash next to the sink in the lab. A spill kit is located on the top shelf on the East wall.

Critical Equipment
There is no critical equipment listed for the Ceramics Processing Laboratory.

2.11.4 Material Chemistry Laboratory-AML/236

The Material Chemistry Laboratory-AML/236 is located on the second floor of the AML. The chemicals of concern located in this lab are:

- nitric acid, 69/71% - 2.5 liters
- silver flake powder #750 - 600 grams

Principle Hazards
The principle hazards associated with the lab include a common operating voltage (< 240 V) electrical hazard; pressure hazards due to the prescence of compressed gas cylinders; thermal hazards due to the prescence of furnaces and ovens; and vacuum hazards due to the prescence of a Schlenk line. A Schlenk line is a vacuum system in which glass-tubes are used to move chemicals from a container to an experiment, and then if necessary, to a disposal container.

Safety Features
The lab features an A,B,C fire extinguisher located on the Southwest wall of the laboratory next to the door. It also includes access to a safety shower and eye wash in the hallway North of the lab door. There is also a drench hose and eye wash next to the sink in the lab. A spill kit is located under the sink in the lab.

Critical Equipment
The Schlenk line vacuum manifold is to be manually shutdown in the event of a loss of power. Any reflux reactions in progress in the hood will be shutdown in the event of a loss of water supply.

2.11.5 Membrane Characterization Laboratory-AML/238

The Membrane Characterization Laboratory-AML/238 is located on the second floor of the AML. The chemicals of concern located in this lab are:

- nitric acid, 70% - 2.5 liters
- nitric acid, 90% - 2.5 liters
- vinyl acetate - 4 liters

Principle Hazards
The principle hazards associated with the lab include a common operating voltage (< 240 V) electrical hazard; pressure hazards due to the prescence of compressed gas cylinders, vacuums, and pressure reactors; and thermal hazards due to the prescence of furnaces and ovens.

Safety Features
The lab features an A,B,C fire extinguisher located on the West panel of the central equipment race. It also includes access to a safety shower and eye wash in the hallway West of the lab door. There is also a drench hose at the sink on the South bench in the lab. Spill kits are located in the hallway West of the lab and in the lab on the North bench.

Critical Equipment
There is no critical equipment listed for the Ceramics Processing Laboratory.

3.0 IDENTIFICATION AND SCREENING OF HAZARDS

This section outlines the processes used to identify both onsite and offsite hazards significant enough to warrant consideration in the SNL/NM emergency management program for the AML and to screen out those hazards that pose minimal risk to the health and safety of the onsite worker and the general public. Those hazards identified by the screening process that pose a significant risk are further evaluated in Section 4.0.

3.1 Identification and Screening of Onsite Hazards

For the purpose of emergency planning, onsite hazards of primary concern are those hazardous materials that if released to the environment may:

- immediately threaten those who are in close proximity to the release,
- have the potential for dispersal beyond the immediate vicinity in quantities which threaten the health and safety of onsite personnel or the public in collocated facilities and/or offsite,
- and have a rate of transport and dispersion sufficient to require time-urgent emergency response to implement protective actions.

The process of identifying the onsite hazards at AML consisted of the following steps: (a) reviewing the most current Preliminary Hazard Assessments (PHAs), (b) reviewing past chemical inventories to determine the maximum historical quantities, (c) reviewing the most recent chemical inventories, and (d) conducting walkthroughs of the facility to verify that the current inventory was complete and accurate.

The following primary sources of information were used to complete the hazard identification and screening process. Based on this information, a comprehensive list of hazardous materials was compiled for AML. The complete list was then screened to determine which hazards required further evaluation.

- Preliminary Hazard Assessments
- Standard Operating Procedures (SOPs)
- Chemical Inventories
- Material Safety Data Sheets (MSDSs)

3.1.1 Screening Criteria

The Emergency Management Guide (EMG) for Hazards Assessments states, in part, "... screening quantities or thresholds should be used to eliminate the need to analyze insignificant hazards."[23] Using this guidance from the EMG and other applicable documents, the following screening criteria were developed and utilized to screen chemical and radiological hazards.

3.1.1.1 Chemical Hazards

Standard Industrial Hazard (SIH)

In accordance with 40 Code of Federal Regulations (CFR), Part 355.20, "Any substance used for personal, family, or household purposes, or is present in the same form and concentration as a product packaged for distribution and use by the general public" is not considered a hazardous chemical.[24]

Therefore, for the purpose of hazards assessments, such chemicals can be eliminated from further evaluation.

Quantity of Material

The quantity at which a chemical does not require evaluation is one pound. This was established based upon 40 CFR Part 302, the Hazardous Substances and Reportable Quantities[25] and 40 CFR Part 355, Appendix A, the Extremely Hazardous Substances and Threshold Planning Quantities[26] in which no listed chemical had a quantity less than one pound.

Toxicity of Material

For those chemicals exceeding one pound, the MSDS and/or the Hazardous Chemical Desk Reference[27]are reviewed to determine if a chemical is hazardous due to its toxicity. Occupational exposure limits are reviewed to determine the toxicity. Those chemicals determined to be non-toxic are screened from further evaluation.

Dispersibility

A chemical is removed from further evaluation if it is determined to be non-dispersible. In order for the chemical to be non-dispersible, it must meet at least one of the following criteria:

- have a boiling point of greater than 100° C,
- be a powder of greater than 10 microns, or
- cannot conceivably be involved in a high energy event such as a fire or explosion.

Dispersion Modeling

Dispersion modeling allows chemicals to be analyzed to determine toxicity levels at various distances. This hazards assessment is primarily concerned with Emergency Response Planning Guidelines (ERPGs) published by the American Industrial Hygiene Association (AIHA) [41]. The ERPG levels in ascending order of severity are ERPG-1, ERPG-2, and ERPG-3. The level of concern used in the screening criteria is an ERPG-1. The ERPGs are discussed in detail in Section 6.2.1 of this document.

A chemical is removed from further evaluation if it does not exceed an ERPG-1 at 30 meters. The distance of 30 meters was selected because the facility boundaries existing at all SNL/NM facilities are, at a miniumum, 30 meters. An ERPG-1 at 30 meters or greater would constitute a minimum of an Alert emergency classification. Emergency classifications are described in Section 6.2.2 of this document.

The dispersion modeling is performed through the Areal Locations of Hazardous Atmospheres (ALOHA) model. ALOHA allows two types of dispersions: heavy gas and gaussian. If unsure which dispersion type should be used, ALOHA gives the option to let the model decide. The infiltration building parameter that should be used in the screening process is 60 air changes per hour. In addition, "worst case" meteorological conditions should be employed for the purpose of modeling (i.e., wind speed of 1 m/s, 10% cloud cover, F stability, 50% humidity, and 20° C).

3.1.1.2 Radiological Hazards

For radioactive materials, the screening criteria is based on 10 CFR, Part 30.72, Schedule C[28] which lists radioactive materials that require consideration for emergency planning. Any radioactive materials that exceed the quantity in curies in 10 CFR, Part 30.72, Schedule C, are kept for further evaluation and characterization. All other radioactive materials are considered insignificant hazards and are removed from further evaluation.

3.2 Identification and Evaluation of Offsite Hazards

The objective of the hazards assessment is to determine the type and extent of planning and preparedness that is appropriate for each facility and site. Hazards originating outside the DOE facility and site that could impact the health and safety of onsite personnel or other DOE interests are identified and examined. Offsite facilities, airways, highways, railroads, and utility transportation arteries (i.e. pipelines) are considered as possible locations of hazardous material accidents.

The Local Emergency Planning Committee (LEPC) for the City of Albuquerque, on which Sandia is represented, is headquartered in the Albuquerque Fire Department, with an assistant Fire Chief being the chairman of the committee. The Assistant Fire Chief was consulted to provide assistance in identifying nearby facilities in the city of Albuquerque that have hazardous material inventories that could potentially impact the Sandia Albuquerque site. Railroads, highways, and other transportation arteries near the facility or site were considered as possible locations of hazardous material transportation accidents. The effects on the facility of hazardous material events originating offsite were estimated and used as the basis for determining whether specific arrangements should be made with offsite authorities for notification of releases and joint response.

3.2.1 Offsite Facilities

The following offsite facility with a hazardous materials inventory large enough and within a reasonable distance of SNL/NM that could have a negative impact on the operation of SNL/NM has been identified.

- The City of Albuquerque water treatment plant is located approximately 6.4 kilometers from the AML Site Boundary. This facility has the capacity to store up to 45, 360 kilograms of liquid chlorine in two 22,680 kilogram capacity tanks.[29] Chlorine is used to treat the municipal water system for biological contaminants prior to distribution. Liquid chlorine has a density that is greater than air. In the event of a release of the chlorine stored at the water treatment plant, the AML would most likely not be impacted due to the increase in elevation between the AML and the water treatment plant.

- As stated before, the New Mexico Engineering Research Institute, Los Alamos National Laboratory, and the Crystal Growth for High Technical Materials facility are all located near the AML. Each facility is responsible for their own hazard assessment for emergency planning. When the information regarding the hazards at these facilities becomes available, it will be incorporated into this section of the hazard assessment.

3.2.2 Airways

Due to the close proximity of the Albuquerque International Airport to the AML, an airplane crash scenario will be considered as an initiating event and considered an offsite hazard. The Albuquerque International Airport is utilized by commercial air carriers, the military, and general aviation aircraft. The carrier aircraft are jet transports, of which the largest currently in use at the airport is the Lockheed 1011. The military aircraft are primarily jet fighters but also include other aircraft ranging from small helicopters to the Lockheed C-5. General aviation aircraft include light single and twin engine airplanes.

Due to safety and noise abatement considerations, the preferred directions for takeoffs and landings is to the south, east, and west of the airport. However, takeoffs and landings from the north do occur. In the unlikely event of an airplane crash at SNL/NM, the SNL/NM, KAFB, and the City of Albuquerque emergency response teams would jointly respond. For the purpose of hazards assessments, the airplane crash scenario could serve as a possible initiating event which fails all mitigative barriers.[30]

3.2.3 Highways

Two major transportation routes are proximal to Albuquerque. These are U.S. Interstate 40, approximately 4.0 km to the north, and U.S. Interstate 25, approximately 0.31 km to the west of the AML.

Truck accident statistics (1989-1990) from the Motor Carrier Division of the National Highway Safety Council indicate the average accident rate for medium to heavy vehicles (>10,000 pounds Gross Vehicle Weight) to be one accident per 2.2 million miles.[31]

The accident rate may appear to be statistically quite low. However, because of the size of the transportation routes surrounding AML and the high volume of truck traffic on the roads, the potential for a vehicle accident involving hazardous materials is considered to be a credible scenario.

The New Mexico State Police maintain responsibility for response to a hazardous materials accident on local transportation routes. In compliance with the Federal Emergency Management Agency and the FEMA State and Local Exercise Requirements, the Albuquerque/Bernallillo LEPC conducts exercises relating to emergency response. The LEPC has conducted exercises relating to a hazardous materials accident to test the Emergency Response Plan. The Emergency Response Plan includes a provision for notifying SNL/NM in the event of an offsite transport transportation accident. SNL/NM can then take the necessary protective actions to ensure the safety and integrity of onsite personnel and their respective operations.

3.2.4 Railways

The Atchison Topeka and Santa Fe, which is a class 1 railroad, has a line that runs parallel to Interstate 25 through the city of Albuquerque, approximately 0.31 km from the western boundary of the site. The inventory of materials transported along this stretch of track for calendar year 1993 was provided by the Director of Environmental Quality and Hazardous Materials.[32] This data indicates that the majority of hazardous material is either flammable liquid or gas, or corrosive material.

Hazardous materials shipments comprise only 14% of the total car loads on the Sante Fe Railway.[33] The shipments are most likely mixed loads containing sizeable amounts of nonhazardous material within the

same trailer or container. Even though the percentage of hazardous materials is low, the potential for a railway accident remains a credible scenario.

In the event of a hazardous materials accident involving a rail car, a joint response between local responders, the State Police, and the railroad would be initiated. The railroad employs a team of security personnel to secure the hazmat spill site until arrangements can be made for cleanup and disposal. Federal law requires the notification of the LEPC in the event of a hazardous materials accident. Under the Emergency Response Plan, SNL/NM would then be notified. SNL/NM can then take the necessary protective actions to ensure the safety and integrity of onsite AML personnel and their respective operations.

3.2.5 Pipelines

Natural gas is distributed in the AML. The hazards of natural gas are well known and well documented. A natural gas explosion will be considered as an initiating event for an accident in the AML.

3.3 AML Chemical Hazards Summary

As a result of screening the hazards at AML , 6 chemicals were found in 7 locations and kept for further evaluation. This evaluation is performed in Section 4.0, Hazard Characterization. The inventories kept for further evaluation are listed below.

Table 3.3-1
AML Hazardous Material Summary

Chemical	Maximum Quantity	Location
1. Nitric Acid, 100%	2 liters	228
2. Bromine	150 milliliters	229
3. Hexane	16 liters	229
4. Hydrofluoric Acid, 49%	4.73 liters	232
5. Nitric Acid, 70%	500 milliliters	232
6. Nitric Acid, 90%	1 liter	232
7. Nitric Acid, 100%	2 liters	232
8. Nitric Acid, 69/71%	2.5 liters	236
9. *Silver Flake #750	600 grams	236
10. Nitric Acid, 70%	2.5 liters	238
11. Nitric Acid, 90%	2.5 liters	238
12. Vinyl Acetate	4 liters	238

* The Silver Flake Powder #750 was kept for characterization because it is below 10 microns in size and therefore, is considered respirable. However, due to the inavailability of a dispersion model that will model particulates, it cannot be characterized at this time.

3.4 AML Radiological Hazards Summary

The radiological hazards in the AML fall below the screening criteria in 10 CFR, Part 30.72, Schedule C. Therefore, they are screened from further consideration.

3.5 Offsite Hazards Summary

SNL/NM provides representatives to the LEPC, and a strong working relationship with the offsite emergency response community has been established. Development of local plans is in progress, and the contemplation of both SNL/NM hazards to the city, and city hazards to SNL/NM are being incorporated in this planning process. Therefore, no offsite hazards were considered for characterization or further evaluation.

4.0 HAZARD CHARACTERIZATION

The screening process described in the preceding section identified 12 chemical hazards that exceeded the screening criteria. These hazards are fully characterized (i.e. physical properties, storage, and use) in this section to support the development of accident scenarios and analysis of possible airborne releases. Engineered controls and/or safety systems designed to prevent or mitigate a hazardous material release will also be discussed. The administrative controls for the following facilities include approved SOPs for all handling and use of hazardous chemicals in the AML. These procedures include the use of protective equipment and protective clothing as well as the training requirements for all workers.

Chemicals are delivered to the AML through the doors on the east side of the building. The chemicals are picked up by the respective laboratories within one hour of delivery. The chemicals are then stored in the laboratory according to the proper procedure as documented in the SOPs.

ERPGs are listed in the characterization below[34] and are utilized in Section 6.0 to determine the consequences of the following hazards. For chemicals that do not have published or recommended ERPG values, the EMG allows Emergency Exposure Guidance Level (EEGL) or Short-term Public Exposure Guidance Level (SPEGL) to be utilized in the place of ERPGs . For those chemicals in which no ERPG, EEGL, or SPEGL values are published, a conservative methodology was developed (consistent with the EMG) that expeditiously allows ERPG equivalents to be established for every chemical that has a Time Weighted Average (TWA) value. This methodology is described in detail in the Concentration Limit Hierarchy for Toxicological Accident Analysis.[35] The ERPG equivalent calculations are depicted in Table 4.0-1. The ERPGs are discussed in detail in Section 6.0.

Table 4.0-1

	ERPG Equivalent Calculations
ERPG-1	TWA x 1.25
ERPG-2	TWA x 3.75
ERPG-3	TWA x 8.63

4.1 Bromine (Br_2)

Bromine is a dark, red liquid. It is a human poison by ingestion and moderately toxic by inhalation. It is a corrosive. Br_2 irritates the mucous membranes of the eyes and the upper respiratory tract. Severe exposure may result in pulmonary edema. Br_2 is flammable in the form of liquid or vapor by spontaneous chemical reaction with reducing materials. It is a very powerful oxidizer. When heated, Br_2 emits highly toxic fumes. It will react with water or steam to produce toxic and corrosive fumes.

Inventory

- 150 milliliters stored in Room 229

Properties

- Boiling point — 58.73° Celsius (C)
- Freezing point — -7.3° C
- Density — 2.928@ 59° C
- Vapor pressure — 175 mm @ 21° C
- ERPG-1 for bromine — 0.2 parts per million (ppm)
- ERPG-2 for bromine — 1 ppm
- ERPG-3 for bromine — 5 ppm

Conditions of Storage and Use

Bromine is stored in Room 229 in a glass bottle in a chemical storage cabinet.

4.2 Hexane (C_6H_{14})

Hexane is a colorless, clear liquid with a faint odor. It is slightly toxic by inhalation and ingestion. Human systemic effects include hallucinations, structural change in nerve or sheath. C_6H_{14} is an eye irritant. It may be irritating to the respiratory tract and a narcotic in high concentrations.

Inventory

- 16 liters stored in Room 229

Properties

- Boiling point — 69° C
- Flash point — -23° C
- Density — 0.66@ 20° C
- Vapor pressure — 100 mm @ 15.8° C
- ERPG-1 for hexane (calculated using TWA) — 62.5 ppm
- ERPG-2 for hexane (calculated using TWA) — 187.5 ppm
- ERPG-3 for hexane (calculated using TWA) — 431.5 ppm

Conditions of Storage and Use

Hexane is stored in Room 229 in a glass bottle in a chemical storage cabinet.

4.3 Hydrofluoric Acid (HF), 49%

Hydrofluoric Acid is a clear, colorless, fuming, corrosive liquid. It is a human poison by inhalation. It is a poison experimentally by inhalation, subcutaneous and intraperitoneal routes. It is a corrosive irritant to eyes, skin, and mucous membranes. Mutation data has been reported. Inhalation of the vapor may cause ulcers of the upper respiratory tract. Concentrations of 50-250 ppm are dangerous, even for brief exposures. HF produces severe skin burns which are slow in healing. The subcutaneous tissues may be affected, becoming blanched and bloodless. Gangrene of the affected areas may follow. It is a common air contaminant. HF reacts with water or steam to produce toxic and corrosive fumes. When heated to decomposition it emits highly corrosive fumes of F^-.

Inventory

- 4.73 liters (10 pounds) stored in Room 232

Properties

• Boiling point	19.54° C
• Melting point	-83.1° C
• Density	0.699 @ 22° C
• Vapor pressure	400 mm @ 2.5° C
• ACGIH TLV-TWA	3 ppm
• ERPG-1 (AIHA)	2 ppm
• ERPG-2 (AIHA)	20 ppm
• ERPG-3 (AIHA)	50 ppm

Conditions of storage and use

Hydrofluoric acid is stored in Room 232 in a plastic bottle in a chemical storage cabinet.

4.4 Nitric Acid ($HN0_3$)

Nitric acid is a transparent, colorless or yellowish, fuming, suffocating, caustic, and corrosive liquid. It is a human poison by ingestion. Nitric acid is an experimental teratogen. Nitric acid has experimental reproductive effects. It is corrosive to eyes, skin, mucous membranes, and teeth. Nitric acid can cause upper respiratory irritation that may seem to clear up, only to return in a few hours and more severely. Depending on environmental factors the vapor will consist of a mixture of the various oxides of nitrogen and nitric acid. It is flammable by chemical reaction with reducing agents. It is a powerful oxidizing agent. Nitric acid will react with water or steam to produce heat and toxic and corrosive fumes. To fight fire, use water. When heated to decomposition emits highly toxic fumes of nitric oxide and hydrogen nitrate.

Inventory

- 2 liters in Room 228
- 2 liters in Room 229
- 500 milliliters at 70% weight in Room 232
- 1 liter at 90% weight in Room 232
- 2.5 liters at 71% weight in Room 232
- 2.5 liters at 70% weight in Room 238
- 2.5 liters at 90% weight in Room 238

Properties

- Melting point -42° C
- Boiling point 86° C
- Density 1.50269 @ 25 ° C
- ERPG-1 (AIHA) 2 ppm
- ERPG-2 (AIHA) 15 ppm
- ERPG-3 (AIHA) 30 ppm

Conditions of Storage and Use

Nitric acid is stored in 5 locations throughout the AML as listed above. Each location stores the nitric acid in glass bottles inside a chemical cabinet.

4.5 Vinyl Acetate ($C_4 H_6 O_2$)

Vinyl acetate is a colorless, mobile liquid. It is moderately toxic by ingestion, inhalation, and intraperitoneal routes. $C_4 H_6 O_2$ is a skin and eye irritant. Highly dangerous fire hazard when exposed to heat, flame, or oxidizers. It is a storage hazard and may undergo spontaneous exothermic polymerization. Reacts with air or water to form peroxides that catalyze an exothermic polymerization reaction that has caused several large industrial explosions.

Inventory

- 4 liters in Room 238

Properties

- Boiling point 73° C
- Melting point -92.8° C
- Density 0.9355@ 20° C
- Vapor pressure 100 mm @ 21.5° C
- ERPG-1 (AIHA) 5 ppm
- ERPG-2 (AIHA) 75 ppm
- ERPG-3 (AIHA) 500 ppm

Conditions of Storage and Use

Vinyl acetate is stored in Room 238 in a four liter bottle in a chemical storage cabinet.

4.6 Silver Flake Powder

Silver Flake Powder is a silvery white powder with a slight waxy odor. Due to being less than 10 microns in size it is resperable. If inhaled, it may irritate the respiratory tract. When it comes into contact with skin, it can leave permanent bluish spots.

Inventory

- 600 grams in Room 236

Properties

- Specific Gravity 10.5
- Threshold Limit Value (ACGIH) 0.1 milligrams per cubic meter (mg/m^3)

Conditions of Storage and Use

Silver Flake Powder is stored in Room 236 in a container in a chemical storage cabinet.

5.0 EVENT SCENARIOS

The barriers that maintain control over the hazardous material described in Section 4.0 have been analyzed, and the possible failure modes have been considered. The initiating events, barrier analyses, and release scenarios are described in the following section. Each scenario is identified by a release designation.

5.1 Chemical Event Scenarios

The chemical event scenarios described below are chemical spills and are classified as laboratory-type accidents. All scenarios consider the possibility of random bullets, as mandated in DOE Order 5480.16, Fire Arms Safety.[36]

The release options utilized in this hazard assessment is the puddle release. If a chemical is in a gaseous state, a direct release option of ALOHA is employed. If a chemical is in liquid form, a puddle option of ALOHA is employed.

5.1.1 Bromine

Failure of the Primary Barrier

Bromine is stored in a glass bottle. Therefore, the bottle is the primary barrier. This could fail as a result of dropping, crushing, or spilling. All methods of failure result in the release of all bromine present in the bottle at the time of the incident.

Effects of Other Barriers

The bromine is stored in a chemical cabinet. An accident (such as spilling or dropping the bottle) could take place away from the cabinet. When appropriate, the bromine is used in a fume hood. However, an explosion could also damage the chemical cabinet or fume hood rendering either ineffective. Therefore, the purpose of emergency planning, worst case scenario is assumed and no credit is taken for the chemical cabinet or the fume hood.

Table 5.1.1
Bromine Scenarios

Scenario	Source Term Parameter	Meteorological Conditions	Release Designation
Bromine 150 milliliters	Puddle Area- .015 m^2 Puddle Volume- 0.15 liters	Worst Case	Br_2-1
	Puddle Area- .015 m^2 Puddle Volume- 0.15 liters	Average	Br_2-2

5.1.2 Hexane

Failure of the Primary Barrier

Hexane is stored in a glass bottle. Therefore, the bottle is the primary barrier. This could fail as a result of breakage from dropping, crushing, or spilling. All methods of failure result in the release of all hexane present in the bottle at the time of the incident.

Effects of Other Barriers

The hexane is stored in a chemical cabinet. However, in the unlikely event of an explosion, the cabinet could be damaged facilitating the release of hexane. In addition, an accident (such as spilling or dropping the bottle) could take place away from the cabinet. When appropriate, the hexane is used in a fume hood. An explosion could also damage the fume hood rendering it useless. Therefore, the purpose of emergency planning, worst case scenario is assumed and no credit is taken for the chemical cabinet or the fume hood.

Table 5.1.2
Hexane Scenarios

Scenario	Source Term Parameter	Meteorological Conditions	Release Designation
Hexane 16 liters	Puddle Area- 1.6 m^2 Puddle Volume- 16 liters	Worst Case	C_6H_{14}-1
	Puddle Area- 1.6 m^2 Puddle Volume- 16 liters	Average	C_6H_{14}-2
Hexane 8 liters	Puddle Area- 0.8 m^2 Puddle Volume- 8 liters	Worst Case	C_6H_{14}-3
	Puddle Area- 0.8 m^2 Puddle Volume- 8 liters	Average	C_6H_{14}-4

5.1.3 Hydrofluoric Acid, 49%

Failure of the Primary Barrier

Hydrofluoric acid is handled, used, and stored in a plastic bottle according to standard laboratory operating procedures. Therefore, the bottles are the primary barriers to be considered. The primary barriers may rupture as a result of dropping the bottles, knocking the bottles over, an object falling on the bottles, or an explosion or bullet holes. All methods of failure result in the release of hydrofluoric acid vapor to the surrounding environment. For the purpose of emergency planning a worst case scenario is assumed and the total quantity is released.

Effects of Other Barriers

The hydrofluoric acid is stored in a chemical cabinet. However, in the unlikely event of an explosion, the cabinet could be damaged facilitating the release of hydrofluoric acid. In addition, an accident (such as spilling or dropping the bottle) could take place away from the cabinet. When appropriate, the

hydrofluoric acid is used in a fume hood. An explosion could also damage the fume hood rendering it useless. Therefore, the purpose of emergency planning, worst case scenario is assumed and no credit is taken for the chemical cabinet or the fume hood.

Table 5.1.3
Hydrofluoric Acid Scenarios

Scenario	Source Term Parameter	Meteorological Conditions	Release Designation
Hydrofluoric Acid, 49% 10 pounds	Puddle Area- 0.23 m^2 Puddle Volume- 2.3 liters	Worst Case	HF-1
	Puddle Area- 0.23 m^2 Puddle Volume- 2.3 liters	Average	HF-2
Hydrofluoric Acid, 49% 5 pounds	Puddle Area-0.115 m^2 Puddle Volume- 1.15 liters	Worst Case	HF-3
	Puddle Area-0.115 m^2 Puddle Volume- 1.15 liters	Average	HF-4

5.1.4 Nitric Acid

Failure of the Primary Barrier

Nitric acid is stored in a glass bottle. Therefore, the bottle is the primary barrier. This could fail as a result of breakage from dropping, crushing, or spilling. All methods of failure result in the release of all nitric acid present in the bottle at the time of the incident.

Effects of Other Barriers

The nitric acid is stored in a chemical cabinet. However, in the unlikely event of an explosion, the cabinet could be damaged facilitating the release of nitric acid. In addition, an accident (such as spilling or dropping the bottle) could take place away from the cabinet. When appropriate, the nitric acid is used in a fume hood. An explosion could also damage the fume hood rendering it useless. Therefore, the purpose of emergency planning, worst case scenario is assumed and no credit is taken for the chemical cabinet or the fume hood.

Table 5.1.4
Nitric Acid Scenarios

Scenario	Source Term Parameter	Meteorological Conditions	Release Designation
Nitric Acid, 90% 2.5 liters	Puddle Area-0.225 m^2 Puddle Volume-2.25 liters	Worst Case	HNO_3-1
	Puddle Area- 0.225 m^2 Puddle Volume-2.25 liters	Average	HNO_3-2
Nitric Acid, 90% 1.25 liters	Puddle Area-0.113 m^2 Puddle Volume-1.13 liters	Worst Case	HNO_3-3
	Puddle Area- 0.113 m^2 Puddle Volume-1.13 liters	Average	HNO_3-4
Nitric Acid, 100% 2 liters	Puddle Area- 0.2 m^2 Puddle Volume-2 liters	Worst Case	HNO_3-5
	Puddle Area- 0.2m^2 Puddle Volume-2 liters	Average	HNO_3-6
Nitric Acid, 100% 1 liter	Puddle Area- 0.1 m^2 Puddle Volume-1 liters	Worst Case	HNO_3-7
	Puddle Area- 0.1m^2 Puddle Volume-1 liters	Average	HNO_3-8
Nitric Acid, 69/71% 2.5 liters	Puddle Area- 0.177 m^2 Puddle Volume-1.77 liters	Worst Case	HNO_3-9
	Puddle Area- 0.177 m^2 Puddle Volume-1.77 liters	Average	HNO_3-10
Nitric Acid, 69/71% 1.25 liters	Puddle Area- 0.089 m^2 Puddle Volume-0.89 liters	Worst Case	HNO_3-11
	Puddle Area- 0.089 m^2 Puddle Volume-0.89 liters	Average	HNO_3-12
Nitric Acid, 90% 1liter	Puddle Area-0.09 m^2 Puddle Volume- 0.9 liters	Worst Case	HNO_3-13
	Puddle Area- 0.09 m^2 Puddle Volume-0.9 liters	Average	HNO_3-14
Nitric Acid, 90% 500 milliliters	Puddle Area-0.045 m^2 Puddle Volume- 0.45 liters	Worst Case	HNO_3-15
	Puddle Area-0.045 m^2 Puddle Volume- 0.45 liters	Average	HNO_3-16

Table 5.1.4 continued on next page

Table 5.1.4 (cont.)
Nitric Acid Scenarios

Scenario	Source Term Parameter	Meteorological Conditions	Release Designation
Nitric Acid, 70% 500 milliliters	Puddle Area-0.035 m^2 Puddle Volume- 0.35 liters	Worst Case	$HN0_3$-17
	Puddle Area- 0.035 m^2 Puddle Volume- 0.35 liters	Average	$HN0_3$-18
Nitric Acid, 70% 250 milliliters	Puddle Area-0.018 m^2 Puddle Volume- 0.18 liters	Worst Case	$HN0_3$-19
	Puddle Area-0.018 m^2 Puddle Volume-0.18 liters	Average	$HN0_3$-20

5.1.5 Vinyl Acetate

Failure of the Primary Barrier

Vinyl acetate is stored in a glass bottle. Therefore, the bottle is the primary barrier. This could fail as a result of breakage from dropping, crushing, or spilling. All methods of failure result in the release of all vinyl acetate present in the bottle at the time of the incident.

Effects of Other Barriers

The vinyl acetate is stored in a chemical cabinet. However, in the unlikely event of an explosion, the cabinet could be damaged facilitating the release of vinyl acetate. In addition, an accident (such as spilling or dropping the bottle) could take place away from the cabinet. When appropriate, the vinyl acetate is used in a fume hood. An explosion could also damage the fume hood rendering it useless. Therefore, the purpose of emergency planning, worst case scenario is assumed and no credit is taken for the chemical cabinet or the fume hood.

Table 5.1.5
Vinyl Acetate Scenarios

Scenario	Source Term Parameter	Meteorological Conditions	Release Designation
Vinyl Acetate 4 liters	Puddle Area-0.4 m^2 Puddle Volume- 4 liters	Worst Case	$C_4H_6O_2$-1
	Puddle Area- 0.4 m^2 Puddle Volume- 4 liters	Average	$C_4H_6O_2$-2
Vinyl Acetate 2 liters	Puddle Area-0.2 m^2 Puddle Volume- 2 liters	Worst Case	$C_4H_6O_2$-3
	Puddle Area-0.2 m^2 Puddle Volume- 2 liters	Average	$C_4H_6O_2$-4

5.1.6 Silver Flake Powder

Failure of the Primary Barrier

Silver Flake Powder is stored in a container. Therefore, the container is the primary barrier. This could fail as a result of breakage from dropping, crushing, or spilling. All methods of failure result in the release of all Silver Flake Powder present in the bottle at the time of the incident.

Effects of Other Barriers

The Silver Flake Powder is stored in a chemical cabinet. However, in the unlikely event of an explosion, the cabinet could be damaged facilitating the release of Silver Flake Powder. In addition, an accident (such as spilling or dropping the container) could take place away from the cabinet. Therefore, the purpose of emergency planning, worst case scenario is assumed and no credit is taken for the chemical cabinet.

Due to modeling limitations, Silver Flake Powder does not have any release scenarios.

5.2 Radiological Event Scenarios

No radiological scenarios are postulated because there are no radiological hazards associated with the AML.

6.0 EVENT CONSEQUENCES

The consequences from the airborne release scenarios described in Section 5.0 are estimated to determine the area potentially affected and the need for personnel protective actions. This section describes computer codes, calculational techniques, input data used for dispersion modeling, and consequence criteria. The results of the dispersion modeling are summarized at the end of this section for each previously identified release designation. The dispersion model data sheets for each release designation are included in Appendix B.

6.1 Calculational Models and Methods

Event consequences are estimated using calculational models and methods that are most appropriate to the physical and atmospheric conditions of the site and the material released.

6.1.1 Calculational Models

The chemical model Computer-Aided Management of Emergency Operations (CAMEO) and it's air model, ALOHA, were utilized for estimating the movement and dispersion of gases.[37] CAMEO was designed by the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Environmental Protection Agency (EPA) to help emergency planners, facility operators, and first responders plan for and safely handle, chemical accidents. The air model estimates pollutant concentrations downwind from the source of a release, taking into consideration the chemical toxicity, physical characteristics of the release site, the atmospheric conditions, and the circumstances of the release.

6.1.2 Calculational Methods

The transport of hazardous materials in the atmosphere from the AML to offsite locations during an accident is a significant concern. Several factors affect the downwind calculations. These factors include the source term (quantity of the material available for release and the size of the puddle, if applicable), evaporation rates, release duration, chemical mixture, plume transport and diffusion, ground deposition, and atmospheric stability.

Six classes of atmospheric stablility are used to indicate mixing in the atmosphere. These classes are referred to as the Pasquill-Gifford Stability Classes.

Pasquill-Gifford Stability Classes

A - Extremely unstable (bright, sunny days)
B - Moderately unstable
C - Slightly unstable (cloudy, low wind speed)
D - Neutral (heavy overcast, day or night)
E - Slightly stable (night, low winds)
F - Moderately stable (very low wind, night or just before dawn)

As shown in Table 5.1-1 through Table 5.1-5, two meteorological conditions were utilized: worst case and average. The meteorological conditions provided a range of accident scenarios for input into ALOHA. The worst case meteorological conditions are Pasquill-Gifford Stability Class F, a 1 m/s wind speed, and a 500 meter inversion.

The average Albuquerque meteorological conditions were obtained from the *Technical Guidance for Siting Criteria,*[38] by selecting data from four months (one from each season). This data provided a range of daily meteorological conditions. The average meteorological conditions analysis resulted in the following conclusions: the average Albuquerque wind speed is 4 m/s and the average stability class is slightly unstable or "C".

6.2 Consequence Thresholds

The consequence thresholds are based upon the ERPGs published by the AIHA.[39]

6.2.1 ERPGs

The ERPG values are intended to provide estimates of concentration ranges above which a person could reasonably anticipate adverse effects as a consequence of exposure to a specific substance. ERPG-1, ERPG-2, and ERPG-3 are defined below.

- The ERPG-1 is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor.

- The ERPG-2 is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair their abilities to take protective action.

- The ERPG-3 is the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing or developing life-threatening health effects.

  Note: For those chemicals in which no ERPG values were published, a methodology was developed that allows ERPG equivalents to be established for every chemical that has a TWA value (Table 4.0-1).

6.2.2 Application of ERPGs

The ERPGs are used to classify the operational emergency events. The three classes of operational emergencies in ascending order are: Alert, Site Area Emergency, and General Emergency. The ERPGs that result in the various levels of operational emergencies are described below.

- The ERPG-1 value is used as a screening criterion, as explained in Section 3.1.1.1, Dispersion Modeling. The ERPG-1 is also used to determine the low end of the emergency classification spectrum (i.e., Alert). For example, if an ERPG-1 is exceeded at 30 meters, the event would constitute a minimum of an Alert Emergency Classification.

- The ERPG-2 value is compared with the maximum toxicity concentration at the facility and site boundaries to determine the appropriate emergency class. If the ERPG-2 is exceeded within the site boundary, the event is considered a Site Area Emergency. If the ERPG-2 is exceeded beyond the site boundary, the event is considered a General Emergency.

- The ERPG-3 value is a consideration in defining the EPZ. The ERPG-3 value represents the Early Severe Health Effects (ESHE) value. The distance at which ESHE is reached is determined for each scenario.

6.3 Receptor Locations

Consequences of the hazardous material releases were quantitively evaluated for various onsite and offsite receptor locations. The demarcation between the onsite and offsite receptors is the site boundary. These receptor locations include areas that could potentially be impacted by an accident at the AML.

6.3.1 Onsite Receptors

The only onsite receptor is the AML itself.

6.3.2 Offsite Receptors

The following offsite receptors include those facilities and areas outside the AML site boundary.

Table 6.3.2-1
Offsite Receptors

Offsite Receptor	Distance (m)	Concentration * (ppm)
Social Security Administration Albuquerque Teleservice Center	~ 75	2.08
Technology Ventures Corporation	~ 150	0.79
New Mexico Research Engineering Lab	~ 70	3.53
Technology Communications Center	~ 150	0.79
Albuquerque Sports Stadium	~ 150	0.79
The UNM Arena	~ 400	0.12
Crystal Growth for High Technical Materials	~ 90	2.15

* Based upon worst case scenario, release designation HNO_3-1. As stated previously in Section 6.2.2, the ERPG-3 distance is used to determine the Emergency Planning Zone (EPZ) for the facility. Nitric acid has an ERPG-3 impact that is slightly greater than that of bromine or hydrofluoric acid. Bromine and hydrofluoric acid actually have ERPG-2 impacts that are greater than nitric acid based upon the lower ERPG-2 values of these chemicals. However, due to the fact that there are 7 sources of nitric acid, as compared to 1 each for bromine and hydrofluoric acid, there is a greater probability for an accident involving nitric acid. Therefore, HNO_3-1 was chosen as the worst case scenario.

6.4 Summary of Consequences

As shown in Table 6.4-1, the greatest distances at which ERPG-2 and ERPG-3 are reached is 61 and 23 meters, respectively. The greatest AML emergency classification is found to be a General Emergency.

Table 6.4-1
Summary of Consequences

Event Consequences for the AML						
Release Designation	Max Concentration at 30 meter Facility/Site Boundary (ppm)	Maximum Distance to ERPG-3 (meters)	Maximum Distance to ERPG-2 (meters)	Maximum Distance to IDLH (meters)	Possible/Probable EAL(s)*	Emergency Event Classification
Br_2-1	3.5	148	61	22	broken/cracked bottle	GE
Br_2-2	0.26	34	15	< 10	broken/cracked bottle	Alert
C_6H_{14}-1	107	41	21	11	broken/cracked bottle	Alert
C_6H_{14}-2	20.3	17	< 10	< 10	broken/cracked bottle	n/a
C_6H_{14}-3	65.3	31	16	11	spilled/leaking bottle	Alert
C_6H_{14}-4	10.6	12	< 10	< 10	spilled/leaking bottle	n/a
HF-1	28.2	115	36	22	ruptured bottle	GE
HF-2	0.67	17	< 10	< 10	ruptured bottle	n/a
HF-3	14.4	81	25	16	spilled/ruptured bottle	Alert
HF-4	0.34	13	< 10	< 10	spilled/ruptured bottle	n/a
HNO_3-1	18.8	94	34	23	broken/cracked bottle	GE
HNO_3-2	0.82	19	< 10	< 10	broken/cracked bottle	n/a
HNO_3-3	9.93	67	24	17	spilled/leaking bottle	Alert
HNO_3-4	0.43	14	< 10	< 10	spilled/leaking bottle	n/a
HNO_3-5	16.8	88	32	22	broken/cracked bottle	GE
HNO_3-6	0.74	18	< 10	< 10	broken/cracked bottle	n/a
HNO_3-7	8.87	64	23	16	spilled/leaking bottle	Alert
HNO_3-8	0.39	13	< 10	< 10	spilled/leaking bottle	n/a
HNO_3-9	15	83	30	21	broken/cracked bottle	GE
HNO_3-10	0.66	17	< 10	< 10	broken/cracked bottle	n/a
HNO_3-11	7.96	60	22	16	spilled/leaking bottle	Alert
HNO_3-12	0.35	13	< 10	< 10	spilled/leaking bottle	n/a
HNO_3-13	8.04	60	22	15	broken/cracked bottle	Alert
HNO_3-14	0.35	13	< 10	< 10	broken/cracked bottle	n/a
HNO_3-15	4.23	44	16	11	spilled/leaking bottle	Alert
HNO_3-16	0.183	< 10	< 10	< 10	spilled/leaking bottle	n/a
HNO_3-17	3.36	39	14	10	broken/cracked bottle	Alert
HNO_3-18	0.144	< 10	< 10	< 10	broken/cracked bottle	n/a
HNO_3-19	1.82	28	10	< 10	spilled/leaking bottle	Alert
HNO_3-20	0.078	< 10	< 10	< 10	spilled/leaking bottle	n/a
$C_4H_6O_2$-1	32.7	104	18	11	broken/cracked bottle	Alert
$C_4H_6O_2$-2	3.83	26	< 10	< 10	broken/cracked bottle	n/a
$C_4H_6O_2$-3	21.4	73	11	11	spilled/leaking bottle	Alert
$C_4H_6O_2$-4	1.99	19	< 10	< 10	spilled/leaking bottle	n/a

* There are not any quantifiable detection methods to confirm that actual releases occured in the scenarios described in Section 5.0, therefore, symptom-based EALs are not utilized in this hazards assessment. The above mentioned event-based EALs are stated in terms of the overall event descriptors as indicated by direct observation. The resulting event classifications are based on the consequences resulting from the releases of the total quantity of the material.

7.0 THE EMERGENCY PLANNING ZONE

The results of the consequence analysis performed in Section 6.0 were used to propose an EPZ. An EPZ is a geographic area surrounding a specific DOE facility for which special planning and preparedness efforts are carried out to ensure that prompt and effective protective actions can be taken to reduce or minimize the impact to onsite personnel, public health and safety, and the environment in the event of an operational emergency.

7.1 The Minimum EPZ Radius

As can be seen from the data in Table 6.4-1, the highest facility emergency class is a General Emergency, and the greatest distance at which a postulated facility event will produce consequences exceeding the Early Severe Health Effects (D_{ESHE}) threshold is 23 meters (Release Designation HNO_3 - 1). In accordance with the EMG, a nominal EPZ that follows the physical and jurisdictional boundaries of the AML was established. The EPZ is depicted in Figure 7-1 on page 39.

7.1.1 Tests of Reasonableness

The EPZ meets the following five tests of reasonableness:

1. Are the maximum distances to PAG/ERPG-level impacts for most of the analyzed accident scenarios equal to or less than the EPZ radius selected?

   Yes. All ERPG-3 impacts are less than the EPZ. As demonstrated in Table 6.4-1, the greatest distance at which a postulated facility event will produce consequences exceeding the Early Severe Health Effects (D_{ESHE}) threshold is 23 meters (Release Designation HNO_3 -1).

2. Is the selected EPZ radius large enough to provide a credible basis for extending response activities outside the EPZ if conditions warrant?

   Yes. Lines of communication and decision processes involving the City of Albuquerque, Bernalillo County, State of New Mexico, and SNL are in the process of being established. In exercises, as well as actual events, the offsite agencies have demonstrated the flexibility to adapt and extend pre-planned response actions to different areas, depending upon the conditions of the particular event. This process is facilitated through the use of the Incident Command System.

3. Is the EPZ radius large enough to support an effective response at and near the scene of the emergency?

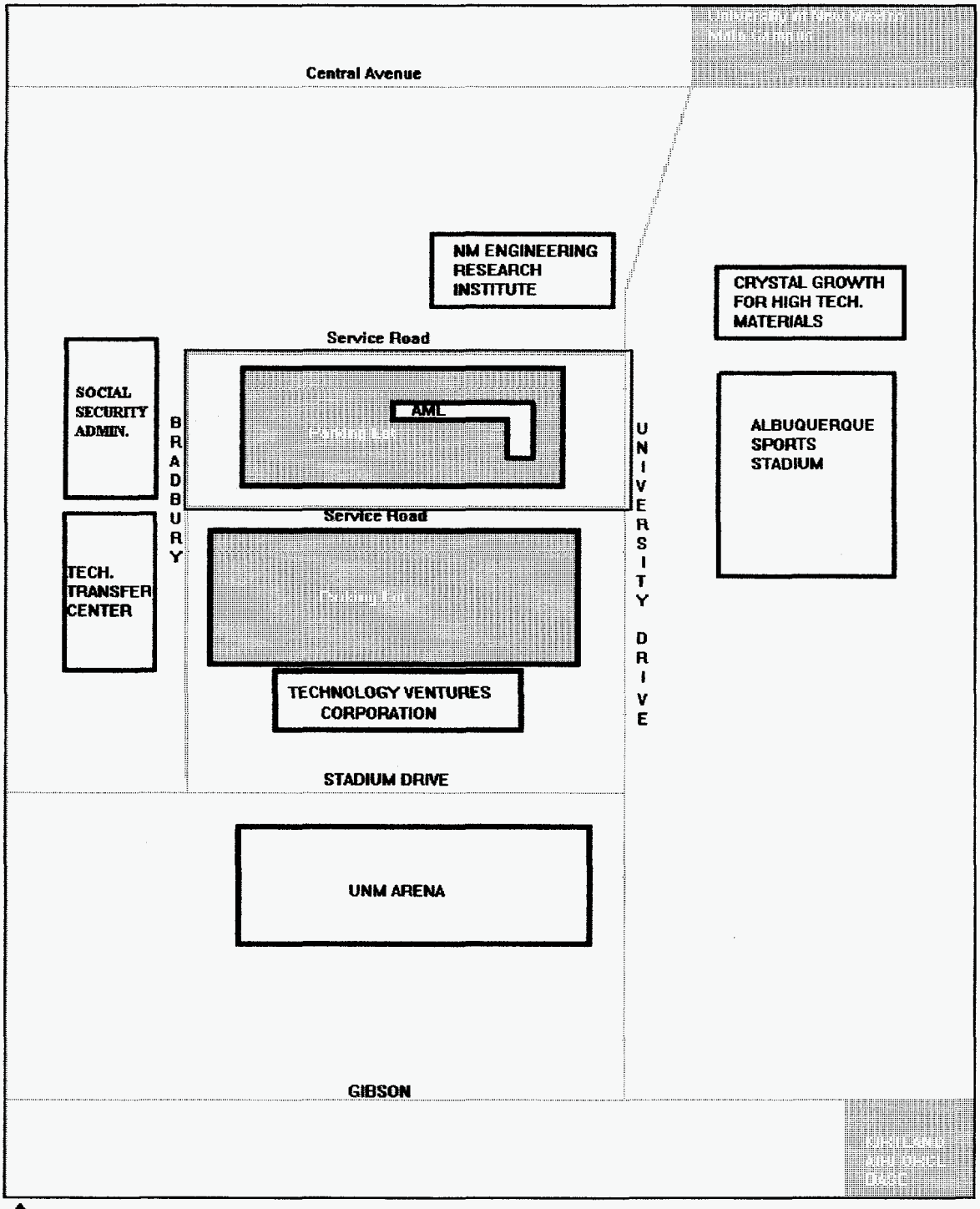
   Yes. The nominal EPZ encompasses the AML and all routes leading to it.

4. Does the proposed EPZ conform to natural and jurisdictional boundaries where reasonable, and are other expectations and needs of the offsite agencies likely to be met by the selected EPZ?

   Yes. The EPZ conforms to jurisdictional boundaries and physical street boundaries. By utilizing streets as physical boundaries for portions of the EPZ, access within the EPZ can be adequately controlled as needed by the first responders.

5. What enhancements of the facility and site preparedness stature would be achieved by increasing the selected radius?

   The proposed EPZ radius ensures the involvement and integration of any required response organizations in the planning process. It is not obvious that any increase in the proposed EPZ boundary will provide significant improvement in the level of facility or site preparedness.



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Note: The Emergency Planning Zone is denoted by the blue line that surrounds the service roads, University and Bradbury.

Illustration 7-1 Emergency Planning Zone

8.0 EMERGENCY CLASSES, PROTECTIVE ACTIONS, AND EALS

The correlation of event scenarios and estimated consequences developed in Sections 5.0 and 6.0 are used to determine the emergency classes and protective actions that are appropriate for the scenarios, as well as the observable indications (i.e. EALs) to trigger emergency declarations and protective actions.

8.1 Emergency Classes

As mentioned in Section 6.0, the three classes of operational emergencies in ascending order of severity are Alert, Site Area Emergency, and General Emergency. These classes are differentiated by severity for the purpose of specifying appropriate emergency actions, including required response activities and notifications, commensurate with the degree of hazard presented by the event. The three classes of emergencies are defined below.

8.1.1 Alert

As stated in DOE Order 5500.1B, "An Alert represents events in progress, or having occurred, which involve an actual or a potential substantial reduction for the level of facility safety and protection. Any environmental release of hazardous materials is expected to be limited to small fractions of the appropriate Protective Action Guide (PAG) or ERPG exposure levels onsite. During an Energy Emergency, an Alert represents an event that is noteworthy; the potential impacts are not expected to be serious; and a negligible long-term supply is anticipated."

As stated in DOE Order 5500.2B, "Declaration of an Operational Alert requires the availability of personnel and resources to:

- Provide continous assessment of pertinent information for DOE decision makers, offsite authorities, the public, and other appropriate entities;
- Conduct appropriate assessments, investigations, or preliminary or confirmatory sampling and monitoring;
- Mitigate the severity of the occurrence or its consequences; and
- Prepare for other response actions should the situation become more serious, requiring emergency response organizations to moblilize or activate resources."

8.1.2 Site Area Emergency

As stated in DOE Order 5500.1B, "A Site Area Emergency represents events which are in progress or have occurred involving actual or likely major failure(s) of facility safety or safeguards systems needed for the protection of onsite personnel, the public health and safety, the environment, or national security. Any environmental release of hazardous materials is not expected to exceed the appropriate PAG or ERPG exposure levels offsite. Within the Energy Emergency category, a Site Area Emergency represents an event in which a substantial supply impact is anticipated."

As stated in DOE Order 5500.2B, "Declaration of an Operational Site Area Emergency requires initiation of predetermined protective actions for onsite personnel and the notification and assembly of emergency response personnel and equipment to activate response centers to provide:

- Continuous assessment of pertinent information for DOE decision makers, offsite authorities, the public, and other appropriate entities;
- Establish communications, consultation, and liaison with offsite authorities;
- Provide information to the public through offsite authorities and the media;
- Conduct or assist in any evacuations and sheltering;
- Conduct appropriate assessments, investigations, or sampling and monitoring;
- Mitigate the severity of the actual or potential consequences; and
- Mobilize appropriate emergency response groups or security forces for immediate dispatch should the situation become more serious."

8.1.3 General Emergency

As stated in DOE Order 5500.1B, "A General Emergency represents events which are in progress or have occurred that involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity, catastrophic degradation of facility protection systems, or catastrophic failure in safety or protection systems threatening the integrity of a weapon or test device which could lead to substantial offsite impacts. Any environmental release of hazardous materials can reasonably be expected to exceed the appropriate PAG or ERPG exposure levels offsite. Within the category of Energy Emergency, a General Emergency is an event which has occurred that has major energy supply impacts."

As stated in DOE Order 5500.2B, "Declaration of an Operational General Emergency requires the notification, mobilization, and dispatch of all appropriate emergency response personnel and equipment including appropriate DOE national response assets to:

- Activate the response centers and other emergency assets to provide continuous assessment of information;
- Establish communications, consultation, and liasion with offsite authorities and recommend predetermined protective actions for the public;
- Provide information to the public through offsite authorities and the media;
- Conduct or assist evacuations and sheltering;
- Conduct appropriate assessments, investigations, or sampling and monitoring;
- Mitigate the severity of the actual or potential consequences; and
- Mobilize and dispatch appropriate emergency response groups or security forces."

8.2 Laboratory Release Events and EALs

The consequence analysis performed in Section 6.0 identified the following conditions which could precipitate an Alert or General Emergency involving chemicals inside the AML. The EAL involves:

- Any condition which could breach the primary and secondary barriers of those chemicals stored in the AML.

  Basis: The chemicals analyzed in the AML are appropriately stored in hazardous materials cabinet. When appropriate, the chemicals are used in a fume hood and all are inside a building assumed to be intact. If the primary and secondary barriers are breached, the EAL is the fractured/punctured container and/or cabinet/fumehood and/or building walls, windows, or roofs as indicated by direct observation.

Note: The AML has the same facility/site boundary, therefore there are no SAEs listed.

8.3 Chemical Delivery Release Events and EALs

Any condition which could breach the primary and secondary barriers of the chemical being delivered or installed in the AML.

Basis: The chemicals analyzed in the AML are delivered according to the standard operating procedure for the laboratory. If the primary and secondary barriers are breached, the EAL is the fractured/punctured container, or the overturned/damaged bottle and/or handling cart as indicated by direct observation.

8.4 Protective Actions

The recommended protective action involving all scenarios inside the AML (i.e. chemical spill, fire, etc.) is evacuation using standard fire drill procedures. Building personnel should be evacuated to a point beyond the site boundary upwind from the incident and a system devised to account for all personnel. The recommended protective actions for other buildings in response to a hazardous materials incident is sheltering in place.

8.4.1 Response

In the event of an emergency at the AML, AML personnel will notify the UNM Communication Center by dialing 911. UNM will evaluate the call and dispatch appropriate response (i.e. security, fire, paramedics) to the facility. The facility owners will then notify the SNL Incident Commander at 844-4189 of any emergency after summoning emergency response. The on-scene incident commander (normally Albuquerque Fire Department) will implement the proper protective actions. After the event has been successfully mitigated, the on-scene incident commander will declare the event to be in the recovery mode and, when conditions warrant, recommend termination of the emergency.

9.0 MAINTENANCE AND REVIEW

The Risk Management and NEPA Department is responsible for ensuring that Hazards Assessment Documents are regularly reviewed and maintained.

It is the responsiblity of the chemical owners and a responsible facility authority to periodically review Hazards Assessment Documents applicable to their facilities and insure that they accurately reflect any changes in facility design, operations, safety features, inventories of materials, and features of the surrounding area.

The line organizations should provide information relative to changes in facility design, operation, safety features, inventories of hazardous materials, and features of the surrounding area to the responsible facility authority.

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Appendix A

AML ChemMaster Inventory

Note: *The following list of chemicals is derived from the SNL/NM ChemMaster Inventory. The quantities herein are listed in various units, as listed in ChemMaster.*

KEY to ABBREVIATIONS FOR CHEMMASTER

BD. FT	Board Feet
BP	Boiling Point
cc	Cubic Centimeter
CHEM	Chemical
cyl	Cylinder
ERPG	Emergency Response Planning Guideline
ft^3	Cubic Feet
G	Gas
g	Gram
gcf	Gaseous Cubic Feet
gal	Gallon
HA	Hazard Assessment
kg	kilogram
L	Liquid
l	Liter
LOC_CODE	Location Code
MQTY	Maximum Quantity
ml	Milliliter
oz	Ounce (avoirdupois)
ozd	Ounces Dry (avoirdupois)
ozf	Fluid Ounce (U.S. liquid measure)
PHYS_STATE	Physical State
pt	Pint
qt	Quart
QTY_UNIT	Quantity Unit
S	Solid
SCR_CRIT	Screening Criteria
SIH	Standard Industrial Hazard
SQ. FT	Square Feet

SNL/NM Hazards Project

HA Required : YES | Number of Chemicals: 24

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
NITRIC ACID 100%	AML/228	L	(l)	2	KEEP
BROMINE	AML/229	L	(ml)	150	KEEP
HEXANE	AML/229	L	(l)	16	KEEP
HYDROFLUORIC ACID, 49%	AML/232	L	(l)	2.3	KEEP
NITRIC ACID 70%	AML/232	L	(ml)	500	KEEP
NITRIC ACID 90%	AML/232	L	(l)	1	KEEP
NITRIC ACID 100%	AML/232	L	(l)	2	KEEP
NITRIC ACID 69/71%	AML/236	L	(l)	2.5	KEEP
SILVER FLAKE #750	AML/236	S	(g)	600	KEEP
NITRIC ACID 70%	AML/238	L	(l)	2.5	KEEP
NITRIC ACID 90%	AML/238	L	(l)	2.5	KEEP
VINYL ACETATE	AML/238	L	(l)	4	KEEP

SNL/NM Hazards Project

HA Required : YES | Number of Chemicals: 24

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
ACETONE	AML/100	L	(gal)	1	ERPG-1 AT 30 M
ALUMINUM ETCHANT	AML/100	L	(gal)	2	ERPG-1 AT 30 M
ETHYL ALCOHOL	AML/100	L	(gal)	1	SIH
POTASSIUM HYDROXIDE	AML/100	L	(gal)	1	ERPG-1 AT 30 M
PZT ETCHANT	AML/100	L	(l)	1	BP > 100 C
RSE-100	AML/100	L	(gal)	2	SIH
TIMETCH	AML/100	L	(gal)	2	SIH
TOLUENE	AML/100	L	(gal)	2	BP > 100 C
WHITE MINERAL OIL	AML/100	L	(gal)	2	SIH
2-PROPANOL	AML/101	L	(l)	4	ERPG-1 AT 30 M
ACETONE	AML/103	L	(l)	4	ERPG-1 AT 30 M
CARBON PAINT	AML/103	L	(ozd)	4.5	SIH
ETHYLENE GLYCOL	AML/103	L	(l)	4	BP > 100 C
FORMAMIDE	AML/103	L	(l)	1	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
METHYL ETHYL KETONE	AML/103	L	(ml)	500	ERPG-1 AT 30 M
SOLDER	AML/103	L	(lb)	1	SIH
ALUMINUM METAPHOSPHATE	AML/105	S	(g)	250	<1 LB.
ALUMINUM PHOSPHATE	AML/105	S	(g)	100	<1 LB.
AMMONIUM PHOSPHATE	AML/105	S	(g)	500	<1 LB.
ARGON	AML/105	G	(gcf)	2000	SIH
BARIUM CARBONATE	AML/105	S	(g)	500	<1 LB.
BISMUTH(III)OXIDE	AML/105	S	(g)	250	<1 LB.
BUFFER SOLUTION PH 4.00	AML/105	L	(ml)	500	SIH
CALCIUM CARBONATE	AML/105	S	(g)	500	<1 LB.
CALCIUM PHOSPHATE, DIBASIC	AML/105	S	(g)	500	<1 LB.
CESIUM CARBONATE	AML/105	S	(g)	100	<1 LB.
DIELECTRIC PASTE	AML/105	S	(g)	50	SIH
ETHYLENEDIAMINETETRAACETIC ACID	AML/105	S	(g)	500	<1 LB.
EUROPIUM OXIDE	AML/229	S	(g)	25	<1 LB.
LITHIUM CARBONATE	AML/105	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
LITHIUM PHOSPHATE, TRIBASIC	AML/105	S	(g)	100	<1 LB.
LITHIUM RIBBON	AML/105	S	(g)	100	<1 LB.
MAGNESIUM CARBONATE	AML/105	S	(kg)	3	NON-DISPERSIBLE
METHANOL	AML/105	L	(ml)	1000	ERPG-1 AT 30 M
MOLYBDENUM TRIOXIDE	AML/105	S	(lb)	0.2	<1 LB.
PH ELECTRODE STROAGE SOLUTION	AML/105	L	(ml)	500	SIH
PHOSPHORIC ACID	AML/105	L	(ml)	500	SIH
PHOSPHORUS PENTACHLORIDE	AML/105	S	(g)	500	<1 LB.
RUBIDIUM CARBONATE	AML/105	S	(g)	50	<1 LB.
SAMARIUM OXIDE	AML/105	S	(g)	25	<1 LB.
SEA SAND	AML/105	S	(kg)	6	SIH
SODIUM (D1) ETHYLENEDIAMINE TETRAACETATE SOLUTION	AML/105	L	(ml)	1000	ERPG-1 AT 30 M
SODIUM HEXAMETHAPHOSPHATE	AML/105	S	(kg)	1	NON-DISPERSIBLE
SODIUM-LEAD ALLOY	AML/105	S	(g)	100	<1 LB.
TELLURIUM(IV)OXIDE	AML/105	S	(g)	250	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
TIN(II)FLUORIOE	AML/105	S	(g)	100	<1 LB.
TIN(II)OXIDE	AML/105	S	(g)	200	<1 LB.
ZINC OXIDE	AML/105	S	(g)	500	<1 LB.
3-IN-1 HOUSEHOLD OIL	AML/106	L	(ozd)	3	SIH
ACETONE	AML/106	L	(l)	5	ERPG-1 AT 30 M
ACETONE	AML/106	L	(l)	6	ERPG-1 AT 30 M
BENZENE	AML/106	L	(ml)	20	ERPG-1 AT 30 M
CALCIUM NITRATE	AML/106	S	(g)	500	<1 LB.
CARBON TETRACHLORIDE	AML/106	L	(ml)	20	ERPG-1 AT 30 M
DUCO CEMENT	AML/106	S	(ozd)	2	SIH
ETHYLENE GLYCOL	AML/106	L	(l)	8	BP > 100 C
GALLIUM METAL	AML/106	S	(g)	50	<1 LB.
LUCITE SHEETS	AML/106	S	(lb)	20	NON-DISPERSIBLE
METHANOL	AML/106	L	(l)	5	ERPG-1 AT 30 M
METHANOL	AML/106	L	(l)	2	ERPG-1 AT 30 M
METHYLENE CHLORIDE	AML/106	L	(l)	1	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
NEPTUNE BLACK XGO	AML/106	S	(g)	100	<1 LB.
NITROGEN GAS	AML/106	G	(oth)	2200	SIH
OLDA 1200	AML/106	L	(l)	1	SIH
POTASSIUM NITRATE	AML/106	S	(g)	500	<1 LB.
SICO YELLOW NB 0 1360	AML/106	S	(g)	250	<1 LB.
SILICONE RUBBER ADHESIVE	AML/106	L	(ml)	60	SIH
SUDAN RED 380	AML/106	S	(g)	100	ERPG-1 AT 30 M
TETRACHLOROETHYLENE	AML/106	L	(l)	4	ERPG-1 AT 30 M
TOLUENE	AML/106	L	(ml)	20	BP > 100 C
VACUUM PUMP OIL	AML/106	L	(qt)	5	SIH
XYLENES	AML/106	L	(l)	1	BP > 100 C
1,6-DIPHENYL-1,3,5-HEXATRIENE	AML/108	S	(g)	1	<1 LB.
150-BUTANOL	AML/108	L	(l)	1	BP > 100 C
ALUMINUM ACETATE	AML/108	S	(g)	500	<1 LB.
ALUMINUM ACETATE BASIC	AML/108	S	(g)	1000	NON-DISPERSIBLE
ALUMINUM ACETATE W/BORIC ACID	AML/108	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
BATH CLEAR ALGICIDE	AML/108	L	(ozd)	8	SIH
CYCLOHEXANOL	AML/108	L	(ml)	500	BP > 100 C
DANSYAMIDE	AML/108	S	(g)	1	<1 LB.
DANSYL AMIDE	AML/108	S	(g)	1	<1 LB.
DANSYL CHLORIDE	AML/108	S	(g)	1	<1 LB.
DANSYLCHLORIDE	AML/108	S	(g)	1	<1 LB.
DECAHYDROHAPTHALENE	AML/108	L	(ml)	500	BP > 100 C
DODECYL SODIUM SULFATE	AML/108	S	(ozd)	1	<1 LB.
ETHYLENE GLYCOL	AML/108	L	(l)	1	BP > 100 C
ETHYLENE GLYCOL	AML/108	L	(l)	1	BP > 100 C
FORMIC ACID (90%)	AML/108	L	(ml)	500	ERPG-1 AT 30 M
GELATIN	AML/108	S	(g)	500	<1 LB.
GLYCERINE	AML/108	L	(l)	1	BP > 100 C
HYDROCHLORIC ACID 2N	AML/108	L	(l)	1	SIH
ISO-BUTANOL	AML/108	L	(l)	1	BP > 100 C
ISO-BUTANOL	AML/108	L	(l)	1	BP > 100 C
LACTIC ACID (85%)	AML/108	L	(ml)	500	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
N-PENTANE	AML/108	L	(l)	1	ERPG-1 AT 30 M
PERYLENE	AML/108	S	(g)	1	<1 LB.
PYRANINE	AML/108	S	(g)	1	<1 LB.
PYRENE	AML/108	S	(g)	25	<1 LB.
RHODAMINE 66	AML/108	S	(mg)	500	<1 LB.
ROHDEMINE D	AML/108	S	(g)	1	<1 LB.
SODIUM CHLORIDE	AML/108	S	(g)	500	<1 LB.
SODIUM HYDROXIDE IN	AML/108	L	(l)	1	BP > 100 C
SODIUM HYDROXIDE IN (T1MOS)	AML/108	L	(l)	1	BP > 100 C
TERTIARY BUTANOL	AML/108	L	(ml)	500	ERPG-1 AT 30 M
TETRAMETHYL ORTHOSILICATE	AML/108	S	(g)	25	<1 LB.
TOLUENE	AML/108	L	(l)	1	BP > 100 C
TRIETHYLENE GLYCOL	AML/108	L	(l)	2	ERPG-1 AT 30 M
TRIS(2,2-BIPYRIDYL)RUTLENIUM(II)	AML/108	S	(g)	2	<1 LB.
TRIS(D,10-PHENANTHROLINE)-RUTHENIUM(II)	AML/108	S	(g)	2	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
WELD-ON	AML/108	L	(ozf)	4	SIH
2-TON EPOXY	AML/109	S	(ozd)	2	SIH
ACETONE	AML/109	L	(l)	8	ERPG-1 AT 30 M
ARGON	AML/109	G	(lb)	0.2	SIH
ARGON	AML/109	G	(gcf)	2	SIH
CARBON MONOX1DE	AML/109	G	(lb)	1	ERPG-1 AT 30 M
CARBON MONOXIDE	AML/109	G	(gcf)	2	ERPG-1 AT 30 M
DEUTERIUM	AML/109	L	(l)	60	SIH
HYDROGEN	AML/109	G	(l)	120	SIH
2-PROPANOL	AML/111/1	L	(gal)	2	SIH
ACETONE	AML/111/1	L	(gal)	2	ERPG-1 AT 30 M
ALCONOX	AML/111/1	L	(lb)	4	SIH
ALUMINUM GRANULES	AML/111/1	S	(lb)	50	NON-DISPERSIBLE
ALUMINUM NITRIDE SUBSTRATE	AML/111/1	S	(g)	50	<1 LB.
ALUMINUM ROD	AML/111/1	S	(ft)	5	SIH
BAIKALOX SUB MICRON ALUMINA POWDER	AML/111/1	S	(lb)	20	NON-DISPERSIBLE

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
CHLORODIFLUOROMETHANE	AML/111/1	L	(gal)	5	ERPG-1 AT 30 M
CMP7O4 SILICONE	AML/111/1	L	(ml)	500	SIH
HAFNIUM	AML/111/1	S	sheet	2	SIH
HALOGENATED HYDROCARBON	AML/111/1	L	(gal)	1	SIH
HALOGENATED HYDROCARBON	AML/111/1	L	(ml)	500	SIH
HIGH PURITY MULLITE POWDER	AML/111/1	S	(g)	112	<1 LB.
HIGH PURITY MULLITE POWDER	AML/111/1	S	(lb)	50	NON-DISPERSIBLE
HYDROCHLORIC ACID	AML/111/1	L	(ml)	3000	SIH
HYDROXYPROPYL CELLULOSE	AML/111/1	S	(g)	250	<1 LB.
MASTERPOLISH 2	AML/111/1	S	(ozd)	64	SIH
MASTERPREP	AML/111/1	L	(qt)	2	SIH
METADI 1,11	AML/111/1	L	(qt)	6	SIH
METADI FLUID	AML/111/1	L	(qt)	6	SIH
METADI SUPREME	AML/111/1	L	(qt)	3	SIH
METHANOL	AML/111/1	L	(gal)	2	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
METHOCEL (R) A15-LV METHYLCELLULOSE	AML/111/1	S	(g)	250	<1 LB.
MP-50 TITANIUM CARBIDE	AML/111/1	S	(g)	250	<1 LB.
NICKLE COMPOUND	AML/111/1	S	(g)	1000	NON-DISPERSIBLE
PETROLEUM OIL, NOIBN	AML/111/1	L	(gal)	4	SIH
SILICON	AML/111/1	S	(kg)	9	NON-DISPERSIBLE
SODIUM CHLORIDE	AML/111/1	S	(g)	500	<1 LB.
SODIUM HYDROXIDE	AML/111/1	S	(g)	500	<1 LB.
SODIUM SILICATE	AML/111/1	L	(ml)	1000	NON-TOXIC
SULFRIC ACID	AML/111/1	L	(ml)	500	BP > 100 C
THINNER	AML/111/1	S	(ozd)	360	SIH
THINNER	AML/111/1	S	(g)	350	SIH
TITANIUM NITRIDE	AML/111/1	S	(g)	250	<1 LB.
TITANIUM SPONGE	AML/111/1	S	(g)	500	<1 LB.
ZIRCONIUM FOIL	AML/111/1	S	sheet	2	SIH
ZIRCONIUM LUMP	AML/111/1	S	(g)	1000	NON-DISPERSIBLE
ZIRCONIUM OXIDE	AML/111/1	S	(kg)	1	NON-DISPERSIBLE

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
1,2-DIIODOETHANE	AML/228	S	(g)	25	<1 LB.
1,4-DIIODOBUTANE	AML/228	S	(g)	25	<1 LB.
1,6-DIIODOHEXANE	AML/228	S	(g)	25	<1 LB.
1-BUTANOL	AML/228	L	(gal)	1	BP > 100 C
2-IDDOPROPANE	AML/228	S	(g)	500	<1 LB.
2-METHYL-1-BUTANOL	AML/228	L	(ml)	100	BP > 100 C
2-PROPANOL	AML/228	L	(gal)	3	SIH
3-METHYL-2-BUTANOL	AML/228	L	(ml)	100	BP > 100 C
ACETIC ACID	AML/228	L	(gal)	6	BP > 100 C
ACETIC ACID-D	AML/228	S	(g)	25	<1 LB.
ACETONE	AML/228	L	(l)	1	ERPG-1 AT 30 M
ACETONE	AML/228	L	(gal)	1	ERPG-1 AT 30 M
ACETONE	AML/228	L	(g)	30	<1 LB.
ACETONITRILE	AML/228	L	(l)	1	ERPG-1 AT 30 M
ACETYL CHLORIDE	AML/228	S	(g)	500	<1 LB.
AMMONIUM HYDROXIDE	AML/228	L	(ml)	500	ERPG-1 AT 30 M
AMYL ALCOHOL	AML/228	L	(l)	1	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
BENZENE	AML/228	L	(l)	1	ERPG-1 AT 30 M
BENZENE	AML/228	L	(g)	200	<1 LB.
BROMOETHANE	AML/228	S	(g)	500	<1 LB.
CARBON TETRACHLORIDE	AML/228	L	(l)	1	ERPG-1 AT 30 M
CHLOROFORM	AML/228	L	(ml)	500	ERPG-1 AT 30 M
CHLOROFORM	AML/228	L	(l)	1	ERPG-1 AT 30 M
CHLOROFORM	AML/228	L	(l)	2	ERPG-1 AT 30 M
CHLOROFORM-D	AML/228	S	(g)	110	<1 LB.
CYCLOHEXYL CHLORIDE	AML/228	S	(g)	500	<1 LB.
DEUTERIUM OXIDE	AML/228	S	(g)	125	<1 LB.
DIBUTYLMAGNESIUM (1.ON SOLUTION,	AML/228	L	(ml)	800	ERPG-1 AT 30 M
DIETHYL ETHER	AML/228	L	(l)	4	ERPG-1 AT 30 M
DIIODOMETHANE	AML/228	S	(g)	25	<1 LB.
ETHYL ACETATE	AML/228	L	(ml)	3000	ERPG-1 AT 30 M
ETHYL ALCOHOL	AML/228	L	(l)	1	SIH
ETHYLENE GLYCOL	AML/228	L	(l)	1	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
GLYCINE KIT	AML/228	S	(g)	5	<1 LB.
HEXAMETHYL-DISILAZANE	AML/228	L	(ml)	20	<1 LB.
HEXANE	AML/228	L	(l)	4	ERPG-1 AT 30 M
HYDROCHLORIC ACID	AML/228	L	(l)	5	SIH
IODINE	AML/228	S	(g)	600	NON-DISPERSIBLE
LEAD (IV) ACETATE	AML/228	S	(g)	300	<1 LB.
LEAD (IV) ACETATE	AML/228	S	(g)	800	NON-DISPERSIBLE
LITHIUM HYDROXIDE	AML/228	S	(g)	500	<1 LB.
MAGNESIUM(II) NITRATE HYDRATE	AML/228	S	(g)	50	<1 LB.
METHANOL	AML/228	L	(gal)	3	ERPG-1 AT 30 M
METHANOL-04	AML/228	S	(g)	250	<1 LB.
METHYL ALCOHOL-D	AML/228	S	(g)	100	<1 LB.
METHYLDICHLOROSILANE	AML/228	S	(g)	500	<1 LB.
METHYLDICHLOROSILANE	AML/228	S	(g)	500	<1 LB.
N-DODECANE	AML/228	L	(ml)	500	ERPG-1 AT 30 M
N-HEPTANE	AML/228	L	(l)	1	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
NITRIC ACID	AML/228	L	(l)	2	KEEP
OCTADECYL-TRICHLOROSILANE	AML/228	L	(ml)	10	<1 LB.
OXALIC ACID	AML/228	S	(kg)	3	NON-DISPERSIBLE
OXALIC ACID DIHYDRATE	AML/228	S	(g)	500	<1 LB.
POTASSIUM HYDROXIDE	AML/228	S	(kg)	3	NON-DISPERSIBLE
PYRIDINE-OS	AML/228	S	(g)	100	<1 LB.
REFRACTIVE INDEX OILS, SERIES B	AML/228	L	(ml)	240	SIH
REFRACTIVE INDEX OILS, SERIES M	AML/228	L	(ml)	160	SIH
REFRACTIVE INDEX OILS, SERIES A	AML/228	L	(ml)	728	SIH
SUCCINYL CHLORIDE	AML/228	S	(g)	100	<1 LB.
SULFURIC ACID	AML/228	L	(gal)	1	BP > 100 C
TETRACHLOROETHYLENE	AML/228	S	(g)	500	<1 LB.
TETRAHYDROFURAN	AML/228	L	(l)	5	ERPG-1 AT 30 M
TETRAHYDROFURAN-	AML/228	S	(g)	20	<1 LB.
TETRAMETHYLAMMONIUM HYDROXIDE PENTAHYDRATE	AML/228	S	(g)	200	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
THALLOUS ETHOXIDE	AML/228	S	(g)	25	<1 LB.
TITANIUM (IV) ISOPROPOXIDE	AML/228	L	(ml)	2500	ERPG-1 AT 30 M
TITANIUM TETRACHLORIDE	AML/228	L	(ml)	500	BP > 100 C
TOLUENE	AML/228	S	(g)	25	<1 LB.
TOLUENE	AML/228	S	(g)	50	<1 LB.
TOLUENE	AML/228	L	(l)	19	BP > 100 C
TRIFLUOROACETIC	AML/228	S	(g)	10	<1 LB.
VANADIUM (IV) CHLORIDE	AML/228	S	(g)	100	<1 LB.
ZIRCONIUM (IV) BUTOXIDE	AML/228	L	(ml)	1000	BP > 100 C
ZIRCONIUM (IV) PROPOXIDE	AML/228	L	(ml)	500	BP > 100 C
1-BUTANOL	AML/228T	L	(l)	1	BP > 100 C
2-PROPANOL	AML/228T	L	(l)	4	SIH
CHLOROFORM	AML/228T	L	(l)	4	ERPG-1 AT 30 M
ETHYLENE GLYCOL	AML/228T	L	(l)	4	BP > 100 C
HEXADECANE	AML/228T	L	(l)	2	NON-TOXIC
HEXADECANE	AML/228T	L	(ml)	500	NON-TOXIC

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
HEXANE	AML/228T	L	(l)	1	ERPG-1 AT 30 M
N-DODECANE	AML/228T	L	(ml)	500	ERPG-1 AT 30 M
N-HEPTANE	AML/228T	L	(l)	2	ERPG-1 AT 30 M
OCTADECYLTRICHLOROSILANE	AML/228T	L	(ml)	40	<1 LB.
STATICIDE	AML/228T	L	(ozd)	32	SIH
TETRAHYDROFURAN	AML/228T	L	(l)	4	ERPG-1. AT 30 M
1,1,1-TRIS(DYDROXYMETHYL)ETHANE	AML/229	S	(g)	500	<1 LB.
1,1,1-TRIS(HYDREXYMETHYL)PROPANE	AML/229	S	(g)	250	<1 LB.
1,3,5 CYCLOHEXANETRIOL DIHYDRATE	AML/229	S	(g)	10	<1 LB.
1-ADAMANTANECARBONYL CHLORIDE	AML/229	S	(g)	25	<1 LB.
1-ADAMANTANOL	AML/229	S	(g)	25	<1 LB.
1-ADOMATONEMETHONOL	AML/229	S	(g)	10	<1 LB.
13 BUTADIENE EPOXIDE	AML/229	S	(g)	50	<1 LB.
14 BUTANEDIOL DIGLYCIDYL	AML/229	S	(g)	50	<1 LB.
2 CHLORO-2METHYLPROPANE	AML/229	L	(ml)	500	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
2- METHOXYETHYL ETHER	AML/229	L	(ml)	200	<1 LB.
2-METHOXYETHANOL	AML/229	L	(ml)	4500	ERPG-1 AT 30 M
2-METHYL-2-ADAMANTANOL	AML/229	S	(g)	5	<1 LB.
2-PROPANOL	AML/229	L	(l)	8	SIH
4 BROMO	AML/229	S	(g)	25	<1 LB.
ACETIC ANLYDICLE	AML/229	S	(g)	200	<1 LB.
ACETIC-D3 ACID-D	AML/229	S	(g)	50	<1 LB.
ACETONE	AML/229	L	(l)	4	ERPG-1 AT 30 M
ACETYLACETONE	AML/229	L	(ml)	500	ERPG-1 AT 30 M
ALUMINUM ISOPROPOXIDE	AML/229	S	(kg)	1	NON-DISPERSIBLE
ALUMINUM TRISEC	AML/229	S	(g)	200	<1 LB.
APIEZON	AML/229	S	(g)	25	SIH
APIEZON	AML/229	S	(g)	25	SIH
ARGON COMPRESSED	AML/229	G	(cyl)	7	SIH
BARIUM ACETATE	AML/229	S	(g)	500	<1 LB.
BARIUM HYDROXIDE OCTAHYDRATE	AML/229	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
BARIUM ISOPROPOXIDE	AML/229	S	(g)	25	<1 LB.
BARIUM PIECES	AML/229	S	(g)	200	<1 LB.
BENZENE	AML/229	S	(g)	100	<1 LB.
BENZOIC	AML/229	S	(g)	500	<1 LB.
BENZOPHENONE	AML/229	S	(g)	1000	NON-DISPERSIBLE
BIS(HYROXYMETHYL)PROPO NIC ACID	AML/229	S	(g)	100	<1 LB.
BISMUTH 2-ETHYL HEXANATE	AML/229	S	(g)	200	<1 LB.
BISMUTH ACETATE	AML/229	S	(g)	50	<1 LB.
BISMUTH ACETATE	AML/229	S	(g)	250	<1 LB.
BISMUTH(III) NITRATE PENTAHYDRATE	AML/229	S	(g)	500	<1 LB.
BROMINE	AML/229	L	(ml)	150	KEEP
CALCIUM HYDRIDE	AML/229	S	(g)	100	<1 LB.
CALCIUM OXIDE	AML/229	S	(g)	500	<1 LB.
CARBON DIOXIDE	AML/229	G	(cyl)	1	SIH
CERIUM (III) ACETATE	AML/229	S	(g)	50	<1 LB.
CHEMTRONICS ULTRAJET C02	AML/229	S	(ozd)	12	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
CHROMIUM TRIOXIDE	AML/229	S	(g)	100	<1 LB.
CITRIC ACID ANHYOROUS	AML/229	S	(g)	500	<1 LB.
CO8ALT(II) ACETYLACETONATE	AML/229	S	(g)	50	<1 LB.
COBALT (II CHLORIDE	AML/229	S	(g)	100	<1 LB.
COBAIT (II) NITRATE HEXAHYDRATE	AML/229	S	(g)	100	<1 LB.
COBALT (III) ACETYLACETONATE	AML/229	S	(g)	210	<1 LB.
COBALT NITRATE	AML/229	S	(g)	500	<1 LB.
COBALT(II) ACETATE TETRAHYORATE	AML/229	S	(g)	100	<1 LB.
COMPRESSED AIR	AML/229	G	(cyl)	2	SIH
COMPRESSED HYDROGEN	AML/229	G	(cyl)	2	SIH
COPPER(I)IODIDE	AML/229	S	(g)	250	<1 LB.
DIBUTYLMAGNESIUM	AML/229	L	(ml)	800	ERPG-1 AT 30 M
DIETHYLZINC	AML/229	S	(g)	200	<1 LB.
DIETHYLZINC	AML/229	S	(g)	100	<1 LB.
DIMETHYLFORMAMIDE	AML/229	L	(l)	1	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
DOW CORNING HIGH VACUUM	AML/229	S	(g)	600	SIH
DUO SEAL PUMP OIL	AML/229	L	(qt)	10	SIH
EPOXI-PATCH A	AML/229	S	(g)	50	SIH
EPOXI-PATCH B	AML/229	S	(g)	25	SIH
FERRIC NITRATE	AML/229	S	(g)	500	<1 LB.
GLYCEROL	AML/229	L	(ml)	500	BP > 100 C
HEXANES	AML/229	L	(l)	16	KEEP
IRON (II) ACETATE	AML/229	S	(g)	50	<1 LB.
IRON (II) CHLORIDE	AML/229	S	(g)	250	<1 LB.
IRON (III) ACETYLACETONATE	AML/229	S	(g)	200	<1 LB.
IRON (III) NITRATE NONAHYDRATE	AML/229	S	(g)	50	<1 LB.
L-TARTARIC ACID	AML/229	S	(g)	100	<1 LB.
LANTHANUM (I II)	AML/229	S	(g)	100	<1 LB.
LANTHANUM (III) ACETATE HYDRATE	AML/229	S	(g)	500	<1 LB.
LANTHANUM (III) ACETATE HYDRATE	AML/229	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
LANTHANUM NITRATE HYDRATE	AML/229	S	(g)	100	<1 LB.
LANTHIUM (III) ACETATE HYDRATE	AML/229	S	(g)	100	<1 LB.
LANTHIUM ISOPROPOXIDE	AML/229	S	(g)	90	<1 LB.
LEAD ACETATE TRIHYDRATE	AML/229	S	(g)	800	NON-DISPERSIBLE
LEAD OXIDE - RED	AML/229	S	(g)	1000	NON-DISPERSIBLE
LEAD SUBACETATE	AML/229	S	(g)	500	<1 LB.
LEAD(II) 2,4 PENTANEDIONATE	AML/229	S	(g)	50	<1 LB.
LEAD(II) BROMIDE	AML/229	S	(g)	100	<1 LB.
LEAD(II) CHLORIDE	AML/229	S	(g)	250	<1 LB.
LEAD, GRANULAR APPROX. 30MESH	AML/229	S	(g)	100	<1 LB.
LIQUID SOLDER	AML/229	L	(ozd)	15	SIH
LITHIUM ALUMINUM HYDRIDE	AML/229	S	(g)	100	<1 LB.
LITHIUM DIMETHYLAMIDE	AML/229	S	(g)	50	<1 LB.
LITHIUM HYDROXIDE MONOHYDRATE	AML/229	S	(g)	250	<1 LB.
LITHIUM WIRE	AML/229	S	(g)	25	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
MAGANESE (III) ACETATE	AML/229	S	(g)	100	<1 LB.
MAGNESIUM ACETATE	AML/229	S	(g)	10	<1 LB.
MAGNESIUM ACETATE	AML/229	S	(g)	250	<1 LB.
MAGNESIUM ACETYLACETONATE	AML/229	S	(g)	250	<1 LB.
MAGNESIUM BROMIDE	AML/229	S	(g)	50	<1 LB.
MAGNESIUM CHLORIDE	AML/229	S	(kg)	1	NON-DISPERSIBLE
MAGNESIUM ETHOXIDE	AML/229	S	(g)	250	<1 LB.
MAGNESIUM GRANULAR	AML/229	S	(kg)	2	<1 LB.
MAGNESIUM HYDROXIDE	AML/229	S	(g)	500	<1 LB.
MAGNESIUM METAL	AML/229	S	(g)	500	<1 LB.
MAGNESIUM NITRATE	AML/229	S	(g)	600	NON-DISPERSIBLE
MAGNESIUM OXIDE	AML/229	S	(g)	100	<1 LB.
MANGANESE ACETATE	AML/229	S	(g)	100	<1 LB.
MANGANESE ACETATE	AML/229	S	(g)	50	<1 LB.
MANGANESE(II)ACETATE	AML/229	S	(g)	500	<1 LB.
MANGANESE(II)CHLORIDE	AML/229	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
MECHANICAL PUMP OIL	AML/229	L	(gal)	10	SIH
MERCURY	AML/229	L	(g)	100	<1 LB.
MERCURY (II) CHLORIDE	AML/229	S	(g)	5	<1 LB.
MERCURY (II) PERCHLORATE	AML/229	S	(g)	100	<1 LB.
MERCURY (II) PERCHLORATE	AML/229	S	(g)	100	<1 LB.
MESO ERYTHRITOL	AML/229	S	(g)	75	<1 LB.
METHANOL OPTIMA	AML/229	L	(l)	4	ERPG-1 AT 30 M
MOLECULAR SIEVES	AML/229	S	(lb)	5	SIH
NEOPENTYL ALCOHOL	AML/229	S	(g)	300	<1 LB.
NEOPENTYL CHLORIDE	AML/229	S	(g)	5	<1 LB.
NICKEL (II) NITRATE	AML/229	S	(g)	10	<1 LB.
NICKEL (II) NITRATE	AML/229	S	(g)	5	<1 LB.
NIOBIUM(V)BROMIDE	AML/229	S	(g)	50	<1 LB.
NIOBIUM(V)CHLORIDE	AML/229	S	(g)	50	<1 LB.
NIOBIUM(V)ETHOXIDE	AML/229	S	(g)	250	<1 LB.
NITROGEN	AML/229	G	(cyl)	2	SIH
NN DIMETHYLACETAMIDE	AML/229	L	(ml)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
NOBIUM TURNINGS	AML/229	S	(g)	250	<1 LB.
OCTAOECYLTRICHLOR0S1LANE	AML/229	L	(ml)	10	<1 LB.
OPTASSIUM T-BUTOXIDE	AML/229	S	(g)	100	<1 LB.
OXALIC ACID DIHYDRATE	AML/229	S	(g)	500	<1 LB.
OXYGEN COMPRESSED	AML/229	S	(cyl)	2	SIH
PETROLEIUM ETHER	AML/229	L	(ml)	1800	SIH
PHENOLPHTHALEIN	AML/229	L	(ml)	500	SIH
POTASSIUM BIS (TRIMETHYL) OMID	AML/229	S	(g)	100	<1 LB.
POTASSIUM BROMIDE	AML/229	S	(g)	50	<1 LB.
POTASSIUM BROMIDE	AML/229	S	(g)	50	<1 LB.
POTASSIUM CARBONATE	AML/229	S	(g)	500	<1 LB.
POTASSIUM CHLORIDE	AML/229	S	(g)	500	<1 LB.
POTASSIUM HYDRIDE	AML/229	S	(g)	75	<1 LB.
POTASSIUM STICKS IN MINERAL OIL	AML/229	S	(g)	50	<1 LB.
PROPANE	AML/229	S	(g)	1200	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
SATIN FLAT ENAMEL	AML/229	S	(ozd)	32	SIH
SILICON OIL	AML/229	L	(ml)	1500	SIH
SILICON WAFERS	AML/229	S	wafrs	50	SIH
SILVER NITRATE	AML/229	S	(g)	25	<1 LB.
SILVER OXIDE	AML/229	S	(g)	10	<1 LB.
SODIUM	AML/229	S	(g)	500	<1 LB.
SODIUM CARBONATE	AML/229	S	(g)	500	<1 LB.
SODIUM CHLORIDE	AML/229	S	(g)	500	<1 LB.
SODIUM CYCLOPENTADIENYLIDE	AML/229	L	(ml)	100	<1 LB.
SODIUM ETHOXIDE	AML/229	S	(g)	250	<1 LB.
SODIUM HYDRIDE	AML/229	S	(g)	50	<1 LB.
SODIUM HYDROXIENE	AML/229	S	(g)	1000	NON-DISPERSIBLE
SODIUM SULFATE	AML/229	S	(g)	500	<1 LB.
SODIUM T-BUTOXIDE	AML/229	S	(g)	100	<1 LB.
SODIUM TERT-BUTOXIDE	AML/229	S	(g)	100	<1 LB.
STRONTIUM 2,4-PENTANEDIONATE	AML/229	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
STRONTIUM ACETATE	AML/229	S	(g)	250	<1 LB.
STRONTIUM ACETATE REAGENT	AML/229	S	(g)	500	<1 LB.
STRONTIUM ACETYLACETONATE HYDRATE	AML/229	S	(g)	25	<1 LB.
STRONTIUM CHLORIDE ACETYLACETONATE	AML/229	S	(g)	100	<1 LB.
STRONTIUM CHLORIDE HEXAHYDRATE	AML/229	S	(g)	50	<1 LB.
STRONTIUM NITRATE	AML/229	S	(g)	500	<1 LB.
STRONTIUM PIECES	AML/229	S	(g)	200	<1 LB.
TANTALUM (IV) ETHOSIDE	AML/229	S	(g)	50	<1 LB.
TERT-BUTYLLITHIUM	AML/229	L	(ml)	100	<1 LB.
TETRACOSANOIC ACID	AML/229	S	(g)	1	<1 LB.
TETRAHYDROFURAN	AML/229	L	(l)	4	ERPG-1 AT 30 M
TETRAMETHYLAMMONIUM HYDROXIDE	AML/229	S	(g)	200	<1 LB.
TETRAMETHYLAMMONIUM HYDROXIDE PENTAHYDRATE	AML/229	S	(g)	100	<1 LB.
TETRAMETHYLIN	AML/229	S	(g)	10	<1 LB.
THALLIUM(II)CHLORIDE	AML/229	S	(g)	25	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
TIDI (OPRI) BIS(OCAC)	AML/229	S	(g)	500	<1 LB.
TITANIUM (IV) ETHOXIDE	AML/229	S	(g)	50	<1 LB.
TITANIUM ISOPROPOXIDE	AML/229	S	(g)	100	<1 LB.
TITANIUM(IV)OXIOE ACETYLACETONATE	AML/229	S	(g)	50	<1 LB.
TITANIUM BUTOXIDE	AML/229	S	(g)	500	<1 LB.
TITANIUM BUTOXIDE	AML/229	S	(g)	500	<1 LB.
TOLUENE	AML/229	L	(l)	4	BP > 100 C
TOLUENE	AML/229	L	(l)	4	BP > 100 C
TOLUENE-D8	AML/229	S	(g)	25	<1 LB.
TRIETHYL METHANE TRICARBOXYLATE	AML/229	S	(g)	75	<1 LB.
TRIMETHYLALUMINUM	AML/229	S	(g)	100	<1 LB.
TRIMETHYLSILYLMETHYLITHIUM	AML/229	L	(ml)	50	<1 LB.
TRITON X-100	AML/229	L	(ml)	50	<1 LB.
TUNGSTEN HEXACARBONYL	AML/229	S	(g)	50	<1 LB.
VANADIUM (III) ACETYLACETONATE	AML/229	S	(g)	50	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
VANADIUM (III) CHLORIDE	AML/229	S	(g)	25	<1 LB.
VANADIUM OXYTRICHLORIDE	AML/229	S	(g)	100	<1 LB.
VANADYL	AML/229	S	(g)	50	<1 LB.
YTTRIUM (III) 2-ETHYHEXONOATE	AML/229	S	(g)	150	<1 LB.
YTTRIUM (IV) ACETATE HYDRATE	AML/229	S	(g)	150	<1 LB.
YTTRIUM NITRATE TETRAHYDRATE	AML/229	S	(g)	600	NON-DISPERSIBLE
YTTRIUMOXIDE ISOPROPOXIDE	AML/229	S	(g)	75	<1 LB.
ZIRCONIUM (IV) ACETYLACETONATE	AML/229	S	(g)	300	<1 LB.
ZIRCONIUM (IV) ETHOXIDE	AML/229	S	(g)	75	<1 LB.
ZIRCONIUM (IV) ISOPROPOXIDE ISOPROPANOL	AML/229	S	(g)	650	<1 LB.
ZIRCONIUM (IV) PROPOXIDE	AML/229	S	(g)	500	<1 LB.
ZIRCONIUM ACETATE SOLUTION	AML/229	L	(gal)	10	BP > 100 C
ZIRCONIUM BUTOXIDE	AML/229	L	(ml)	1000	BP > 100 C
ZIRCONIUM IV ISOPROPOXIDE ISOPROPANOL COMPLEX	AML/229	S	(g)	200	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
ZIRCONIUM N-BUTOXIDE	AML/229	S	(g)	100	<1 LB.
ZIRCONIUM(IV) ISOPROPOXIDE ISOPROPANOL COMPLEX	AML/229	S	(g)	50	<1 LB.
ZIRCONIUM IV CHLORIDE	AML/229	S	(g)	100	<1 LB.
2-PROPANOL	AML/230	L	(l)	3	SIH
906 MAGNESIA	AML/230	L	(ml)	2	<1 LB.
906 MAGNESIA ADHESIVE	AML/230	S	(lb)	5	NON-DISPERSIBLE
ACETONE	AML/230	L	(l)	3	ERPG-1 AT 30 M
AMDRY COPPER 911	AML/230	S	(lb)	5	SIH
BATH CLEAR	AML/230	L	(ml)	500	SIH
CERAMABOND 571	AML/230	L	(l)	2	SIH
CERAMABOND 632	AML/230	L	(ml)	500	SIH
CERAMACAST 576	AML/230	L	(qt)	3	SIH
CERAMAPOT 583 CASTING MATERIAL	AML/230	S	(lb)	10	SIH
CERAMIC ADHESIVE 918	AML/230	L	(qt)	1	SIH
CERMACAST 583	AML/230	L	(qt)	2	SIH
DRIERITE-8MESH	AML/230	S	(lb)	10	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
DURAPOT 804	AML/230	L	(qt)	1	SIH
DURAPOT 814	AML/230	L	(ml)	250	SIH
DURAPOT 814 POWDER	AML/230	S	(qt)	1	SIH
EA 934 NA PART A	AML/230	L	(qt)	1	SIH
EA 934 PART B	AML/230	L	(pt)	1	SIH
ETHYL ALCOHOL	AML/230	L	(l)	5	SIH
HYDROCHLORIC ACID	AML/230	L	(ml)	5000	SIH
ISOTRON	AML/230	L	(ozf)	144	SIH
METHANOL	AML/230	L	(ml)	1500	ERPG-1 AT 30 M
TOULENE	AML/230	L	(ml)	500	BP > 100 C
1-CHLORO-2,4-DINITROBENZENE	AML/231	S	(g)	100	<1 LB.
18-CROWN-6	AML/231	S	(g)	5	<1 LB.
ALUMINA	AML/231	L	(ml)	10000	BP > 100 C
ALUMINA	AML/231	L	(ml)	1000	BP > 100 C
ALUMINUM HYDROXIDE	AML/231	S	(g)	100	<1 LB.
ALUMINUM HYDROXIDE	AML/231	S	(lb)	5	NON-DISPERSIBLE

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
ALUMINUM NITRATE	AML/231	S	(g)	50	<1 LB.
ALUMINUM NITRATE 9-HYDRATE	AML/231	S	(g)	500	<1 LB.
ALUMINUM OXIDE HYDROXIDE	AML/231	L	(ml)	1000	ERPG-1 AT 30 M
ALUMINUM OXIDE HYDROXIDE	AML/231	L	(ml)	100	ERPG-1 AT 30 M
ALUMINUM SULFATE	AML/231	S	(g)	500	<1 LB.
AMMONIUM DIHYDROGEN	AML/231	S	(g)	250	<1 LB.
AMMONIUM FLUROIDE	AML/231	S	(lb)	1	<1 LB.
AMMONIUM METAVANADATE	AML/231	S	(g)	100	<1 LB.
AMMONIUM MOLYBDATE	AML/231	S	(g)	500	<1 LB.
AMMONIUM NITRATE	AML/231	S	(g)	500	<1 LB.
AMMONIUM NITRATE	AML/231	S	(g)	1000	NON-DISPERSIBLE
AMMONIUM OXALATE	AML/231	S	(lb)	1	<1 LB.
AMMONIUM PERRHENATE	AML/231	S	(g)	20	<1 LB.
AMMONIUM PERSULFATE	AML/231	S	(g)	500	<1 LB.
AMMONIUM PHOSPHATE	AML/231	S	(g)	1000	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
AMMONIUM SELENATE	AML/231	S	(g)	10	<1 LB.
AMMONIUM SULFATE	AML/231	S	(g)	500	<1 LB.
AMMONIUM SULFIDE	AML/231	L	(ml)	250	ERPG-1 AT 30 M
AMMONIUM TELLURIUM OXIDE	AML/231	S	(g)	10	<1 LB.
ANION EXCHANGE RESIN IDNAC	AML/231	S	(g)	500	<1 LB.
ANTIMONY POTASSIUM TARTRATE	AML/231	S	(g)	250	<1 LB.
ANTIMONY(III)CHLORIDE	AML/231	S	(g)	500	<1 LB.
ANTIMONY(III)SULFIDE	AML/231	S	(g)	250	<1 LB.
ANTIMONY(V)OXIDE	AML/231	S	(g)	50	<1 LB.
ARSENIC	AML/231	S	(g)	125	<1 LB.
ARSENIC(III)OXIDE	AML/231	S	(g)	250	<1 LB.
ARSENIC(III)SULFIDE	AML/231	S	(g)	100	<1 LB.
BARIUM HYDROXIDE	AML/231	S	(lb)	1	<1 LB.
BARIUM ISOPROPOXIDE	AML/231	S	(g)	5	<1 LB.
BARIUM NITRATE	AML/231	S	(g)	500	<1 LB.
BERYLLIUM OXIDE	AML/231	S	(g)	25	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
BISMUTH OXIDE	AML/231	S	(g)	50	<1 LB.
BORIC ACID	AML/231	S	(g)	500	<1 LB.
BROMOCRESOL GREEN SOLUTION	AML/231	L	(ml)	500	SIH
CADIUM NITRATE	AML/231	S	(lb)	1	<1 LB.
CALCIUM FLUORIDE	AML/231	S	(lb)	1	<1 LB.
CALCIUM OXALATE	AML/231	S	(lb)	1	<1 LB.
CALCIUM OXIDE	AML/231	S	(g)	500	<1 LB.
CALCIUM OXIDE	AML/231	S	(lb)	1	<1 LB.
CALCIUM SULFIDE	AML/231	S	(g)	500	<1 LB.
CELITE	AML/231	S	(g)	500	<1 LB.
CERIUM NITRATE	AML/231	S	(g)	200	<1 LB.
CERIUMOUS CHLORIDE	AML/231	S	(ozd)	4	<1 LB.
CESIUM CARBONATE	AML/231	S	(g)	100	<1 LB.
CESIUM FLUORIDE	AML/231	S	(g)	100	<1 LB.
CESIUM NITRATE	AML/231	S	(g)	100	<1 LB.
CETYLTRIMETHYL AMMONIUM	AML/231	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
CETYLTRIMETHYL AMMONIUM	AML/231	S	(g)	100	<1 LB.
CETYLTRIMETHYLAMMONIUM CHLORIDE	AML/231	L	(ml)	500	ERPG-1 AT 30 M
CHLORAMINE T	AML/231	S	(g)	500	<1 LB.
CHROMIC CHLORIDE	AML/231	S	(g)	500	<1 LB.
CHROMIUM(III) NITRATE	AML/231	S	(g)	250	<1 LB.
CITRIC ACID	AML/231	S	(lb)	1	<1 LB.
COBALT NITRATE	AML/231	S	(g)	500	<1 LB.
COPPER(II) SELENIDE	AML/231	S	(g)	25	<1 LB.
COPPER(II)BROMIDE	AML/231	S	(g)	250	<1 LB.
CUPRIC CHLORIDE	AML/231	S	(g)	500	<1 LB.
CUPRIC NITRATE	AML/231	S	(g)	500	<1 LB.
DECYLTRIMETHYL AMMONIUM	AML/231	S	(g)	100	<1 LB.
DIDYMIUM CARBONATE	AML/231	S	(lb)	1	<1 LB.
DODECYLBENZENESULPHONIC	AML/231	S	(g)	500	<1 LB.
DODECYLTRIMETHYL AMMONIUM BROMIDE	AML/231	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
DOWEX	AML/231	S	(g)	500	<1 LB.
DYSPROSIUM(III)	AML/231	S	(g)	100	<1 LB.
ERBIUM(III) NITRATE PENTAHYDRATE	AML/231	S	(g)	25	<1 LB.
EUROPIUM NITRATE	AML/231	S	(g)	30	<1 LB.
EUROPIUM(III) OXIDE	AML/231	S	(g)	5	<1 LB.
FERRIC NITRATE 9-HYDRATE	AML/231	S	(g)	500	<1 LB.
GADOLINIUM(III)	AML/231	S	(g)	100	<1 LB.
GALLIUM	AML/231	S	(g)	50	<1 LB.
GALLIUM(III) OXIDE	AML/231	S	(g)	25	<1 LB.
GERMANIUM (IV) OXIDE	AML/231	S	(g)	25	<1 LB.
GERMANIUM DIOXIDE	AML/231	S	(g)	100	<1 LB.
GERMANIUM TETRACHLORIDE	AML/231	S	(g)	100	<1 LB.
GLASS-SURFACE CLEANER	AML/231	S	(ozd)	19	SIH
GLYCEROL	AML/231	L	(ml)	500	BP > 100 C
GUANADINE CARBONATE	AML/231	L	(ml)	60	<1 LB.
GUANIDINE CARBONATE	AML/231	L	(kg)	1	NON-DISPERSIBLE

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
HAFNIUM(IV) OXIDE	AML/231	S	(g)	25	<1 LB.
HEXADECYLTRIMETHULAMMONIUM BROMIDE	AML/231	S	(g)	500	<1 LB.
HOLMIUM	AML/231	S	(g)	100	<1 LB.
HOLMIUM(III) NITRATE PENTAHYDRATE	AML/231	S	(g)	50	<1 LB.
HYDROQUINONE	AML/231	S	(g)	500	<1 LB.
IDOIC ACID	AML/231	S	(lb)	2	NON-DISPERSIBLE
IRON CHLORIDE	AML/231	S	(g)	250	<1 LB.
IRON(II)	AML/231	S	(g)	50	<1 LB.
KAOLIN	AML/231	L	(kg)	1	ERPG-1 AT 30 M
KAOLIN	AML/231	L	(ml)	125	ERPG-1 AT 30 M
LANTHANUM CHLORIDE	AML/231	S	(g)	25	<1 LB.
LANTHANUM NITRATE	AML/231	S	(g)	100	<1 LB.
LEAD NITRATE	AML/231	S	(g)	50	<1 LB.
LEAD(IV) OXIDE	AML/231	S	(g)	10	<1 LB.
LITHIUM ACETATE	AML/231	S	(g)	250	<1 LB.
LITHIUM CARBONATE	AML/231	S	(lb)	1	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
LITHIUM FORMATE	AML/231	S	(lb)	1	<1 LB.
LITHIUM METABORATE	AML/231	S	(g)	250	<1 LB.
LITHIUM NITRATE	AML/231	S	(lb)	1	<1 LB.
LUTETIUM NITRATE	AML/231	S	(g)	15	<1 LB.
MAGNESIUM CARBONATE	AML/231	S	(g)	20	<1 LB.
MAGNESIUM CHLORIDE	AML/231	S	(g)	500	<1 LB.
MANGANESE CARBONATE	AML/231	S	(g)	250	<1 LB.
MANGANESE(II) CHLORED	AML/231	L	(ml)	250	ERPG-1 AT 30 M
MANGANESE(IV) OXIDE	AML/231	S	(g)	100	<1 LB.
MERCURIC SULFIDE	AML/231	S	(lb)	1	<1 LB.
MERCURY	AML/231	S	(g)	10	<1 LB.
METHYL RED	AML/231	S	(g)	10	<1 LB.
MINERAL OIL	AML/231	L	(l)	1	SIH
MONTMORILLONITE	AML/231	L	(ml)	500	NON-TOXIC
MYRISTYLTRIMETHYL AMMONIUM BROMIDE	AML/231	S	(g)	500	<1 LB.
NEODYMIUM OXIDE	AML/231	S	(g)	25	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
NEODYMIUM(III) NITRATE HEXAHYDRATE	AML/231	S	(g)	100	<1 LB.
NICKELOUS ACETATE	AML/231	S	(lb)	1	<1 LB.
NICKELOUS CHLORIDE	AML/231	S	(lb)	1	<1 LB.
NIOBIUM	AML/231	S	(g)	100	<1 LB.
PAPER CEMENT	AML/231	L	(ml)	236	SIH
PHOSPHORUS POWDER	AML/231	S	(g)	500	<1 LB.
PHOSPOTUNGSTIC ACID	AML/231	S	(lb)	1	<1 LB.
POLY(ETHYLENE GLYCOL)	AML/231	S	(g)	500	<1 LB.
POLY(ETHYLENE GLYCOL)	AML/231	S	(g)	500	<1 LB.
POLY(VINYL ALCOHOL), 99+	AML/231	S	(g)	500	<1 LB.
POTASSIUM ARSENATE	AML/231	S	(ozd)	4	<1 LB.
POTASSIUM BIS(OXALATO)OXOTITANTE	AML/231	S	(g)	500	<1 LB.
POTASSIUM BISULFATE	AML/231	S	(lb)	1	<1 LB.
POTASSIUM CARBONATE	AML/231	S	(lb)	1	<1 LB.
POTASSIUM CHLORIDE CRYSTAL	AML/231	S	(g)	500	<1 LB.
POTASSIUM DICHROMATE	AML/231	S	(lb)	1	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
POTASSIUM FLUORIDE	AML/231	S	(g)	250	<1 LB.
POTASSIUM HYDROXIDE	AML/231	S	(g)	500	<1 LB.
POTASSIUM HYDROXIDE	AML/231	S	(g)	500	<1 LB.
POTASSIUM HYDROXIDE PELLETS	AML/231	S	(g)	500	<1 LB.
POTASSIUM OXALATE	AML/231	S	(g)	500	<1 LB.
POTASSIUM PERIODATE	AML/231	S	(g)	100	<1 LB.
POTASSIUM PERSULFATE	AML/231	S	(g)	500	<1 LB.
POTASSIUM PHOSPHATE MONOBASIC	AML/231	S	(lb)	1	<1 LB.
POTASSIUM PHOSPHATE MONOBASIC	AML/231	S	(lb)	1	<1 LB.
POTASSIUM SULFATE	AML/231	S	(g)	500	<1 LB.
POTASSIUM TUNGSTATE	AML/231	S	(g)	100	<1 LB.
PRASEODYMIUM OXIDE	AML/231	S	(g)	2	<1 LB.
PRASEODYMIUM(III) NITRATE	AML/231	S	(g)	50	<1 LB.
RUBIDIUM CARBONATE	AML/231	S	(g)	100	<1 LB.
RUBIDIUM FLUORIDE 99% (METAL BASIS)	AML/231	S	(g)	25	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
RUBIDIUM NITRATE	AML/231	S	(g)	50	<1 LB.
RUBIDIUM NITRATE	AML/231	S	(g)	100	<1 LB.
SCADIUM OXIDE 99.95%	AML/231	S	(g)	15	<1 LB.
SAMARIUM ACETATE	AML/231	S	(g)	25	<1 LB.
SAMARIUM(III) NITRATE	AML/231	S	(g)	100	<1 LB.
SILICON	AML/231	S	(g)	25	<1 LB.
SN09201	AML/231	S	(g)	150	<1 LB.
SODIUM ACETATE	AML/231	S	(g)	500	<1 LB.
SODIUM CARBONATE	AML/231	S	(g)	500	<1 LB.
SODIUM CARBONATE ANHYDROUS	AML/231	S	(g)	500	<1 LB.
SODIUM CHLORATE	AML/231	S	(kg)	1	NON-DISPERSIBLE
SODIUM CHLORIDE	AML/231	S	(g)	500	<1 LB.
SODIUM DODECYL SULPHATE	AML/231	S	(g)	100	<1 LB.
SODIUM FORMATE CRYSTAL	AML/231	S	(g)	500	<1 LB.
SODIUM HYDROGEN	AML/231	S	(g)	500	<1 LB.
SODIUM HYDROXIDE PELLETS	AML/231	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
SODIUM MOLYBDATE REAGENT GRADE	AML/231	S	(lb)	1	<1 LB.
SODIUM MOLYBDATE(VI) HYDRATE	AML/231	S	(g)	100	<1 LB.
SODIUM NITRATE	AML/231	S	(g)	500	<1 LB.
SODIUM NITRITE	AML/231	S	(g)	500	<1 LB.
SODIUM PHOSPHATE DIBASIC	AML/231	S	(g)	500	<1 LB.
SODIUM PYROHPOSPHATE	AML/231	S	(g)	500	<1 LB.
SODIUM THIOCYANATE	AML/231	S	(g)	500	<1 LB.
SODIUM TUNGSTATE	AML/231	S	(g)	453.6	<1 LB.
STRONTIUM	AML/231	S	(g)	10	<1 LB.
STRONTIUM HYDROXIDE	AML/231	S	(g)	100	<1 LB.
STRONTIUM NITRATE	AML/231	S	(lb)	1	<1 LB.
TANTALUM (V) OXIDE	AML/231	S	(g)	25	<1 LB.
TANTALUM (V) OXIDE	AML/231	S	(g)	25	<1 LB.
TERBIUM (III) NITRATE PENTAHYDRATE	AML/231	S	(g)	25	<1 LB.
TERBIUM (III) NITRATE PENTAHYDRATE	AML/231	S	(g)	25	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
THALIUM	AML/231	S	(g)	50	<1 LB.
THALLIUM NITRATE	AML/231	S	(g)	25	<1 LB.
THALLIUM NITRATE	AML/231	S	(g)	10	<1 LB.
THIDACETAMIDE	AML/231	S	(g)	200	<1 LB.
THULIUM	AML/231	S	(g)	6	<1 LB.
TIN(IV)	AML/231	S	(g)	500	<1 LB.
TIN(IV)	AML/231	S	(g)	50	<1 LB.
TITANIUM (VI) OXIDE	AML/231	S	(g)	500	<1 LB.
TITANIUM TETRACHLORIDE	AML/231	L	(ml)	500	BP > 100 C
TITANIUM TETRACHLORIDE	AML/231	L	(ml)	500	BP > 100 C
TRITRON	AML/231	S	(g)	500	<1 LB.
TUNGSTEN (VI) OXIDE 99.995%	AML/231	S	(g)	10	<1 LB.
TUNGSTIC ANHYDRIDE	AML/231	S	(g)	100	<1 LB.
VANADIUM (V) TRICHLORIDE	AML/231	S	(g)	100	<1 LB.
VANADIUM OXIDE	AML/231	S	(g)	25	<1 LB.
VANADIUM PENTOXIDE	AML/231	S	(ozd)	4	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
VOLCLAY	AML/231	L	(ml)	2000	NON-TOXIC
WAHING SODA	AML/231	L	(ozd)	55	SIH
WATER	AML/231	L	(gal)	1	SIH
YTTRIUM (III) NITRATE	AML/231	S	(g)	50	<1 LB.
YTTRIUM	AML/231	S	(g)	50	<1 LB.
ZINC ACETATE	AML/231	S	(lb)	1	<1 LB.
ZINC CHLORIDE	AML/231	S	(g)	500	<1 LB.
ZINC NITRATE	AML/231	S	(g)	500	<1 LB.
ZINC OXIDE	AML/231	S	(lb)	1	<1 LB.
ZINC SULFIDE	AML/231	S	(g)	250	<1 LB.
ZINC SULPHATE	AML/231	S	(lb)	1	<1 LB.
ZIRCONIUM (IV) ACETYL ACETONATE	AML/231	S	(g)	25	<1 LB.
ZIRCONIUM (VI) OXIDE	AML/231	S	(g)	10	<1 LB.
ZIRCONIUM NITRATE	AML/231	S	(ozd)	4	<1 LB.
ZIRCONIUM OXIDE	AML/231	S	(g)	500	<1 LB.
ZIRCONYL NITRATE HYDRATE	AML/231	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
0-PHOSPHORIC ACID 85%	AML/232	L	(l)	2	SIH
1,1-AZOBIS(CYCLOHEXANE-CARBONITRILE)	AML/232	S	(g)	25	<1 LB.
1-ACETYLIMIDAZOLE	AML/232	S	(g)	25	<1 LB.
1-DODECANETHIOL	AML/232	S	(g)	100	<1 LB.
1-METHYL-2-PYRROLIDINONE	AML/232	S	(g)	1	<1 LB.
1-METHYL-4(METHYLAMINO)PIPERIDINE	AML/232	S	(g)	100	<1 LB.
2 HYDROXYETHYL METHACRYLATE	AML/232	L	(l)	1	ERPG-1 AT 30 M
2-(DIMETHYLAMINO) ETHYL	AML/232	L	(ml)	100	<1 LB.
2-BUTANONE PEROXIDE	AML/232	S	(g)	100	<1 LB.
2-HYDROXYETHYL METHACRYLATE	AML/232	S	(g)	500	<1 LB.
3-(TRIMETHOXYSILYL)PROPYL METHACRYLATE	AML/232	S	(g)	100	<1 LB.
3-AMINOPHTALIC ACID	AML/232	S	(g)	5	<1 LB.
3-SULFOPROPYL METHACRYLATE, POTASSIUM SALT	AML/232	S	(g)	500	<1 LB.
6-AMINO-1-HEXYL PHOSPHATE	AML/232	S	(mg)	100	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
ACETIC ACID	AML/232	L	(ml)	500	BP > 100 C
ACETONE	AML/232	L	(l)	5	ERPG-1 AT 30 M
ACRYLAMIDE	AML/232	S	(g)	500	<1 LB.
ACRYLIC	AML/232	S	(g)	100	<1 LB.
AEROSOL	AML/232	S	(ozd)	19	SIH
AGARIC ACID	AML/232	S	(g)	5	<1 LB.
AGAROSE	AML/232	S	(g)	100	<1 LB.
AGAROSE	AML/232	S	(g)	25	<1 LB.
AIR, COMPRESSED	AML/232	G	(gcf)	225	SIH
ALUMINA	AML/232	S	(lb)	1	<1 LB.
ALUMINUM OXIDE	AML/232	S	(g)	1500	NON-DISPERSIBLE
AMMONIUM CHLORIDE	AML/232	S	(g)	500	<1 LB.
AMMONIUM HYDROXIDE	AML/232	L	(l)	2	ERPG-1 AT 30 M
AMMONIUM HYDROXIDE	AML/232	L	(ml)	500	ERPG-1 AT 30 M
AMMONIUM NITRATE	AML/232	S	(g)	500	<1 LB.
AMMONIUM OXALATE	AML/232	S	(g)	500	<1 LB.
AMMONIUM SULFATE,	AML/232	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
ARACHIDIC ACID	AML/232	S	(g)	1	<1 LB.
ARACHIDIC ACID	AML/232	S	(g)	5	<1 LB.
ARGON, COMPRESSED	AML/232	G	(gcf)	250	SIH
BARIUM CARBONATE	AML/232	S	(g)	25	<1 LB.
BARIUM NITRATE	AML/232	S	(lb)	1	<1 LB.
BEHENIC	AML/232	S	(g)	5	<1 LB.
BENZENE	AML/232	L	(l)	1	ERPG-1 AT 30 M
BORIC ACID	AML/232	S	(g)	500	<1 LB.
BUFFER SOLUTION	AML/232	L	(ml)	500	SIH
BUFFER SOLUTION	AML/232	L	(ml)	500	SIH
BUFFER SOLUTION	AML/232	L	(ml)	500	SIH
BUTYL METHACRYLATE	AML/232	L	(ml)	100	BP > 100 C
CADMIUM ACETATE	AML/232	S	(g)	100	<1 LB.
CADMIUM ACETATE, DIHYDRATE	AML/232	S	(g)	100	<1 LB.
CADMIUM CHLORIDE	AML/232	S	(g)	150	<1 LB.
CADMIUM NITRATE	AML/232	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
CADMIUM NITRATE	AML/232	S	(g)	100	<1 LB.
CADMIUM SULFATE	AML/232	S	(lb)	1	<1 LB.
CALCIUM CARBONATE	AML/232	S	(lb)	1	<1 LB.
CALCIUM CHLORIDE	AML/232	S	(g)	1000	NON-DISPERSIBLE
CALCIUM NITRATE	AML/232	S	(g)	1000	NON-DISPERSIBLE
CALCIUM OXALATE	AML/232	S	(g)	500	<1 LB.
CAPRYLIC ACID	AML/232	L	(ml)	10	<1 LB.
CARBON DIOXIDE COMPRESSED	AML/232	G	(gcf)	250	SIH
CARBON TETRACHLORIDE	AML/232	L	(l)	4	ERPG-1 AT 30 M
CARBONIC ANHYDRASE	AML/229	S	(mg)	100	<1 LB.
CATECHOL	AML/232	S	(g)	100	<1 LB.
CHLOROFORM	AML/232	L	(l)	1	ERPG-1 AT 30 M
CHLOROFORM	AML/232	L	(l)	3	ERPG-1 AT 30 M
CHLOROTRIMETHYLSILANE	AML/232	L	(l)	4	NON-TOXIC
CITRIC ACID MONOHYDRATE	AML/232	S	(g)	500	<1 LB.
CITRIC ACID, ANHYDROUS	AML/232	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
COLLOIDAL ALUMINA/SILICA SOL	AML/232	L	(l)	1	ERPG-1 AT 30 M
COLLOIDAL SILICA SOL	AML/232	L	(l)	1	ERPG-1 AT 30 M
CONDUCTIVITY CALIBRATOR	AML/232	L	(l)	3	SIH
COPPER (11) OXIDE	AML/232	S	(g)	100	<1 LB.
COPPER(II)SULFATE, PENTAHYDRATE	AML/232	S	(g)	50	<1 LB.
CORNSTARCH	AML/232	S	(g)	454	SIH
CSM-1 DEGREASER	AML/232	S	(ozd)	12	SIH
CUPRIC SULFATE	AML/232	S	(g)	500	<1 LB.
DARVAN 821 A	AML/232	L	(ml)	500	SIH
DARVAN C	AML/232	L	(ml)	500	SIH
DECANOIC ANHYDRIDE	AML/232	S	(g)	1	<1 LB.
DICHLOROMETHANE	AML/232	L	(ml)	100	ERPG-1 AT 30 M
DICHLOROMETHYLSILANE	AML/232	S	(g)	500	<1 LB.
DIMETHYLACETAMIDE	AML/232	L	(ml)	400	ERPG-1 AT 30 M
DIMETHYLFOROMIDE	AML/232	L	(ml)	200	ERPG-1 AT 30 M
DIMETHYLSILOXANE	AML/232	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
DOCOSADIENOICACID	AML/232	S	(mg)	25	<1 LB.
DOCOSANOIC ACID	AML/232	S	(g)	5	<1 LB.
DOCOSATRIENOIC ACID	AML/232	S	(mg)	25	<1 LB.
DODECANE	AML/232	L	(ml)	500	NON-DISPERSIBLE
DRIERITE	AML/232	S	(lb)	6	SIH
EDTA	AML/232	S	(g)	500	<1 LB.
EICOSANOIC ACID	AML/232	S	(g)	1	<1 LB.
ELECHROPHORESIS	AML/232	S	(g)	25	<1 LB.
ELECTRODE STORAGE SOLUTION	AML/232	L	(l)	1	SIH
ETHYL ALCOHOL	AML/232	L	(l)	4	SIH
ETHYLENE GLYCOL	AML/232	L	(l)	1	BP > 100 C
ETHYLENE GLYCOL	AML/232	L	(l)	3	BP > 100 C
ETHYLENE GLYCOL	AML/232	L	(ml)	500	BP > 100 C
GELATIN	AML/232	S	(g)	20	<1 LB.
GELATIN	AML/232	S	(g)	450	<1 LB.
GLASSCLAD	AML/232	L	(ml)	100	SIH

Chemical Inventory

CHEM	LOC_CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
GLYCERIN	AML/232	L	(ml)	500	BP > 100 C
GLYCEROL	AML/232	L	(ml)	500	BP > 100 C
GLYCIDYL METHACRYLATE	AML/232	S	(g)	100	<1 LB.
HEPTANE	AML/232	L	(l)	4	ERPG-1 AT 30 M
HEXADECANE	AML/232	L	(ml)	1500	ERPG-1 AT 30 M
HEXADECYL MERCAPTAN	AML/232	L	(ml)	100	<1 LB.
HIGH PURITY ALUMINA, TYPE AKP-15	AML/232	S	(kg)	3	NON-DISPERSIBLE
HIGH PURITY ALUMINA, TYPE AKP-30	AML/232	S	(kg)	1	NON-DISPERSIBLE
HIGH PURITY SILVER PAINT	AML/232	S	(ozd)	1	NON-DISPERSIBLE
HYDRIODIC ACID	AML/232	S	(lb)	1	<1 LB.
HYDROCHLORIC ACID	AML/232	L	(l)	3	SIH
HYDROCHLORIC ACID	AML/232	L	(ml)	500	SIH
HYDROCHLORIC ACID 1N SOLUTION	AML/232	L	(l)	3	SIH
HYDROCHLORIC ACID 5N	AML/232	L	(l)	1	SIH
HYDROFLUORIC ACID, 49%	AML/232	L	(lb)	10	KEEP
HYDROGEN PEROXIDE	AML/232	L	(ml)	1000	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
KAOLIN	AML/232	S	(g)	100	<1 LB.
KAOLIN	AML/232	S	(g)	500	<1 LB.
L-A-PHOSPHATIDIC ACID,	AML/232	S	(mg)	25	<1 LB.
L-A-PHOSPHATIDIC ACID, DIPALMITOYL	AML/232	S	(mg)	50	<1 LB.
L-A-PHOSPHATIDYCHOLINE,	AML/232	S	(mg)	250	<1 LB.
LABORATORY CLEANING SOLUTiON	AML/232	L	(ozd)	8	SIH
LIGNOCERIC ACID	AML/232	S	(g)	1	<1 LB.
LITHIUM	AML/232	S	(lb)	1	<1 LB.
MAGNESIUM CHLORIDE	AML/232	S	(g)	500	<1 LB.
MAGNESIUM OXIDE	AML/232	S	(lb)	1	<1 LB.
MAGNESIUM SULFATE	AML/232	S	(g)	500	<1 LB.
METHACRYLIC ACID	AML/232	S	(g)	500	<1 LB.
METHACRYLOYL CHLORIDE	AML/232	S	(g)	100	<1 LB.
METHANOL	AML/232	L	(l)	5	ERPG-1 AT 30 M
METHYL METHACRYLATE	AML/232	L	(ml)	500	ERPG-1 AT 30 M
MOLYBDENUM SILICIDE	AML/232	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
MULLITE	AML/232	S	(g)	500	<1 LB.
MULLITE	AML/232	S	(lb)	3	NON-DISPERSIBLE
MYRISTIC ACID	AML/232	S	(g)	25	<1 LB.
MYRISTIC ACID	AML/232	S	(g)	10	<1 LB.
N, N DIMETHYLFORMAMIDE	AML/232	L	(l)	4	BP > 100 C
N-CAPROIC ACID	AML/232	L	(ml)	10	<1 LB.
N-DODECANE	AML/232	S	(g)	1	<1 LB.
N-HEXYLTRICHLOROSILANE	AML/232	S	(g)	100	<1 LB.
N-LAUROYL-P-AMINOPHENOL	AML/232	S	(g)	3	<1 LB.
N-STEAROYL-P-AMINOPHENOL	AML/232	S	(g)	3	<1 LB.
NITRIC ACID	AML/232	L	(ml)	500	KEEP
NITRIC ACID 90%	AML/232	L	(ml)	1000	KEEP
NITROGEN COMPRESSED	AML/232	G	(gcf)	250	SIH
NN-DIMETHYL-P-TOLUIDINE	AML/232	L	(ml)	100	<1 LB.
OCTADECYLTRICHLOROSILANE	AML/232	L	(ml)	50	<1 LB.
OCTANOL	AML/232	L	(ml)	500	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
OL-ALYL	AML/232	S	(g)	5	<1 LB.
PALMITIC ACID	AML/232	S	(g)	10	<1 LB.
PERCHLORIC ACID	AML/232	S	(lb)	8	NON-DISPERSIBLE
PHFFT-PRECISION	AML/232	S	(ozd)	18	SIH
POLY(ACRYLIC	AML/232	S	(g)	110	<1 LB.
POLYDIMETHOXYSILOXANE	AML/232	S	(g)	100	<1 LB.
POLYGALACTURONIC	AML/232	S	(g)	5	<1 LB.
POLYOCTADECYL	AML/232	S	(g)	300	<1 LB.
POLYVINYL ALCOHOL	AML/232	S	(kg)	1	NON-DISPERSIBLE
POTASSIUM BROMIDE	AML/232	S	(g)	500	<1 LB.
POTASSIUM CHLORIDE	AML/232	S	(g)	250	<1 LB.
POTASSIUM CHLORIDE	AML/232	S	(g)	500	<1 LB.
POTASSIUM HYDROGEN PHTHALATE	AML/232	S	(lb)	1	<1 LB.
POTASSIUM NITRATE	AML/232	S	(g)	500	<1 LB.
POTASSIUM PHOSPHATE	AML/232	S	(g)	500	<1 LB.
POTASSIUM PHOSPHATE	AML/232	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
PROPANOL	AML/232	L	(l)	4	SIH
QUICK FREEZE	AML/232	S	(ozd)	20	SIH
RHOPLEX B	AML/232	S	(lb)	2	SIH
SILICONE LUBRICANT	AML/232	L	(ozd)	14	SIH
SNOOP	AML/232	L	(ozd)	8	SIH
SODIUM ACETATE	AML/232	S	(g)	500	<1 LB.
SODIUM BICARBONATE	AML/232	S	(g)	453	<1 LB.
SODIUM CARBONATE	AML/232	S	(g)	500	<1 LB.
SODIUM CHLORIDE	AML/232	S	(g)	1000	NON-DISPERSIBLE
SODIUM FLUORIDE	AML/232	S	(g)	100	<1 LB.
SODIUM HYDROXIDE 1N SOLUTION	AML/232	L	(kg)	3	BP > 100 C
SODIUM HYDROXIDE 5N SOLUTION	AML/232	L	(l)	2	BP > 100 C
SODIUM HYDROXIDE SOLUTION	AML/232	L	(l)	2	BP > 100 C
SODIUM HYDROXIDE SOLUTION N/10	AML/232	L	(ml)	1500	BP > 100 C
SODIUM NITRATE	AML/232	S	(g)	500	<1 LB.
SODIUM OXALATE	AML/232	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
SODIUM PHOSPHATE, DIBASIC	AML/232	S	(g)	500	<1 LB.
SODIUM PHOSPHATE, TRIBASIC	AML/232	S	(g)	453	<1 LB.
SODIUM SULFATE NONAHYDRATE	AML/232	S	(g)	500	<1 LB.
SODIUM SULFIDE	AML/232	S	(g)	100	<1 LB.
SODIUM THIOSULFATE, 5-HYDRATE	AML/232	S	(g)	500	<1 LB.
SPINEL POWDER	AML/232	S	(lb)	1	<1 LB.
SPRAY ADHESIVE	AML/232	S	(ozd)	11	SIH
SPRAY-N-GO	AML/232	S	(ozd)	12	SIH
STEARIC ACID	AML/232	S	(g)	5	<1 LB.
STEARIC ACID	AML/232	S	(g)	5	<1 LB.
STEARIC ACID	AML/232	S	(g)	1	<1 LB.
STRONTIUM CARBONATE	AML/232	S	(lb)	1	<1 LB.
STRONTIUM CHLORIDE	AML/232	S	(g)	500	<1 LB.
STRONTIUM NITRATE	AML/232	S	(g)	500	<1 LB.
SULFOETHYL METHACRYLATE	AML/232	S	(g)	100	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
SULFURIC ACID	AML/232	L	(l)	3	BP > 100 C
SULFURIC ACID	AML/232	L	(ml)	500	BP > 100 C
TETRAETHYL ORTHOSILICATE	AML/232	L	(l)	4	BP > 100 C
TETRAETHYLENE GLYCOLDIACRYLATE	AML/232	S	(g)	100	<1 LB.
THIDACETAMIDE	AML/232	S	(g)	100	<1 LB.
THIOUREA	AML/232	S	(g)	100	<1 LB.
TOLUENE	AML/232	L	(l)	1	BP > 100 C
TRIETHYLENE GLYCOL DIMETHACRYLATE	AML/232	L	(ml)	250	BP > 100 C
ULTRASONIC CLEANING SOLUTION-CONCENTRATE	AML/232	L	(ozd)	6	SIH
UREA	AML/232	S	(g)	113	<1 LB.
WD-40	AML/232	S	(ozd)	12	SIH
XYLENES	AML/232	L	(l)	1	BP > 100 C
ZINC ACETATE	AML/232	S	(g)	1000	NON-DISPERSIBLE
ZINC CHLORIDE	AML/232	S	(g)	100	<1 LB.
ZINC NITRATE	AML/232	S	(g)	500	<1 LB.
ZINC SULFATE HEPTAHYDRA	AML/232	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
TE					
NITRIC ACID	AML/233	L	(l)	2	KEEP
2-PROPANOL	AML/235	L	(l)	8	SIH
ACETONE	AML/235	L	(l)	8	ERPG-1 AT 30 M
1-BUTANOL	AML/236	L	(ml)	500	BP > 100 C
15% LEAD-85% TIN SOLDER ALLOY POWDER	AML/236	S	(lb)	5	NON-DISPERSIBLE
2-PROPANOL	AML/236	L	(ml)	3000	SIH
250-HF FLUX	AML/236	L	(ozd)	12	<1 LB.
30% LEAD-70% TIN SOLDER ALLOY POWDER	AML/236	S	(lb)	3	SIH
37% LEAD - 63% TIN SOLDER ALLOY INGOT	AML/236	S	(lb)	2	SIH
37% LEAD-63% TIN SOLDER ALLOY PELLETS	AML/236	S	(g)	700	SIH
45SN-55P8 SOLDER PELLETS	AML/236	S	(g)	120	SIH
4OSN-6OPB SOLDER PELLETS	AML/236	S	(g)	120	SIH
505N-5OPB SOLDER PELLETS	AML/236	S	(g)	120	SIH
55SN-45PB SOLDER PELLETS	AML/236	S	(g)	120	SIH
58% BISMUTH-42%	AML/236	S	(lb)	2	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
6-5N63-500-A//NC SOLDER PASTE	AML/236	S	(g)	35	SIH
6-SN63-200-A//RMA SOLDER PASTE	AML/236	S	(g)	20	SIH
6-SN63-201-A//RMA SOLDER PASTE	AML/236	S	(g)	35	SIH
6-SN63-300-A//RA SOLDER PASTE	AML/236	S	(g)	35	SIH
6-SN63-400-A//WS SOLDER PASTE	AML/236	S	(g)	35	SIH
62.5% GALLIUM-21.5% INDIUM-16% TIN SOLDER ALLOY	AML/236	L	(ml)	75	SIH
65SN-35PB SOLDER PELLETS	AML/236	S	(g)	120	SIH
60SN-40PB SOLDER PELLETS	AML/236	S	(g)	120	SIH
75SN-25PB SOLDER PELLETS	AML/236	S	(g)	120	SIH
70SN-30PB SOLDER PELLETS	AML/236	S	(g)	120	SIH
85SN-15PB SOLDER PELLETS	AML/236	S	(g)	120	SIH
80SN-20PB SOLDER PELLETS	AML/236	S	(g)	120	SIH
920CXF FLUX	AML/236	L	(ozf)	12	SIH
95SN-5PB SOLDER	AML/236	S	(g)	120	SIH
90SN-10PB SOLDER PELLETS	AML/236	S	(g)	120	SIH

Chemical Inventory

CHEM	LOC_CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
ACETIC ACID, GLACIAL	AML/236	L	(ml)	900	BP > 100 C
ACETONITRILE	AML/236	L	(ml)	200	BP > 100 C
ALPHA 611 RMA MICROFLUX	AML/236	L	(gal)	1	SIH
ANTIMONY, 100 MESH POWDER	AML/236	S	(ozd)	6	<1 LB.
ANTIMONY, CRYSTALS	AML/236	S	(g)	1000	NON-DISPERSIBLE
ANTIMONY, INGOT	AML/236	S	(g)	1100	NON-DISPERSIBLE
AROROX PC 1125	AML/236	L	(gal)	5	SIH
AVACHEM PRECLEANER	AML/236	L	(ml)	600	SIH
BISMUTH, 8 MESH	AML/236	S	(g)	150	<1 LB.
BISMUTH, INGOT	AML/236	S	(g)	500	<1 LB.
BISMUTH, SHOT	AML/236	S	(g)	75	<1 LB.
BORON, CRYSTALLINE	AML/236	S	(g)	6	<1 LB.
CASTIN NC 291 AX SOLDER	AML/236	S	(g)	250	SIH
CASTIN RMA 291 SOLDER PASTE	AML/236	S	(g)	500	SIH
CASTIN RMA FLUX,	AML/236	S	(g)	6	SIH
CASTIN SOLDER, WIRE	AML/236	S	(g)	20	SIH

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
CASTIN WS-475-ET SOLDER	AML/236	S	(g)	250	SIH
CHROMIUM, POWDER	AML/236	S	(g)	1000	NON-DISPERSIBLE
CITRIC ACID, ANHYDROUS,	AML/236	S	(g)	500	<1 LB.
CITRIC ACID, MONOHYDRATE, GRANULAR	AML/236	S	(g)	500	<1 LB.
COPPER, POWDER	AML/236	S	(g)	20	<1 LB.
COPPER, WIRE	AML/236	S	(g)	300	SIH
CYCLOHEXANOL	AML/236	L	(ml)	500	BP > 100 C
DECANE	AML/236	L	(ml)	400	NON-TOXIC
DECANOL	AML/236	L	(ml)	500	BP > 100 C
DRIERITE	AML/236	S	(lb)	5	SIH
ETHELYNE GLYCOL	AML/236	L	(ml)	1000	BP > 100 C
FERRIC CHLORIDE	AML/236	S	(g)	500	<1 LB.
GALLIUM	AML/236	S	(g)	20	SIH
GLYCEROL, ANHYDROUS	AML/236	L	(ml)	1000	BP > 100 C
GRAPHITE, POWDER	AML/236	S	(ozd)	4	<1 LB.
HF 1189 FLUX	AML/236	S	(ozd)	12	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
HYDROCHLORIC ACID SOLUTION	AML/236	L	(ml)	500	SIH
IND #121 SOLDER, WIRE	AML/236	S	(lb)	1	SIH
IND 121-NC-5MQ71 SOLDER PASTE	AML/236	S	(g)	25	SIH
IND 121-WMA-SMQ61 SOLDER PASTE	AML/236	S	(g)	25	SIH
IND 121: RMA-SNM51AC SOLDER PASTE	AML/236	S	(g)	25	SIH
IND 155:NC-SMQ71 SOLDER PASTE	AML/236	S	(g)	25	SIH
IND 155:RMA-SNQ51AC SOLDER PASTE	AML/236	S	(g)	25	SIH
IND 155:WMA-SMQ61 SOLDER PASTE	AML/236	S	(g)	25	SIH
INDALLOY #171 SOLDER WIRE	AML/236	S	(lb)	2	SIH
INDIUM, INGOT	AML/236	S	(g)	500	<1 LB.
INDIUM,WIRE	AML/236	S	(g)	300	SIH
IRON, POWDER	AML/236	S	(g)	25	<1 LB.
MAGNESIUM, TURNINGS	AML/236	S	(g)	250	<1 LB.
MERCURY	AML/236	L	(lb)	5	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
METHANOL	AML/236	L	(gal)	1	ERPG-1 AT 30 M
MOLYBDENUM, POWDER	AML/236	S	(g)	1000	NON-DISPERSIBLE
MONOETHANOLAMINE	AML/236	L	(ml)	500	BP > 100 C
NC-SMQ71 SOLDER FLUX	AML/236	S	(g)	100	SIH
NICKEL, POWDER	AML/236	S	(g)	1000	NON-DISPERSIBLE
NITRIC ACID, 69/71%	AML/236	L	(ml)	2500	KEEP
OST 281WIRE	AML/236	S	(g)	200	SIH
PARAFFIN OIL	AML/236	L	(ml)	500	SIH
POLY-ETCH	AML/236	L	(ml)	500	SIH
POLYDIMETHYSILOXANE	AML/236	L	(ml)	1000	NON-TOXIC
PROPELYNE GLYCOL	AML/236	L	(ml)	500	BP > 100 C
RMA-SMQ5IAC SOLDER FLUX	AML/236	S	(g)	100	SIH
RUTHENIUM DIOXIDE	AML/236	S	(g)	5	<1 LB.
SILICON FLUID	AML/236	L	(ml)	100	SIH
SILVER, FLAKE #750	AML/236	S	(g)	600	KEEP
SILVER, POWDER	AML/236	S	(g)	100	<1 LB.
SILVER, WIRE	AML/236	S	(g)	400	SIH

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
SN-3.3AG-4.8BI SOLDER WIRE	AML/236	S	(g)	2	SIH
SN-4.7AG-1.7CU SOLDER WIRE	AML/236	S	(g)	2.5	SIH
SN-AG-CU(5%BI) SOLDER WIRE	AML/236	S	(g)	1	SIH
SN-BI-AG RMA-390 SOLDER PASTE	AML/236	S	(g)	100	SIH
SN-BI-AG-LR-725 SOLDER PASTE	AML/236	S	(g)	50	SIH
SODIUM HYDROXIDE, GRANULAR	AML/236	S	(g)	1000	NON-DISPERSIBLE
SODIUM POTASSIUM TARTRATE	AML/236	S	(g)	500	<1 LB.
STANNOUS CHLORIDE	AML/236	S	(g)	500	<1 LB.
SUCROSE, CRYSTAL	AML/236	S	(g)	500	<1 LB.
SULFURIC ACID	AML/236	L	(ml)	1000	BP > 100 C
TIN, INGOT	AML/236	S	(lb)	50	NON-DISPERSIBLE
TRICHLOROETHYLENE	AML/236	L	(ml)	4000	ERPG-1 AT 30 M
WMA-SMQ61 SOLDER FLUX	AML/236	S	(g)	100	SIH
BIS(CYCLOPENTADIENYL)TITANIUM DICHLORIDE	AML/237	S	(g)	50	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
BIS(CYCLOPENTADIENYL)ZIR CONIUM DICHLORIDE	AML/237	S	(g)	50	<1 LB.
CYCLOHEXANE	AML/237	L	(l)	2	BP > 100 C
HEXANE	AML/237	L	(l)	2	ERPG-1 AT 30 M
HYDROGEN, 5% IN NITROGEN UN1954	AML/237	G	(gcf)	200	SIH
LITHIUM ALUMINUM HYDRIDE	AML/237	S	(g)	100	<1 LB.
POLYMETHYLSILANE	AML/237	S	(g)	50	<1 LB.
SODIUM METAL IN MINERAL OIL	AML/237	L	(g)	50	<1 LB.
TETRAHYDROFURAN	AML/237	L	(l)	2	ERPG-1 AT 30 M
TOLUENE	AML/237	L	(l)	2	BP > 100 C
ZINC, NUGGETS	AML/237	S	(g)	100	<1 LB.
ZIRCONIUM (IV) ISOPROPOXIDE, ISOPROPANOL COMPLEX	AML/237	S	(g)	20	<1 LB.
(4-DICYANOVINYL) JULOLIDINE	AML/238	S	(mg)	25	<1 LB.
1,1 – 1-TRICHLOROETHANE, INHIBITED	AML/238	L	(l)	4	ERPG-1 AT 30 M
1,10-BIS(PYRENE) DECANE	AML/238	S	(mg)	25	<1 LB.
1,3-BIS(PYRENE)PROPANE	AML/238	S	(mg)	25	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
1,4-DIOXANE	AML/238	L	(l)	4	BP > 100 C
1-BUTANOL	AML/238	L	(ml)	750	BP > 100 C
2,2-AZOBIS(2-METHYLPROPIONITRILE)	AML/238	S	(g)	100	<1 LB.
2-PROPANOL	AML/238	L	(gal)	2	SIH
ACETIC ACID, GLACIAL	AML/238	L	(ml)	500	BP > 100 C
ACETONE SEMI-GRADE	AML/238	L	(gal)	1	ERPG-1 AT 30 M
ACETONITRILE	AML/238	L	(l)	4	ERPG-1 AT 30 M
AIR UN 1002	AML/238	G	gcf	280	SIH
ALLYLTRIETHOXYSILANE	AML/238	S	(g)	40	<1 LB.
ALUMINUM TRI-SEC-BUTOXIDE	AML/238	S	(kg)	2	NON-DISPERSIBLE
ALUNDUM CEMENT	AML/238	S	(kg)	3	SIH
ALUNDUM GRANULES	AML/238	S	(g)	500	NON-DISPERSIBLE
AMMOMIUM HYDROXIDE, AQUEOUS	AML/238	L	(l)	1.5	ERPG-1 AT 30 M
AMMONIUM SULFATE	AML/238	S	(g)	500	<1 LB.
AREMCO SEAL 617	AML/238	L	(ml)	500	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
ARGON UHP UNI1006	AML/238	G	(gcf)	331	SIH
BENXOYL PEROXIDE, 97%	AML/238	S	(g)	50	<1 LB.
BENZENE	AML/238	L	(l)	1	ERPG-1 AT 30 M
BENZOPHENONE	AML/238	S	(g)	500	<1 LB.
BIS(METHOXYDIMETHYLSILYL)M-CARBORANE	AML/238	S	(g)	5	<1 LB.
BIS(TRIETHOXYSILY)BENZENE	AML/238	L	(ml)	100	<1 LB.
BIS(TRIETHOXYSILYL)BIPHENYL	AML/238	L	(ml)	100	<1 LB.
BIS(TRIETHOXYSILYL)ETHYLENE	AML/238	L	(ml)	100	<1 LB.
BUTANE LIGHTER FLUID	AML/238	L	(g)	100	SIH
CALCIUM CARBONATE 99.95%	AML/238	S	(g)	30	<1 LB.
CALCIUM CARBONATE LOW ALKALI	AML/238	S	(g)	100	<1 LB.
CALCIUM CHLORIDE, DIHYDRATE	AML/238	S	(kg)	1	NON-DISPERSIBLE
CARBON DIOXIDE UN 1013	AML/238	G	(lb)	120	SIH
CARBON TETRACHLORIDE	AML/238	L	(l)	1	ERPG-1 AT 30 M
CELLULOSE ACETATE	AML/238	S	(g)	500	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
CHLORODIBROMOMETHANE, 98%	AML/238	S	(g)	50	<1 LB.
CHLORODIFLUOROMETHANE	AML/238	S	(kg)	4	NON-DISPERSIBLE
CHLOROFORM	AML/238	L	(l)	4	ERPG-1 AT 30 M
CHLOROTRIMETHYLSILANE	AML/238	L	(l)	1	NON-TOXIC
COPPER SULFATE PENTAHYDRATE	AML/238	S	(g)	500	<1 LB.
CYCLOHEXANE	AML/238	L	(l)	2	BP > 100 C
DAROCUR	AML/238	S	(g)	300	<1 LB.
DICHLORO(1,5-CYCLOOCTADIENE)PALLADIUM(II)	AML/238	S	(g)	300	<1 LB.
DIETHYLPHOSPHATOETHYLTRIETHOXYSILANE	AML/238	S	(g)	50	<1 LB.
DIPHENYL(2,4,6,-4265/2-HYDROXY-2-METHYLPROPIOPHENONE, TRIMETHYLBENZOYL)	AML/238	S	(g)	5	<1 LB.
DISPERAL SOL	AML/238	L	(ml)	100	<1 LB.
DISPERAL, 0.2 UM PARTICLE SIZE	AML/238	S	(g)	300	<1 LB.
DISPERAL, IOOA PARTICLE SIZE	AML/238	S	(g)	500	<1 LB.
DRIERITE INDICATING	AML/238	S	(lb)	5	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
ETHANOL 190 PROOF	AML/238	L	(gal)	4	SIH
ETHANOL 200 PROOF	AML/238	L	(gal)	4	SIH
ETHANOL DENATURED WITH 5% ISOPROPANOL 5% METHANOL	AML/238	L	(gal)	2	SIH
ETHYLENE GLYCOL	AML/238	L	(l)	4	BP > 100 C
ETHYLENEDIAMINETERAACETIC ACID TETRASODIUM SALT DIHYDRATE	AML/238	S	(g)	500	<1 LB.
ETHYLENEDIAMINETETRAACETIC ACID	AML/238	S	(g)	500	<1 LB.
ETHYLENEDIAMINETETRAACETIC ACID DIPOTASSIUM SALT DIHYDRATE	AML/238	S	(g)	500	<1 LB.
ETHYLENEDIAMINETETRAACETIC ACID, DISODIUM SALT, DIHYDRATE	AML/238	S	(g)	200	<1 LB.
ETHYLTRIETHOXYSILANE	AML/238	L	(ml)	200	NON-TOXIC
FEL-PRO C-100 ANTISEIZE COMPOUND	AML/238	L	(ozf)	1	SIH
FLUOROSILICIC ACID, 25 ST% IN H20	AML/238	L	(kg)	500	BP > 100 C
FORMIC ACID	AML/238	S	(g)	500	<1 LB.
GAS CHROMATOGRAPH TEST SAMPLE	AML/238	S	(g)	20	SIH
HELIUM UHP UN 1046	AML/238	G	(gcf)	488	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
HEXANE	AML/238	L	(l)	1	ERPG-1 AT 30 M
HYDRAZINE, 35 WT% IN H20	AML/238	S	(g)	200	<1 LB.
HYDROCHLORIC ACID, 12M FUMING	AML/238	L	(l)	1	SIH
HYDROCHLORIC ACID, 1M	AML/238	L	(l)	3	SIH
HYDROCHLORIC ACID, 6M, 20%	AML/238	L	(l)	1	SIH
HYDROFLUORIC ACID, 20%, BUFFERED	AML/238	L	(ml)	250	SIH
IRGACURE 184	AML/238	S	(g)	250	<1 LB.
IRGACURE 500	AML/238	S	(g)	250	<1 LB.
KAOLIN	AML/238	S	(g)	500	<1 LB.
LITHIUM	AML/238	S	(g)	500	<1 LB.
METHACRYLOXYPROPYL TRIMETHOXYSILANE	AML/238	S	(g)	700	NON-DISPERSIBLE
METHANE UHP UN 1971	AML/238	G	(gcf)	580	SIH
METHANOL SEMI-GRADE	AML/238	L	(gal)	2	ERPG-1 AT 30 M
METHYL METHACRYLATE	AML/238	L	(l)	2	ERPG-1 AT 30 M
METHYLLITHIUM 1.4M IN DIETHYLETHER	AML/238	L	(ml)	300	ERPG-1 AT 30 M

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
METHYLOICHLOROSILANE	AML/238	L	(ml)	200	ERPG-1 AT 30 M
METHYLTRIETHOXYSILANE	AML/238	S	(g)	500	<1 LB.
MINERAL OIL	AML/238	L	(l)	1	SIH
N-OCTYLTRIMETHOXYSILANE 0.9	AML/238	S	(g)	100	<1 LB.
NITRIC ACID	AML/238	L	(l)	2.5	KEEP
NITRIC ACID	AML/238	L	(l)	2.5	KEEP
NITRILOTRIS(METHYLENE)TRI PHOSPHONIC ACID 50% IN H20	AML/238	S	(kg)	1	NON-DISPERSIBLE
NITROGEN UHP UN 1066	AML/238	G	gcf	900	SIH
OXYGEN UHP	AML/238	G	gcf	249	SIH
PALLADIUM (II) ACETYLACETONATE	AML/238	S	(g)	5	<1 LB.
PALLADIUM (II) CHLORIDE	AML/238	S	(g)	25	<1 LB.
PHENYLTRIETHOXYSILANE	AML/238	S	(g)	500	<1 LB.
POLYMETHYLSILANE	AML/238	S	(g)	10	<1 LB.
POTASSIUM BROMIDE	AML/238	S	(g)	200	<1 LB.
POTASSIUM HYDROXIDE PELLETS	AML/238	S	(kg)	2.5	NON-DISPERSIBLE

Chemical Inventory

CHEM	LOC_CODE	PHYS_STATE	QTY_UNIT	MQTY	SCR_CRIT
PROPANE UN 1075	AML/238	G	(lb)	20	SIH
PROPYLENE UHP	AML/238	G	(lb)	70	SIH
RHODIUM (III) ACETYLACETONATE	AML/238	S	(g)	1	<1 LB.
SAND	AML/238	S	(kg)	2.5	SIH
SILICIC ACID N-HYDRATE POWDER	AML/238	S	(g)	500	<1 LB.
SILVER GOOP	AML/238	L	(ozf)	1	SIH
SILVER PERCHLORATE HYDRATE	AML/238	S	(g)	5	<1 LB.
SNOOP LEAK DETECTOR	AML/238	L	(ozf)	8	SIH
SODIUM SILICATE SOLUTION, 40-42 DEGREES BE TECH. GRADE	AML/238	L	(l)	1	SIH
SPILL-X-A ACID TREATMENT AGENT	AML/238	S	(lb)	5	SIH
SPILL-X-C CAUSTIC TREATMENT AGENT	AML/238	S	(lb)	4	SIH
SPILL-X-S SOLVENT TREATMENT AGENT	AML/238	S	(lb)	2	SIH
SULFUR HEXAFLUORIDE	AML/238	G	(lb)	11	NON-TOXIC
SULFURIC ACID 96%	AML/238	L	(l)	5	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
TETRAETHYL ORTHOSILICATE	AML/238	S	(kg)	10	NON-TOXIC
TETRAFLUOROETHANE	AML/238	L	(ozf)	60	ERPG-1 AT 30 M
TETRAHYDROFURAN	AML/238	L	(l)	4	ERPG-1 AT 30 M
TETRAPROPYL ORTHOSILICATE	AML/238	S	(g)	100	<1 LB.
TIN (II) CHLORIDE DIHYDRATE	AML/238	S	(g)	100	<1 LB.
TIN (IV) CHLORIDE PENTAHYDRATE	AML/238	S	(g)	100	<1 LB.
TOLUENE	AML/238	L	(l)	1	BP > 100 C
VINYL ACETATE	AML/238	L	(l)	4	KEEP
XYLENES	AML/238	L	(l)	1	BP > 100 C
ZIRCONIUM (IV) ETHOXIDE	AML/238	S	(g)	25	<1 LB.
(3,3,3,-TRIFLUOROPROPYL) TRIMETHOXYSILANE	AML/239	S	(g)	100	<1 LB.
(30-35%) METHYLHYDRO-(65-70%)DIMETHYLSILOXANE COPOLYMER	AML/239	S	(g)	100	<1 LB.
(50-55%)METHYLHYDRO-(45-50%)DIMETHYLSILOXANE COPOLYMER	AML/239	S	(g)	100	<1 LB.
1-BUTANOL	AML/239	L	(ml)	100	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
1-HEXENE	AML/239	L	(l)	1	ERPG-1 AT 30 M
1-PROPANOL	AML/239	L	(l)	4	SIH
15-CROWN-5	AML/239	S	(g)	5	<1 LB.
18-CROWN-6	AML/239	S	(g)	10	<1 LB.
2,4-PENTANEDIONE	AML/239	L	(ml)	250	ERPG-1 AT 30 M
2-METHYLPROPANE	AML/239	S	(lb)	35	NON-DISPERSIBLE
2-PROPANOL	AML/239	L	(gal)	1	SIH
3-AMINOPROPYLTRIMETHOXYSILANE	AML/239	S	(g)	500	<1 LB.
ACETONE	AML/239	L	(ml)	500	ERPG-1 AT 30 M
ACETONE-D6	AML/239	L	(g)	10	<1 LB.
AIR, UN 1002	AML/239	G	(gcf)	280	SIH
ALUMINA HSA CATALYST CARRIER, SA REFERENCE STANDARD	AML/239	S	(g)	25	<1 LB.
ALUMINA, ACTIVATED BEADS	AML/239	S	(g)	500	<1 LB.
ALUMINUM PERCHLORATE NONAHYDRATE, 98%	AML/239	S	(g)	500	<1 LB.
AMYL ACETATE	AML/239	L	(ml)	50	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
APIEZON H GREASE	AML/239	S	(g)	50	SIH
APIEZON L GREASE	AML/239	S	(g)	50	SIH
APIEZON M GREASE	AML/239	S	(g)	50	SIH
APIEZON T GREASE	AML/239	S	(g)	50	SIH
APIEZON W WAX	AML/239	S	(g)	500	SIH
ARGON UHP UN1006	AML/239	G	(gcf)	662	SIH
BENZENE-D6 99.5%	AML/239	L	(ml)	20	ERPG-1 AT 30 M
BORANE-METHYLSULFIDE 2M IN TOLUENE	AML/239	L	(ml)	100	<1 LB.
CALCIUM NITRATE	AML/239	S	(g)	500	<1 LB.
CARBON DIOXIDE UN 1013	AML/239	G	(lb)	180	SIH
CARBON PAINT, CONDUCTIVE	AML/239	L	(ozf)	6	SIH
CHLOROFORM-D 0.05% TMS	AML/239	S	(g)	10	<1 LB.
CHLOROFORM-D 99.8%	AML/239	S	(g)	10	<1 LB.
CYCLOHEXANE	AML/239	L	(l)	1	BP > 100 C
CYCLOHEXANE-D12, 0.997	AML/239	S	(g)	20	BP > 100 C
DIETHOXYDIMETHYLSILANE	AML/239	L	(ml)	500	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
DIETHYLZINC, 15% IN TOLUENE	AML/239	S	(g)	100	<1 LB.
DOW CORNING HIGH VACUUM GREASE	AML/239	S	(g)	600	SIH
ETHANOL DENATURED, 5% ISOPROPANOL, 5% METHANOL	AML/239	L	(l)	2	SIH
ETHER, ANHYDROUS	AML/239	L	(l)	1	SIH
ETHYLENE GLYCOL	AML/239	L	(l)	4	BP > 100 C
FLUOROLUBE GREASE	AML/239	L	(g)	50	SIH
HELIUM UHP UN 1046	AML/239	G	(gcf)	488	SIH
HEXANE	AML/239	L	(l)	8	ERPG-1 AT 30 M
HYDROGEN UN 1049	AML/239	G	(gcf)	213	SIH
IRON (III) PERCHLORATE HYDRATE	AML/239	S	(g)	100	<1 LB.
ISOBUTYL ALCOHOL, APLC GR 99%	AML/239	L	(l)	1	SIH
LITHIUM ALUMINIUM HYDRIDE 1M IN TETRAHYDROFURAN	AML/239	L	(ml)	100	<1 LB.
MAGNESIUM	AML/239	S	(g)	250	<1 LB.
MERCURY	AML/239	L	(lb)	6	SIH
METHANE UHP UN 1971	AML/239	G	(gcf)	290	SIH

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
MICROPOSIT PHOTORESIST	AML/239	L	(ml)	50	SIH
MINERAL OIL	AML/239	L	(l)	2	SIH
MOLECULAR SIEVE TYPE 13X SA REFERENCE STANDARD	AML/239	S	(g)	25	SIH
N-(2-AMINOETHYL)	AML/239	S	(g)	100	<1 LB.
N-(TRIMETHOXYSILYLPROPYL)ETHYLENEDIAMINE TRIACETIC ACID	AML/239	S	(g)	50	<1 LB.
NITROGEN UHP UN 1066	AML/239	G	(gcf)	900	SIH
NITROGEN, LIQUID UN 1977	AML/239	L	(l)	130	SIH
POLYMETHYLHYDROSILOXANE, TRIMETHYLSILYL-TERMINATED	AML/239	S	(kg)	1	NON-DISPERSIBLE
PROPANE UN 1075	AML/239	G	(lb)	35	SIH
SCOTCH WELD EPOXY ADHESIVE 8&A	AML/239	L	(ozf)	5	SIH
SILICA-ALUMINA SA REFERENCE STANDARD	AML/239	S	(g)	25	<1 LB.
SILVER NITRATE	AML/239	S	(g)	10	<1 LB.
SNOOP LEAK DETECTOR	AML/239	L	(ozf)	8	SIH
SODIUM METAL IN OIL	AML/239	S	(g)	200	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
SODIUM METAL UNDER KEROSENE	AML/239	S	(g)	125	<1 LB.
SUPER STRENGTH EXPOXY ADHESIVE RESIN & HARDENER	AML/239	L	(ozf)	1	SIH
TETRAHYDROFURAN	AML/239	L	(l)	6	ERPG-1 AT 30 M
TETRAHYDROFURAN-D8,99.5%	AML/239	L	(g)	10	<1 LB.
TETRAMETHYL ORTHOSILICATE	AML/239	S	(g)	200	NON-TOXIC
TETRAPROPYL ORTHOSILICATE	AML/239	S	(g)	100	<1 LB.
TETRAVINYLSILANE	AML/239	S	(g)	20	<1 LB.
TITANIUM (IV) TETRACHLORIDE	AML/239	L	(ml)	500	BP > 100 C
TOLUENE	AML/239	L	(l)	12	BP > 100 C
TRIETHYSILANE	AML/239	S	(g)	50	<1 LB.
VACUUM PUMP OIL	AML/239	L	(l)	10	SIH
ZINC NITRATE HEXAHYDRATE	AML/239	S	(kg)	1	NON-DISPERSIBLE
ZIRCONIUM (IV) PROPOXIDE, 70 WT% IN 1-PROPANOL	AML/239	L	(ml)	100	BP > 100 C
ZIRCONIUM N-BUTOXIDE, BUTANOL COMPLEX	AML/239	S	(g)	500	BP > 100 C

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
METHANOL	AMLIIDO	L	(gal)	1	ERPG-1 AT 30 M
ACRYLIC CEMENT	AMLIIOG	S	(ozd)	4	SIH
1.1.2 TRICHLOROTHRIFLUOROETHANE	AMLIIOS	L	(ml)	1000	ERPG-1 AT 30 M
ACETONE	AMLIIOS	L	(ml)	1000	ERPG-1 AT 30 M
ALUMINUM OXIDE	AMLIIOS	S	(g)	500	<1 LB.
AMMONIUM HYDROGEN DIFLUORIDE	AMLIIOS	S	(g)	500	<1 LB.
BORIC ACID	AMLIIOS	S	(g)	500	<1 LB.
BUFFER SOLUTION PH 10.00	AMLIIOS	L	(ml)	500	SIH
BUFFER SOLUTION PH 7.00	AMLIIOS	L	(ml)	500	SIH
C02	AMLIIOS	S	(g)	400	SIH
CUPRIC OXIDE	AMLIIOS	S	(g)	500	<1 LB.
DRIERITE	AMLIIOS	S	(lb)	10	SIH
DYSPROSIUM OXIDE	AMLIIOS	S	(g)	25	<1 LB.
LANTHANUM OXIDE	AMLIIOS	S	(g)	250	<1 LB.
LITHIUM METAPHOSPHATE	AMLIIOS	S	(g)	100	<1 LB.
NEODYMIUM OXIDE	AMLIIOS	S	(g)	20	<1 LB.

Chemical Inventory

CHEM	LOC CODE	PHYS STATE	QTY UNIT	MQTY	SCR CRIT
PD-AG CONDUCTOR PASTE	AMLIIOS	S	(g)	50	<1 LB.
POTASSIUM CARBONATE	AMLIIOS	S	(g)	500	<1 LB.
PRASEODYMIUM OXIDE	AMLIIOS	S	(g)	25	<1 LB.
PT-PD-AG CONDUCTOR PASTE	AMLIIOS	S	(g)	50	<1 LB.
SILICA	AMLIIOS	S	(kg)	3	NON-DISPERSIBLE
SODIUM CARBONATE	AMLIIOS	S	(kg)	10	NON-DISPERSIBLE
SODIUM CHLORIDE,0.85%	AMLIIOS	L	(ml)	4000	SIH
SODIUM TRIPOLYPHOSPHATE	AMLIIOS	S	(lb)	1	<1 LB.
TITANIUM OXIDE	AMLIIOS	S	(g)	500	<1 LB.
WATER-170	AMLIIOS	S	(g)	2	<1 LB.
ZINC FLUORIDE	AMLIIOS	S	(g)	100	<1 LB.

Appendix B

ALOHA Dispersion Model Printouts

Procedure for Dispersing Mixtures

Background

The following procedure provides a description for the dispersion of mixtures through the ALOHA dispersion model. ALOHA is designed to model the release rate and dispersion of pure chemicals only. It is difficult for a model like ALOHA to correctly predict the behavior of a mixture of chemicals. However, for the purpose of emergency planning, ALOHA serves a vital role in estimating the distance at which protective actions should be initiated.

The current process used to model the release of mixtures first requires a determination of the percent of hazardous material in the total mixture and releasing that percentage (quantity) as a pure chemical through ALOHA. To calculate the percentage of the hazardous material, multiply the total quantity of the mixture by the percentage of hazardous material in the mixture. The resulting quantity is then run on ALOHA as a direct source (for a gas mixture), or a puddle source (for a liquid mixture). The calculated results depict the most conservative estimate of the behavior of the chemical for emergency planning purposes.

Release Designation
Br_2-1

Bromine

The release of 150 milliliters of bromine due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

150 milliliters
Worst Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: BROMINE Molecular Weight: 159.81 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 0.2 ppm
Boiling Point: 58.75° C
Vapor Pressure at Ambient Temperature: 0.22 atm
Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.015 square meters
Puddle Volume: 0.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.21 grams/min
Max Average Sustained Release Rate: 4.29 grams/min
(averaged over a minute or more)
Total Amount Released: 219 grams

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 0.2 ppm
Max Threat Zone for LOC: 148 meters
Max Threat Zone for IDLH: 12 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: BROMINE Molecular Weight: 159.81 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 1 ppm
Boiling Point: 58.75° C
Vapor Pressure at Ambient Temperature: 0.22 atm
Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.015 square meters
Puddle Volume: 0.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.21 grams/min
Max Average Sustained Release Rate: 4.29 grams/min
(averaged over a minute or more)
Total Amount Released: 219 grams

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1 ppm
Max Threat Zone for LOC: 61 meters
Max Threat Zone for IDLH: 12 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: BROMINE          Molecular Weight: 159.81 kg/kmol
  TLV-TWA: 0.10 ppm               IDLH: 10.00 ppm
  Footprint Level of Concern: 5 ppm
  Boiling Point: 58.75° C
  Vapor Pressure at Ambient Temperature: 0.22 atm
  Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F              Air Temperature: 68° F
  Relative Humidity: 5%           Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.015 square meters
  Puddle Volume: 0.15 liters
  Soil Type: Default              Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.21 grams/min
  Max Average Sustained Release Rate: 4.29 grams/min
     (averaged over a minute or more)
  Total Amount Released: 219 grams

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 5 ppm
  Max Threat Zone for LOC: 22 meters
  Max Threat Zone for IDLH: 12 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.
```

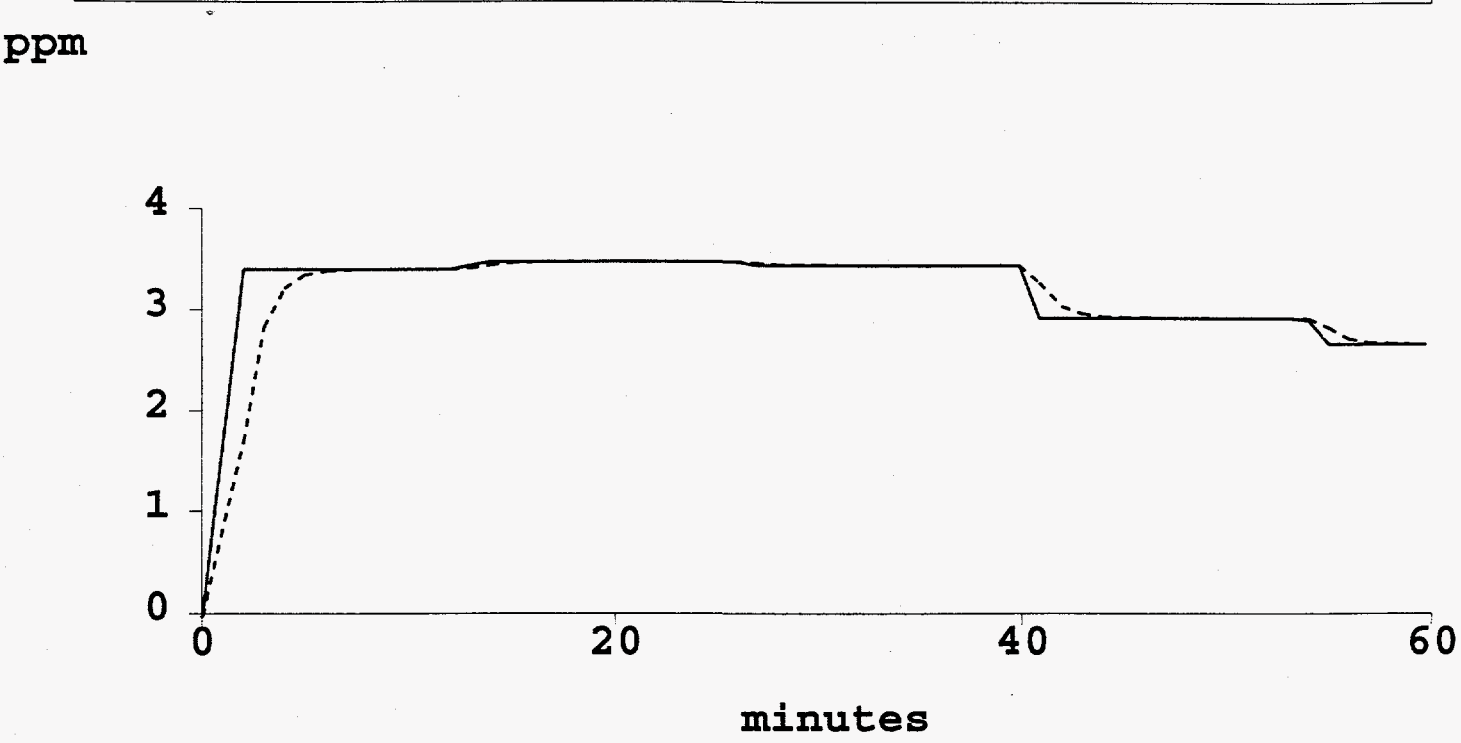
```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: BROMINE          Molecular Weight: 159.81 kg/kmol
  TLV-TWA: 0.10 ppm               IDLH: 10.00 ppm
  Footprint Level of Concern: 10 ppm
  Boiling Point: 58.75° C
  Vapor Pressure at Ambient Temperature: 0.22 atm
  Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F              Air Temperature: 68° F
  Relative Humidity: 5%           Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.015 square meters
  Puddle Volume: 0.15 liters
  Soil Type: Default              Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.21 grams/min
  Max Average Sustained Release Rate: 4.29 grams/min
     (averaged over a minute or more)
  Total Amount Released: 219 grams

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: equals IDLH (10 ppm)
  Max Threat Zone for LOC: 12 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.


TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 3.48 ppm
     Indoor:  3.48 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window

2888485175

Chemical Name: BROMINE
Model Run: Heavy Gas
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.48 ppm
Indoor: 3.48 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
Br_2-2

Bromine

The release of 150 milliliters of bromine due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

150 milliliters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: BROMINE Molecular Weight: 159.81 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 0.2 ppm
Boiling Point: 58.75° C
Vapor Pressure at Ambient Temperature: 0.22 atm
Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.015 square meters
Puddle Volume: 0.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 1 hour
Max Computed Release Rate: 15.6 grams/min
Max Average Sustained Release Rate: 10.2 grams/min
(averaged over a minute or more)
Total Amount Released: 468 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 0.2 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: BROMINE          Molecular Weight: 159.81 kg/kmol
   TLV-TWA: 0.10 ppm               IDLH: 10.00 ppm
   Footprint Level of Concern: 1 ppm
   Boiling Point: 58.75° C
   Vapor Pressure at Ambient Temperature: 0.22 atm
   Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C              Air Temperature: 68° F
   Relative Humidity: 25%          Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.015 square meters
   Puddle Volume: 0.15 liters
   Soil Type: Default              Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: 1 hour
   Max Computed Release Rate: 15.6 grams/min
   Max Average Sustained Release Rate: 10.2 grams/min
      (averaged over a minute or more)
   Total Amount Released: 468 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 1 ppm
   Max Threat Zone for LOC:  15 meters
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: BROMINE Molecular Weight: 159.81 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 58.75° C
Vapor Pressure at Ambient Temperature: 0.22 atm
Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.015 square meters
Puddle Volume: 0.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 1 hour
Max Computed Release Rate: 15.6 grams/min
Max Average Sustained Release Rate: 10.2 grams/min
(averaged over a minute or more)
Total Amount Released: 468 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 5 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: BROMINE Molecular Weight: 159.81 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 58.75° C
Vapor Pressure at Ambient Temperature: 0.22 atm
Ambient Saturation Concentration: 269,258 ppm or 26.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

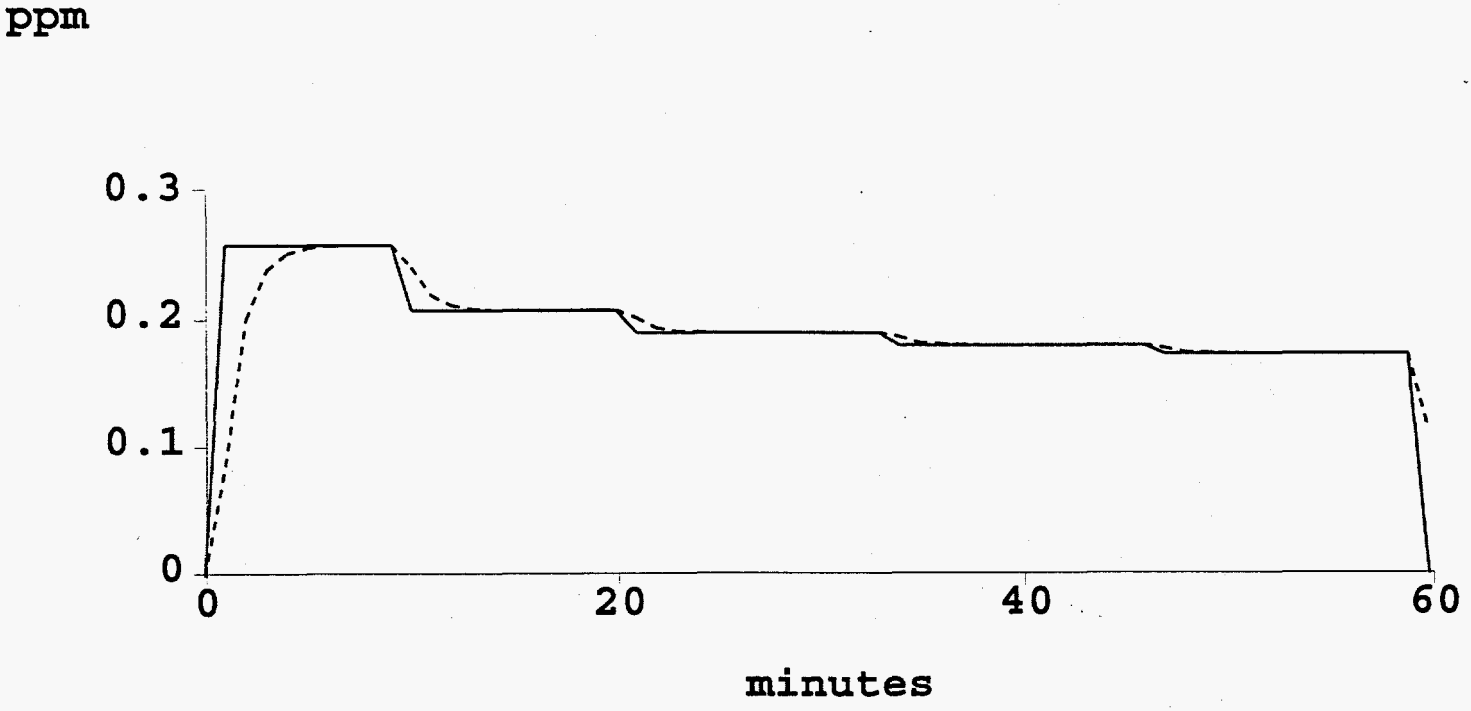
SOURCE STRENGTH INFORMATION:
Puddle Area: 0.015 square meters
Puddle Volume: 0.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 1 hour
Max Computed Release Rate: 15.6 grams/min
Max Average Sustained Release Rate: 10.2 grams/min
(averaged over a minute or more)
Total Amount Released: 468 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.259 ppm
Indoor: 0.259 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888485202

Chemical Name: BROMINE
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.259 ppm
Indoor: 0.259 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
C_6H_{14}-1

Hexane

The release of 16 liters of hexane due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

16 liters
Worst Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 62.5 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1.6 square meters
Puddle Volume: 16 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 196 grams/min
Max Average Sustained Release Rate: 170 grams/min
(averaged over a minute or more)
Total Amount Released: 8.88 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 62.5 ppm
Max Threat Zone for LOC: 41 meters
Max Threat Zone for IDLH: 11 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

Text Summary

2873721995

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
  Chemical Name: HEXANE          Molecular Weight: 86.18 kg/kmol
  TLV-TWA: 50.00 ppm             IDLH: 5000.00 ppm
  Footprint Level of Concern: 187.5 ppm
  Boiling Point: 68.73° C
  Vapor Pressure at Ambient Temperature: 0.16 atm
  Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 1.6 square meters
  Puddle Volume: 16 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 196 grams/min
  Max Average Sustained Release Rate: 168 grams/min
     (averaged over a minute or more)
  Total Amount Released: 8.60 kilograms

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 187.5 ppm
  Max Threat Zone for LOC: 21 meters
  Max Threat Zone for IDLH: 11 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
  Chemical Name: HEXANE          Molecular Weight: 86.18 kg/kmol
  TLV-TWA: 50.00 ppm             IDLH: 5000.00 ppm
  Footprint Level of Concern: 431.5 ppm
  Boiling Point: 68.73° C
  Vapor Pressure at Ambient Temperature: 0.16 atm
  Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 1.6 square meters
  Puddle Volume: 16 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 196 grams/min
  Max Average Sustained Release Rate: 168 grams/min
     (averaged over a minute or more)
  Total Amount Released: 8.60 kilograms

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 431.5 ppm
  Max Threat Zone for LOC: 11 meters
  Max Threat Zone for IDLH: 11 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 5000 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1.6 square meters
Puddle Volume: 16 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 196 grams/min
Max Average Sustained Release Rate: 172 grams/min
(averaged over a minute or more)
Total Amount Released: 9.08 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: equals IDLH (5000 ppm)
Max Threat Zone for LOC: 11 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

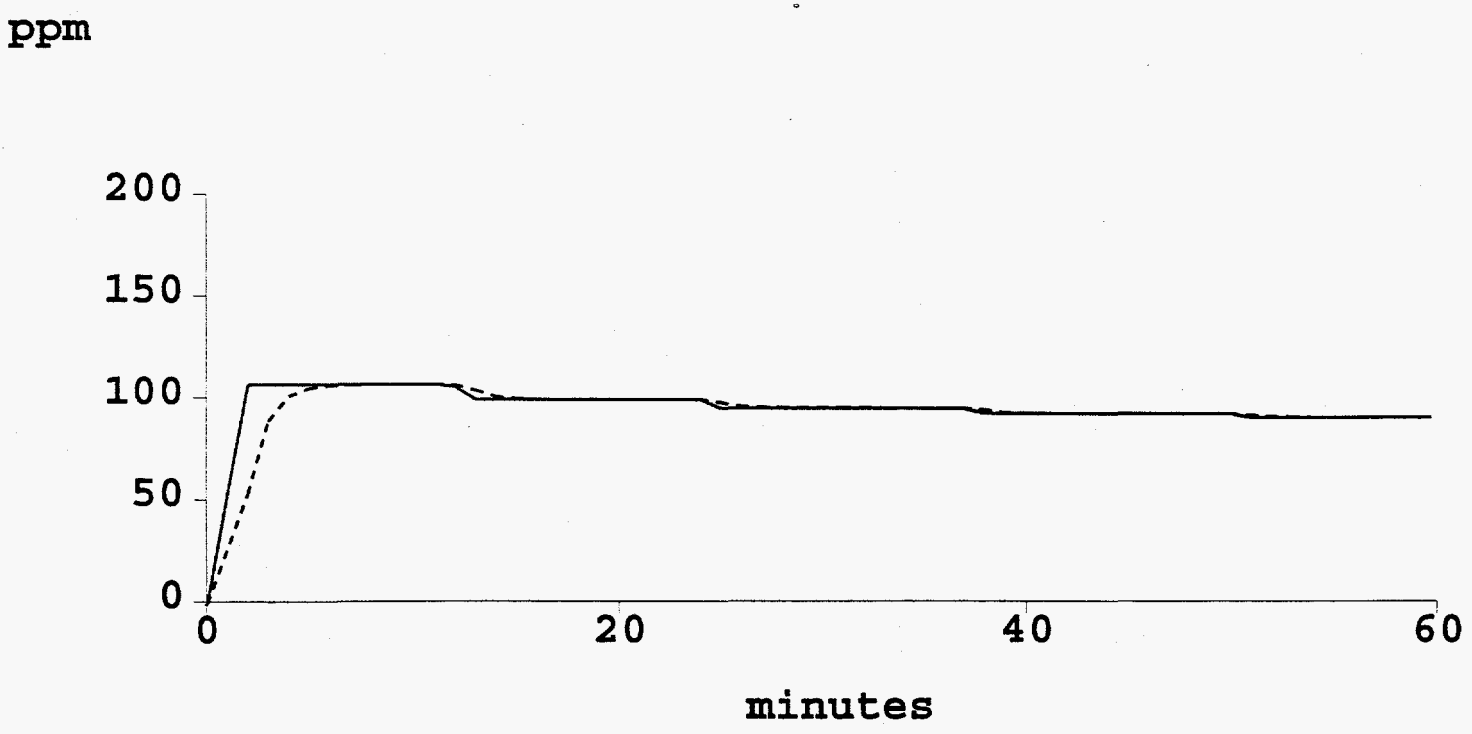
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 107 ppm
Indoor: 107 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888485367

Chemical Name: HEXANE
Model Run: Heavy Gas
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 107 ppm
Indoor: 107 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
C_6H_{14}-2

Hexane

The release of 16 liters of hexane due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

16 liters
Worst Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 62.5 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1.6 square meters
Puddle Volume: 16 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 30 minutes
Max Computed Release Rate: 551 grams/min
Max Average Sustained Release Rate: 438 grams/min
(averaged over a minute or more)
Total Amount Released: 10.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 62.5 ppm
Max Threat Zone for LOC: 17 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 187.5 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1.6 square meters
Puddle Volume: 16 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 30 minutes
Max Computed Release Rate: 551 grams/min
Max Average Sustained Release Rate: 438 grams/min
(averaged over a minute or more)
Total Amount Released: 10.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 187.5 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 431.5 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1.6 square meters
Puddle Volume: 16 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 30 minutes
Max Computed Release Rate: 551 grams/min
Max Average Sustained Release Rate: 438 grams/min
(averaged over a minute or more)
Total Amount Released: 10.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 431.5 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 5000 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

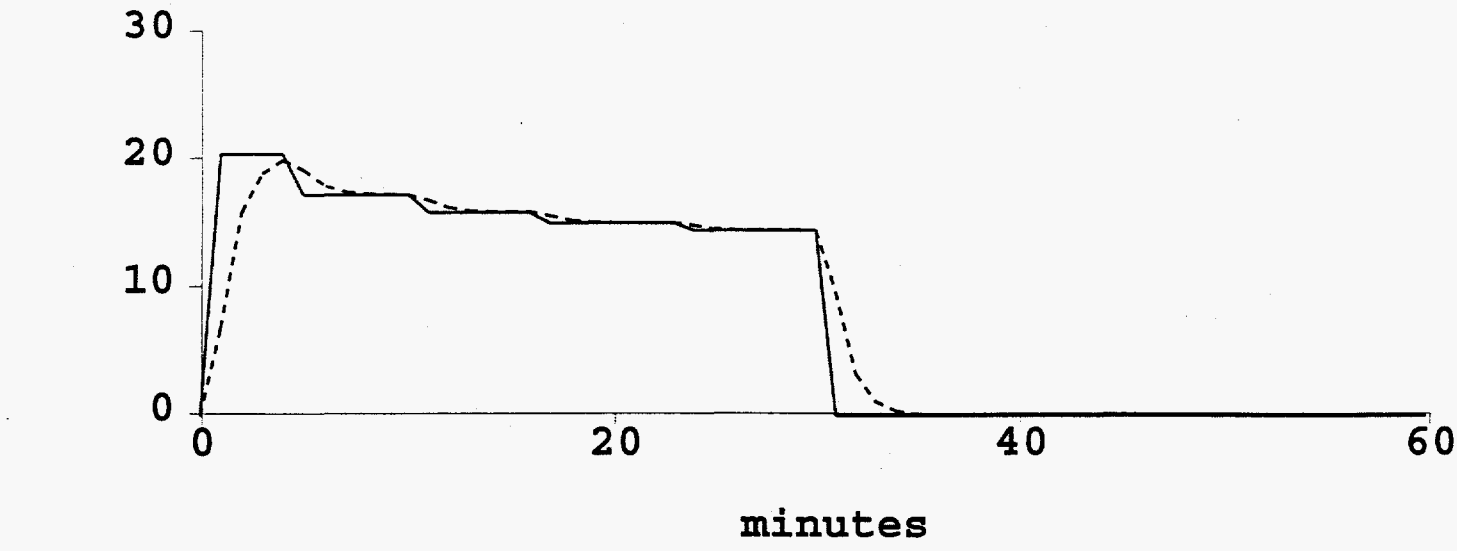
SOURCE STRENGTH INFORMATION:
Puddle Area: 1.6 square meters
Puddle Volume: 16 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 30 minutes
Max Computed Release Rate: 551 grams/min
Max Average Sustained Release Rate: 438 grams/min
(averaged over a minute or more)
Total Amount Released: 10.6 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20.3 ppm
Indoor: 19.8 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888485455

```
Chemical Name: HEXANE
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)


TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 20.3 ppm
     Indoor:  19.8 ppm
  Note: Indoor graph is shown with a dotted line.
```



Release Designation
C_6H_{14}-3

Hexane

The release of 8 liters of hexanedue to spilling or partially fracturing the bottles.

8 liters
Worst Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 62.5 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.8 square meters
Puddle Volume: 8 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 102 grams/min
Max Average Sustained Release Rate: 89.2 grams/min
(averaged over a minute or more)
Total Amount Released: 4.69 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 62.5 ppm
Max Threat Zone for LOC: 31 meters
Max Threat Zone for IDLH: 11 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HEXANE          Molecular Weight: 86.18 kg/kmol
  TLV-TWA: 50.00 ppm             IDLH: 5000.00 ppm
  Footprint Level of Concern: 187.5 ppm
  Boiling Point: 68.73° C
  Vapor Pressure at Ambient Temperature: 0.16 atm
  Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.8 square meters
  Puddle Volume: 8 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 102 grams/min
  Max Average Sustained Release Rate: 89.2 grams/min
     (averaged over a minute or more)
  Total Amount Released: 4.69 kilograms

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 187.5 ppm
  Max Threat Zone for LOC: 16 meters
  Max Threat Zone for IDLH: 11 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 431.5 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.8 square meters
Puddle Volume: 8 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 102 grams/min
Max Average Sustained Release Rate: 89.2 grams/min
(averaged over a minute or more)
Total Amount Released: 4.69 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 431.5 ppm
Max Threat Zone for LOC: 11 meters
Max Threat Zone for IDLH: 11 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

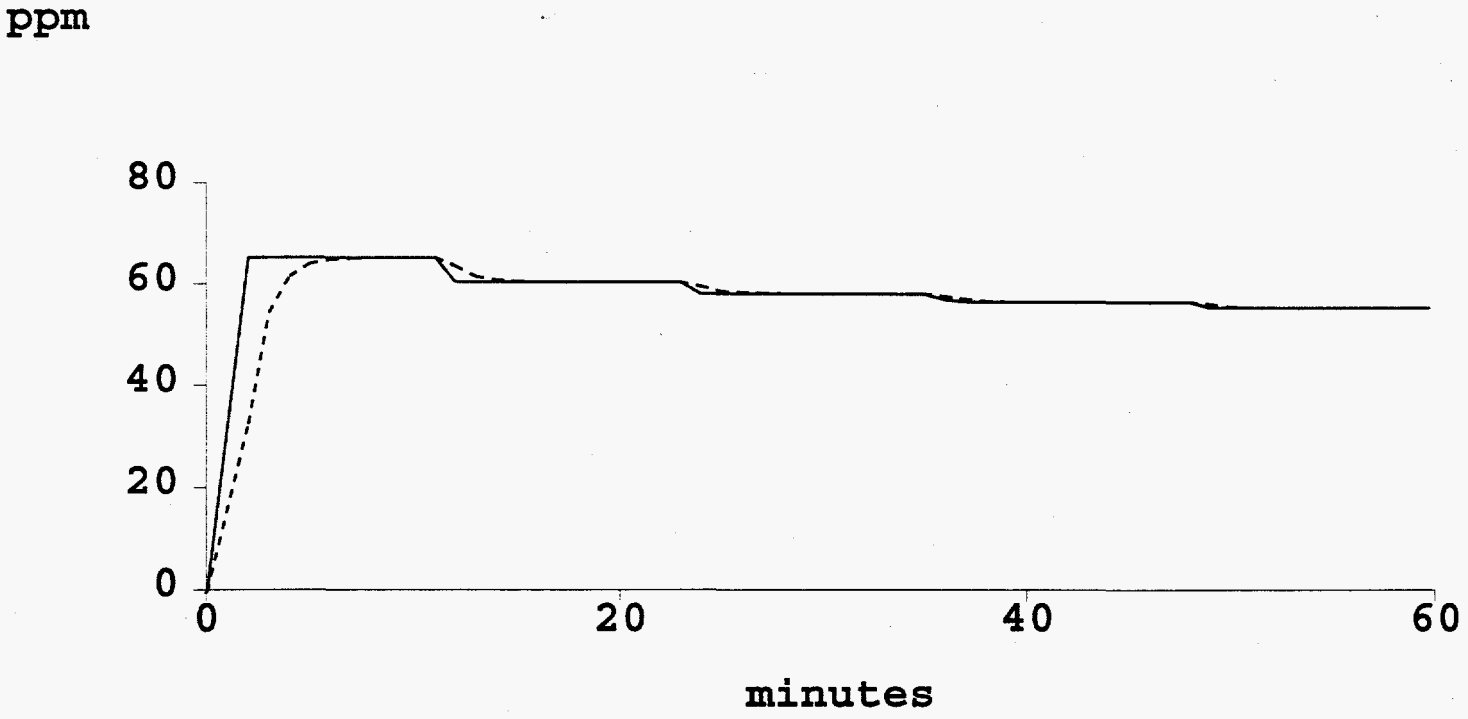
```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HEXANE          Molecular Weight: 86.18 kg/kmol
  TLV-TWA: 50.00 ppm             IDLH: 5000.00 ppm
  Footprint Level of Concern: 5000 ppm
  Boiling Point: 68.73° C
  Vapor Pressure at Ambient Temperature: 0.16 atm
  Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.8 square meters
  Puddle Volume: 8 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 102 grams/min
  Max Average Sustained Release Rate: 89.2 grams/min
     (averaged over a minute or more)
  Total Amount Released: 4.69 kilograms

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: equals IDLH (5000 ppm)
  Max Threat Zone for LOC: 11 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.


TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 65.3 ppm
     Indoor:  65.3 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window

2888485593

Chemical Name: HEXANE
Model Run: Heavy Gas
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 65.3 ppm
Indoor: 65.3 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
C_6H_{14}-4

Hexane

The release of 8 liters of hexanedue to spilling or partially fracturing the bottles.

8 liters
Average Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HEXANE          Molecular Weight: 86.18 kg/kmol
  TLV-TWA: 50.00 ppm             IDLH: 5000.00 ppm
  Footprint Level of Concern: 62.5 ppm
  Boiling Point: 68.73° C
  Vapor Pressure at Ambient Temperature: 0.16 atm
  Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.8 square meters
  Puddle Volume: 8 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: 29 minutes
  Max Computed Release Rate: 287 grams/min
  Max Average Sustained Release Rate: 227 grams/min
     (averaged over a minute or more)
  Total Amount Released: 5.29 kilograms

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 62.5 ppm
  Max Threat Zone for LOC:  12 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 187.5 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.8 square meters
Puddle Volume: 8 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 29 minutes
Max Computed Release Rate: 287 grams/min
Max Average Sustained Release Rate: 227 grams/min
(averaged over a minute or more)
Total Amount Released: 5.29 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 187.5 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

Text Summary

2888397404

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HEXANE          Molecular Weight: 86.18 kg/kmol
  TLV-TWA: 50.00 ppm             IDLH: 5000.00 ppm
  Footprint Level of Concern: 431.5 ppm
  Boiling Point: 68.73° C
  Vapor Pressure at Ambient Temperature: 0.16 atm
  Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.8 square meters
  Puddle Volume: 8 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: 29 minutes
  Max Computed Release Rate: 287 grams/min
  Max Average Sustained Release Rate: 227 grams/min
     (averaged over a minute or more)
  Total Amount Released: 5.29 kilograms

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 431.5 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HEXANE Molecular Weight: 86.18 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 5000 ppm
Boiling Point: 68.73° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 193,559 ppm or 19.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.8 square meters
Puddle Volume: 8 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 29 minutes
Max Computed Release Rate: 287 grams/min
Max Average Sustained Release Rate: 227 grams/min
(averaged over a minute or more)
Total Amount Released: 5.29 kilograms

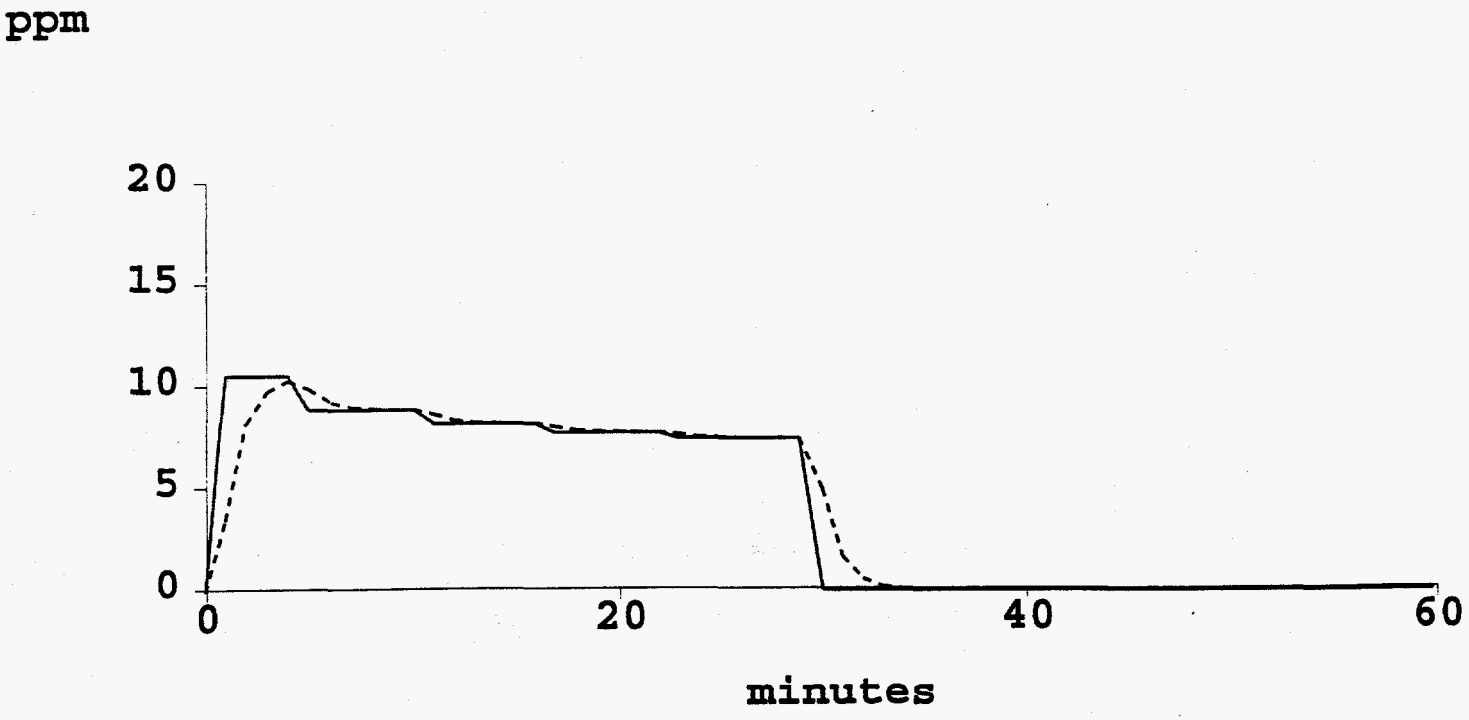
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.6 ppm
Indoor: 10.4 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888485617

Chemical Name: HEXANE
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.6 ppm
Indoor: 10.4 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HF-1

Hydrofluoric Acid

The release of 2.3 liters of hydrofluoric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

2.3 liters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
  Molecular Weight: 20.01 kg/kmol
  TLV-TWA: 3.00 ppm              IDLH: 30.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 19.52° C
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.23 square meters
  Puddle Volume: 2.3 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: boiling point
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 9.41 grams/min
  Max Average Sustained Release Rate: 2.55 grams/min
     (averaged over a minute or more)
  Total Amount Released: 107 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  115 meters
  Max Threat Zone for IDLH: 29 meters
```

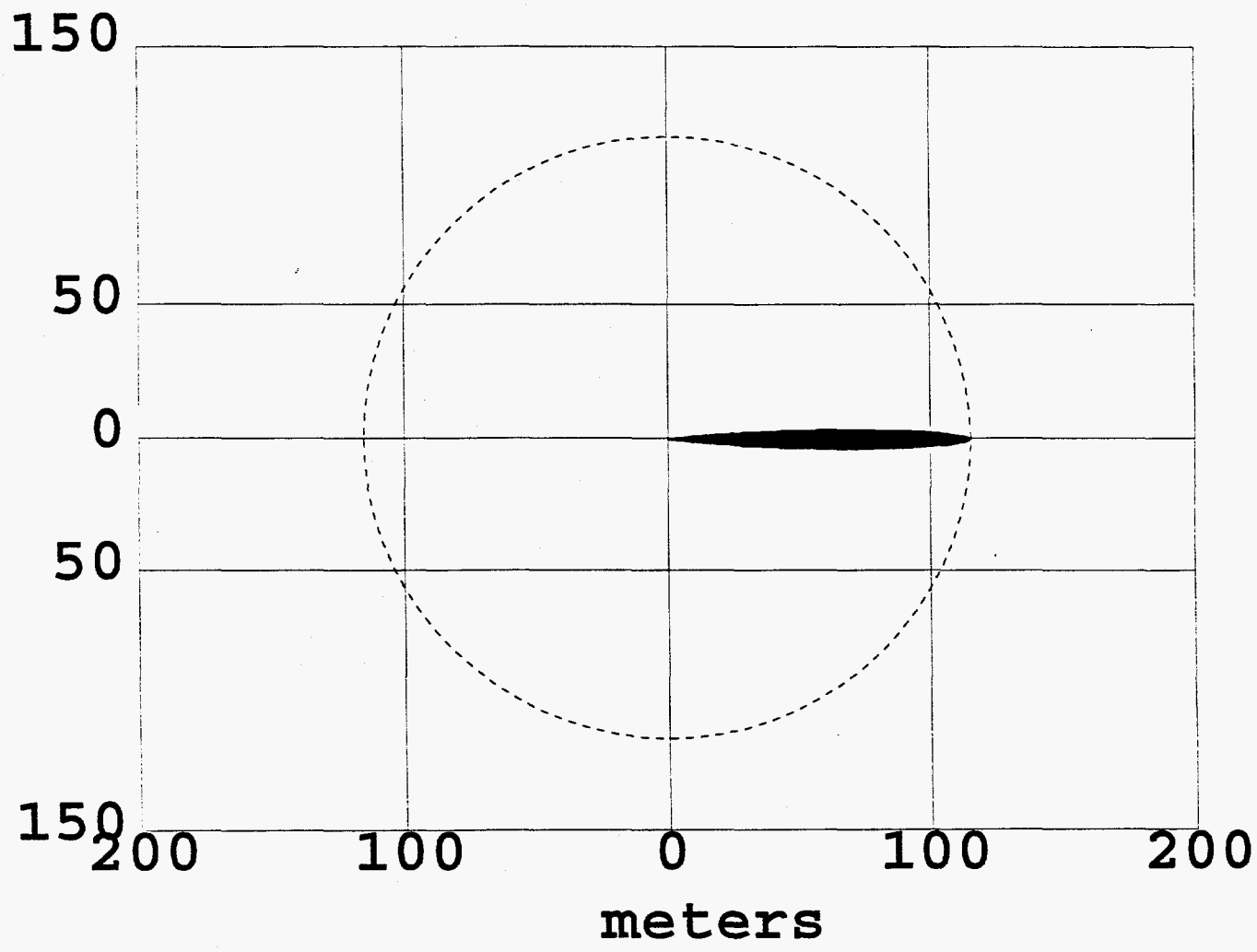
Footprint Window

2888397793

Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Model Run: Gaussian
Wind: 1 meters/sec from 0° true

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 115 meters
Max Threat Zone for IDLH: 29 meters

meters



SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.23 square meters
Puddle Volume: 2.3 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.41 grams/min
Max Average Sustained Release Rate: 2.55 grams/min
(averaged over a minute or more)
Total Amount Released: 107 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 36 meters
Max Threat Zone for IDLH: 29 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

Text Summary

2888397831

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
  Molecular Weight: 20.01 kg/kmol
  TLV-TWA: 3.00 ppm              IDLH: 30.00 ppm
  Footprint Level of Concern: 50 ppm
  Boiling Point: 19.52° C
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.23 square meters
  Puddle Volume: 2.3 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: boiling point
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 9.41 grams/min
  Max Average Sustained Release Rate: 2.55 grams/min
     (averaged over a minute or more)
  Total Amount Released: 107 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 50 ppm
  Max Threat Zone for LOC:  22 meters
  Max Threat Zone for IDLH: 29 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

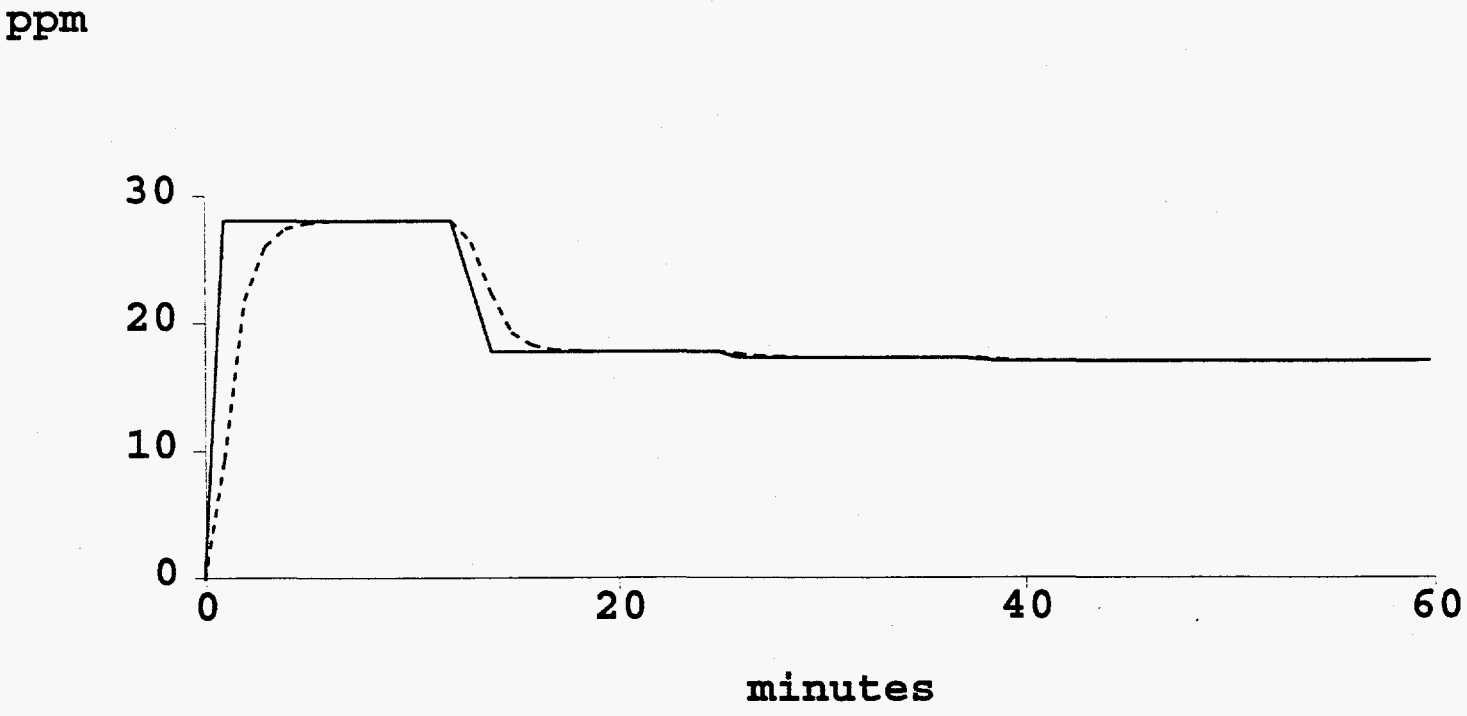
SOURCE STRENGTH INFORMATION:
Puddle Area: 0.23 square meters
Puddle Volume: 2.3 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.41 grams/min
Max Average Sustained Release Rate: 2.55 grams/min
(averaged over a minute or more)
Total Amount Released: 107 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 28.2 ppm
Indoor: 28.2 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888485884

Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 28.2 ppm
Indoor: 28.2 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HF-2

Hydrofluoric Acid

The release of 2.3 liters of hydrofluoric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

2.3 liters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.23 square meters
Puddle Volume: 2.3 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 14.3 grams/min
Max Average Sustained Release Rate: 3.34 grams/min
(averaged over a minute or more)
Total Amount Released: 132 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 17 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.23 square meters
Puddle Volume: 2.3 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 14.3 grams/min
Max Average Sustained Release Rate: 3.34 grams/min
(averaged over a minute or more)
Total Amount Released: 132 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.23 square meters
Puddle Volume: 2.3 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 14.3 grams/min
Max Average Sustained Release Rate: 3.34 grams/min
(averaged over a minute or more)
Total Amount Released: 132 grams

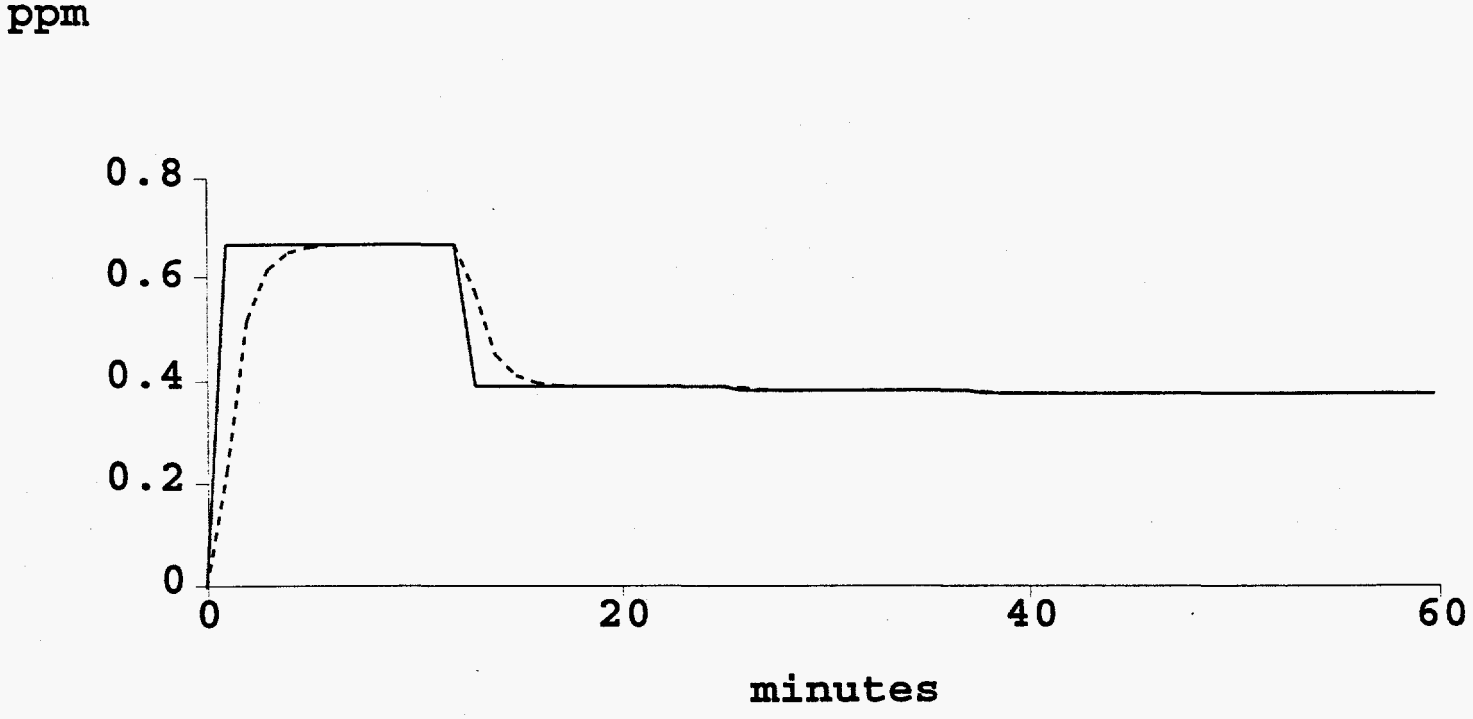
FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
  Molecular Weight: 20.01 kg/kmol
  TLV-TWA: 3.00 ppm              IDLH: 30.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 19.52° C
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.23 square meters
  Puddle Volume: 2.3 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: boiling point
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 14.3 grams/min
  Max Average Sustained Release Rate: 3.34 grams/min
     (averaged over a minute or more)
  Total Amount Released: 132 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:        30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 0.674 ppm
     Indoor:  0.674 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888485917

Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.674 ppm
Indoor: 0.674 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HF-3

Hydrofluoric Acid

The release of 1.15 liters of hydrofluoric acid due to spilling or partially fracturing the bottles.

2 liters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
  Molecular Weight: 20.01 kg/kmol
  TLV-TWA: 3.00 ppm              IDLH: 30.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 19.52° C
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.115 square meters
  Puddle Volume: 1.15 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: boiling point
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 4.85 grams/min
  Max Average Sustained Release Rate: 1.3 grams/min
     (averaged over a minute or more)
  Total Amount Released: 54.0 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  81 meters
  Max Threat Zone for IDLH: 20 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.115 square meters
Puddle Volume: 1.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.85 grams/min
Max Average Sustained Release Rate: 1.3 grams/min
(averaged over a minute or more)
Total Amount Released: 54.0 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 25 meters
Max Threat Zone for IDLH: 20 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.115 square meters
Puddle Volume: 1.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.85 grams/min
Max Average Sustained Release Rate: 1.3 grams/min
(averaged over a minute or more)
Total Amount Released: 54.0 grams

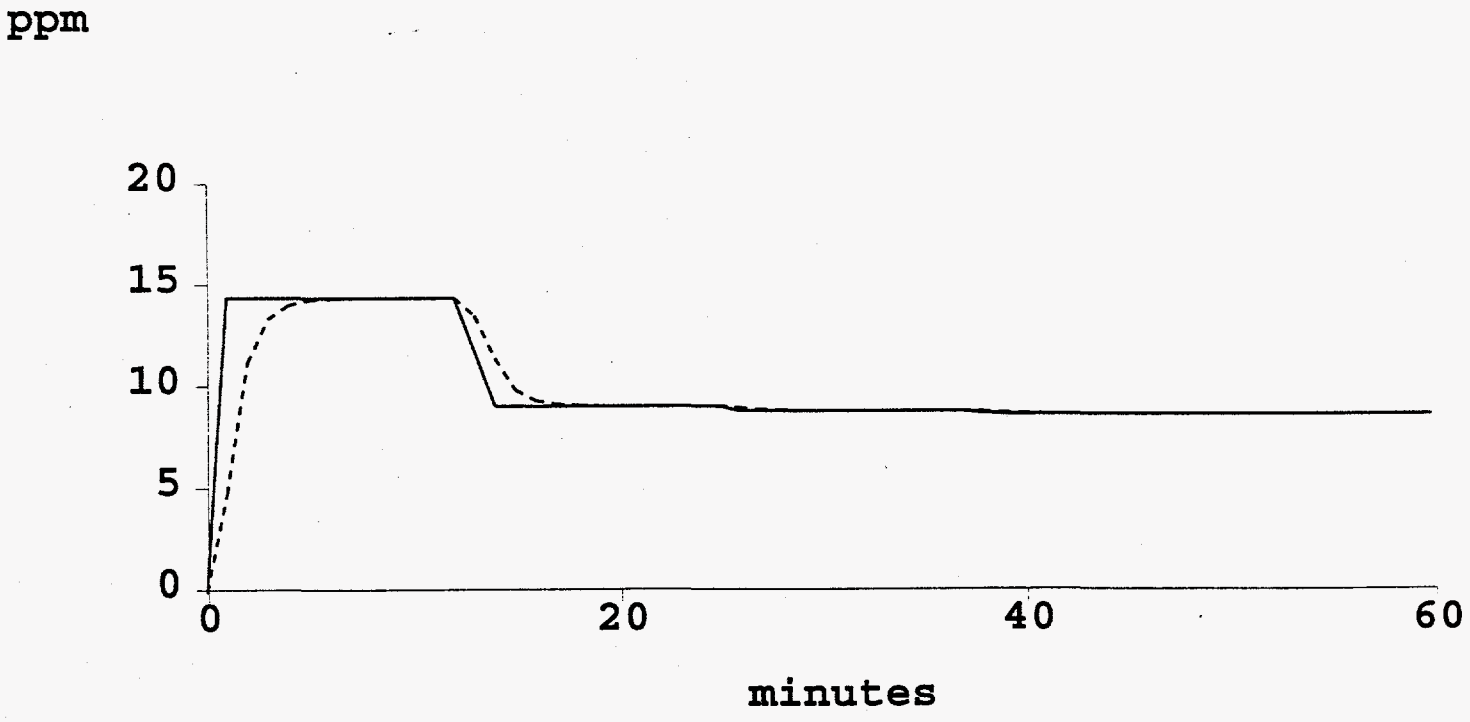
FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 16 meters
Max Threat Zone for IDLH: 20 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
  Molecular Weight: 20.01 kg/kmol
  TLV-TWA: 3.00 ppm              IDLH: 30.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 19.52° C
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.115 square meters
  Puddle Volume: 1.15 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: boiling point
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 4.85 grams/min
  Max Average Sustained Release Rate: 1.3 grams/min
     (averaged over a minute or more)
  Total Amount Released: 54.0 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 14.4 ppm
     Indoor:  14.4 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888485955

Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14.4 ppm
Indoor: 14.4 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HF-4

Hydrofluoric Acid

The release of 1.15 liters of hydrofluoric acid due to spilling or partially fracturing the bottles.

2 liters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.115 square meters
Puddle Volume: 1.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.35 grams/min
Max Average Sustained Release Rate: 1.7 grams/min
(averaged over a minute or more)
Total Amount Released: 67.3 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 13 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.115 square meters
Puddle Volume: 1.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.35 grams/min
Max Average Sustained Release Rate: 1.7 grams/min
(averaged over a minute or more)
Total Amount Released: 67.3 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
   Molecular Weight: 20.01 kg/kmol
   TLV-TWA: 3.00 ppm              IDLH: 30.00 ppm
   Footprint Level of Concern: 50 ppm
   Boiling Point: 19.52° C
   Vapor Pressure at Ambient Temperature: greater than 1 atm
   Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C             Air Temperature: 68° F
   Relative Humidity: 25%         Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.115 square meters
   Puddle Volume: 1.15 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: boiling point
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 7.35 grams/min
   Max Average Sustained Release Rate: 1.7 grams/min
      (averaged over a minute or more)
   Total Amount Released: 67.3 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 50 ppm
   Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Molecular Weight: 20.01 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 19.52° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.115 square meters
Puddle Volume: 1.15 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.35 grams/min
Max Average Sustained Release Rate: 1.7 grams/min
(averaged over a minute or more)
Total Amount Released: 67.3 grams

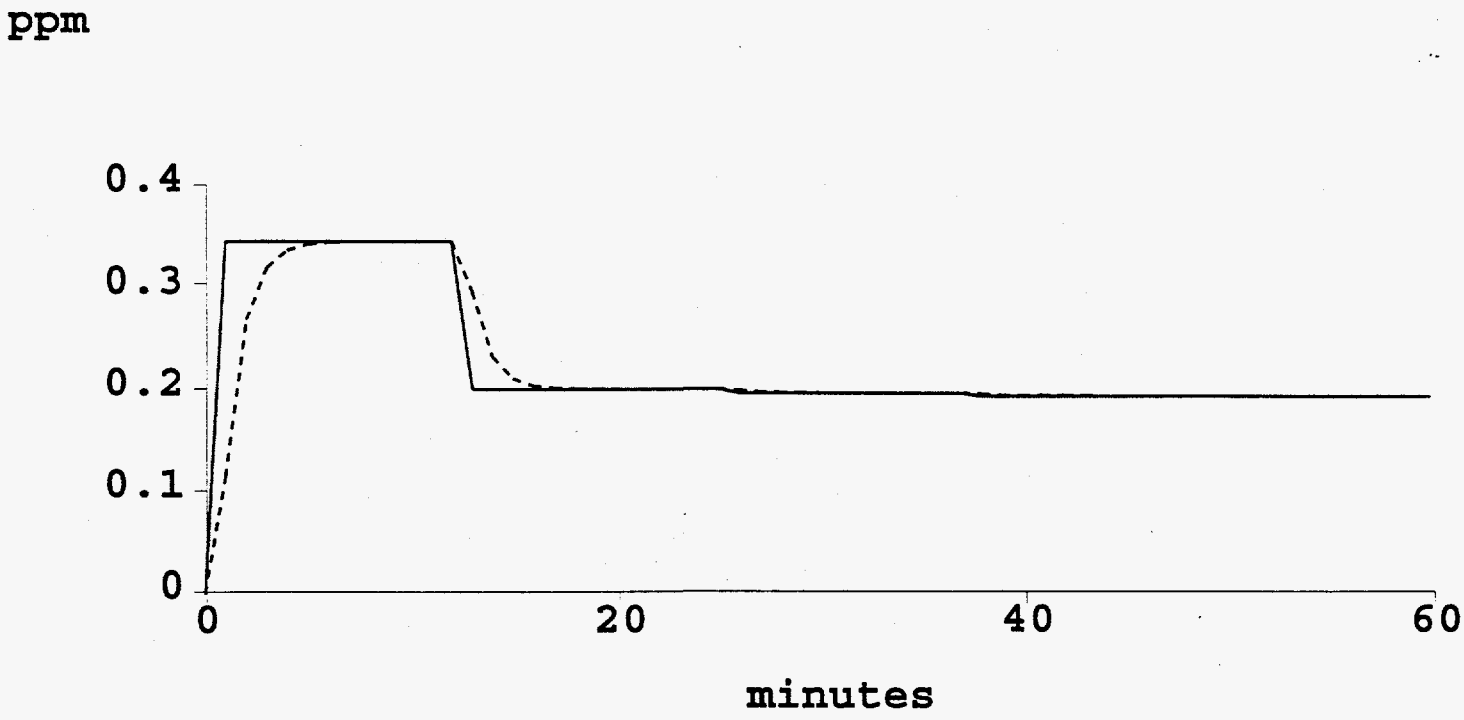
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.344 ppm
Indoor: 0.344 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888486008

Chemical Name: HYDROFLUORIC ACID, ANHYDROUS
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.344 ppm
Indoor: 0.344 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-1

Nitric Acid, 90%

The release of 2.25 liters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

2.25 liters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .225 square meters
  Puddle Volume: 2.25 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.68 grams/min
  Max Average Sustained Release Rate: 5.35 grams/min
     (averaged over a minute or more)
  Total Amount Released: 301 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  94 meters
  Max Threat Zone for IDLH: 13 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

Text Summary

2876143832

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .225 square meters
  Puddle Volume: 2.25 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.68 grams/min
  Max Average Sustained Release Rate: 5.35 grams/min
     (averaged over a minute or more)
  Total Amount Released: 301 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  34 meters
  Max Threat Zone for IDLH: 13 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .225 square meters
Puddle Volume: 2.25 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.68 grams/min
Max Average Sustained Release Rate: 5.35 grams/min
(averaged over a minute or more)
Total Amount Released: 301 grams

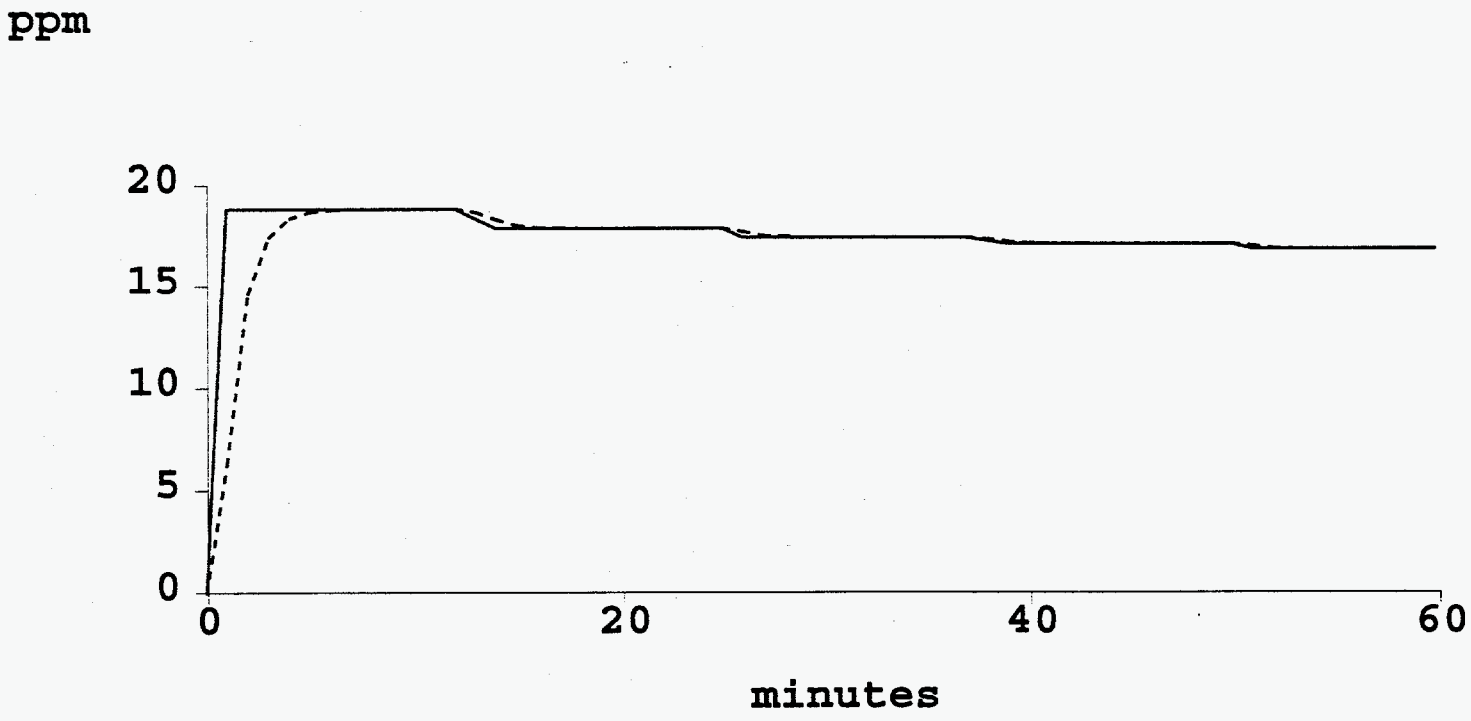
FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: 23 meters
Max Threat Zone for IDLH: 13 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.225 square meters
  Puddle Volume: 2.25 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.68 grams/min
  Max Average Sustained Release Rate: 5.35 grams/min
     (averaged over a minute or more)
  Total Amount Released: 301 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:        30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 18.8 ppm
     Indoor:  18.8 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888486556

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 18.8 ppm
Indoor: 18.8 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-2

Nitric Acid, 90%

The release of 2.25 liters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

2.25 liters
Average Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.225 square meters
  Puddle Volume: 2.25 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 15.5 grams/min
  Max Average Sustained Release Rate: 12.9 grams/min
     (averaged over a minute or more)
  Total Amount Released: 667 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  19 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.225 square meters
Puddle Volume: 2.25 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 15.5 grams/min
Max Average Sustained Release Rate: 12.9 grams/min
(averaged over a minute or more)
Total Amount Released: 667 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.225 square meters
  Puddle Volume: 2.25 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 15.5 grams/min
  Max Average Sustained Release Rate: 12.9 grams/min
     (averaged over a minute or more)
  Total Amount Released: 667 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 30 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

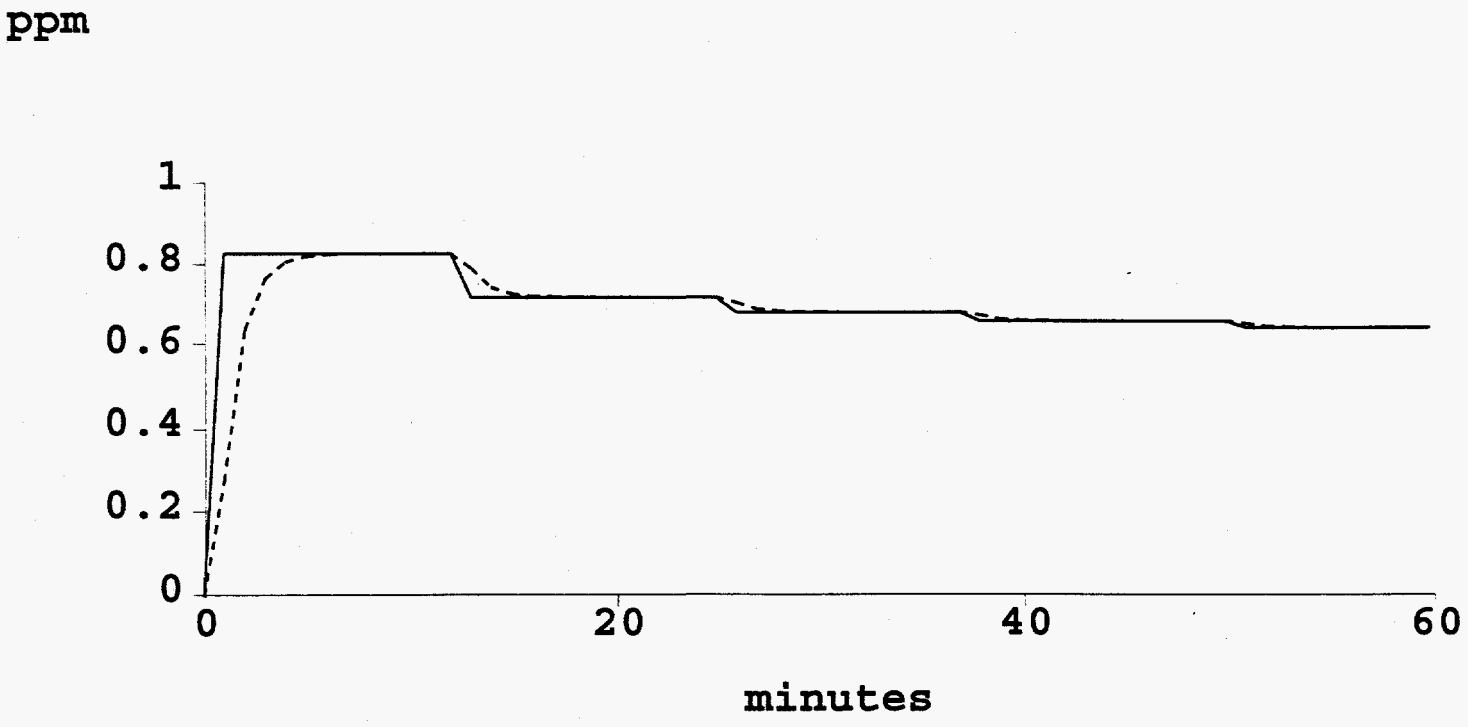
SOURCE STRENGTH INFORMATION:
Puddle Area: 0.225 square meters
Puddle Volume: 2.25 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 15.5 grams/min
Max Average Sustained Release Rate: 12.9 grams/min
(averaged over a minute or more)
Total Amount Released: 667 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.828 ppm
Indoor: 0.828 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888486598

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.828 ppm
Indoor: 0.828 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-3

Nitric Acid, 90%

The release of 1.13 liters of nitric acid due to spilling or partially fracturing the bottles.

1.13 liters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 2 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 1 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: F             Air Temperature: 68° F
   Relative Humidity: 5%          Ground Roughness: Open country
   Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.113 square meters
   Puddle Volume: 1.13 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 3 grams/min
   Max Average Sustained Release Rate: 2.81 grams/min
      (averaged over a minute or more)
   Total Amount Released: 158 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 2 ppm
   Max Threat Zone for LOC:  67 meters
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.113 square meters
Puddle Volume: 1.13 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3 grams/min
Max Average Sustained Release Rate: 2.81 grams/min
(averaged over a minute or more)
Total Amount Released: 158 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 24 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.113 square meters
Puddle Volume: 1.13 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3 grams/min
Max Average Sustained Release Rate: 2.81 grams/min
(averaged over a minute or more)
Total Amount Released: 158 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: 17 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.113 square meters
Puddle Volume: 1.13 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3 grams/min
Max Average Sustained Release Rate: 2.81 grams/min
(averaged over a minute or more)
Total Amount Released: 158 grams

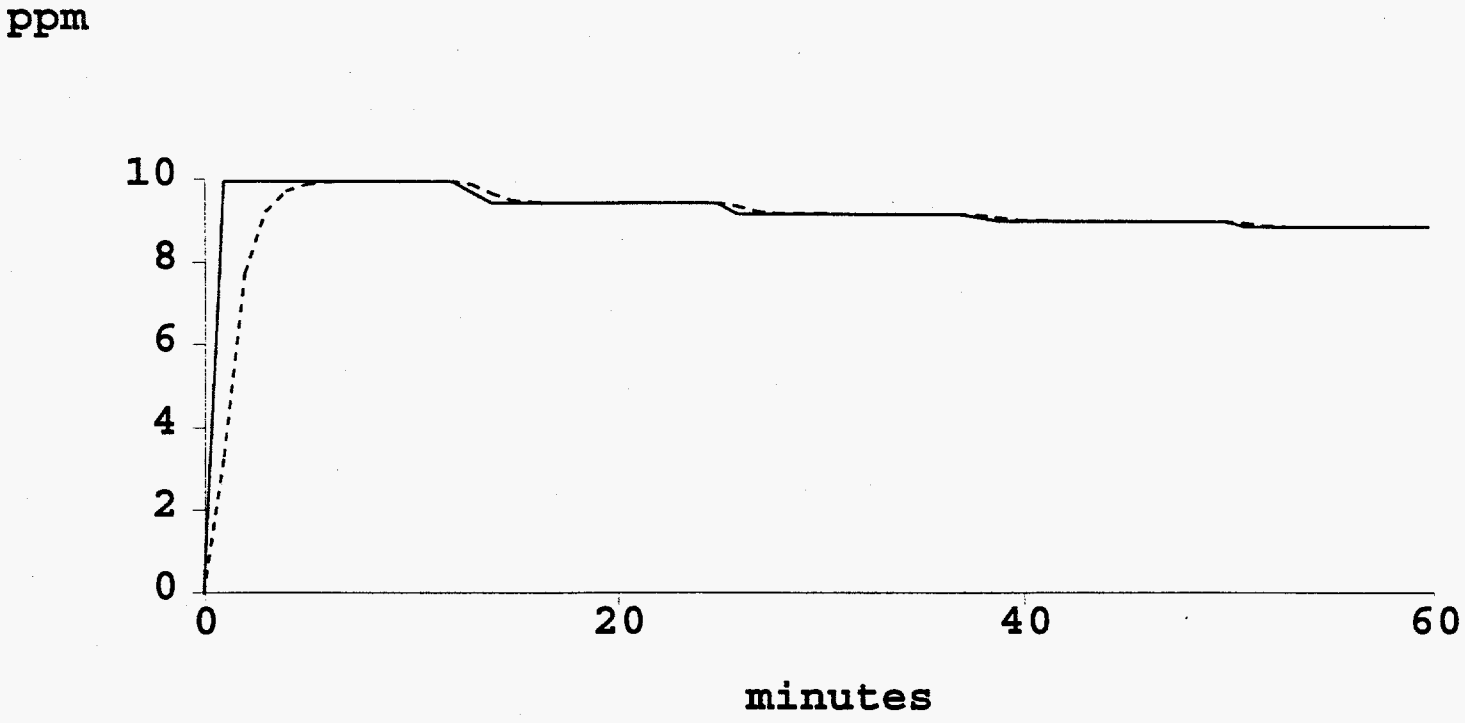
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.93 ppm
Indoor: 9.93 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888486635

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.93 ppm
Indoor: 9.93 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-4

Nitric Acid, 90%

The release of 1.13 liters of nitric acid due to spilling or partially fracturing the bottles.

1.13 liters
Average Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.113 square meters
  Puddle Volume: 1.13 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 8.19 grams/min
  Max Average Sustained Release Rate: 6.76 grams/min
     (averaged over a minute or more)
  Total Amount Released: 348 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  14 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

Text Summary

2888469304

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.113 square meters
  Puddle Volume: 1.13 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 8.19 grams/min
  Max Average Sustained Release Rate: 6.76 grams/min
     (averaged over a minute or more)
  Total Amount Released: 348 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.113 square meters
  Puddle Volume: 1.13 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 8.19 grams/min
  Max Average Sustained Release Rate: 6.76 grams/min
     (averaged over a minute or more)
  Total Amount Released: 348 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 30 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

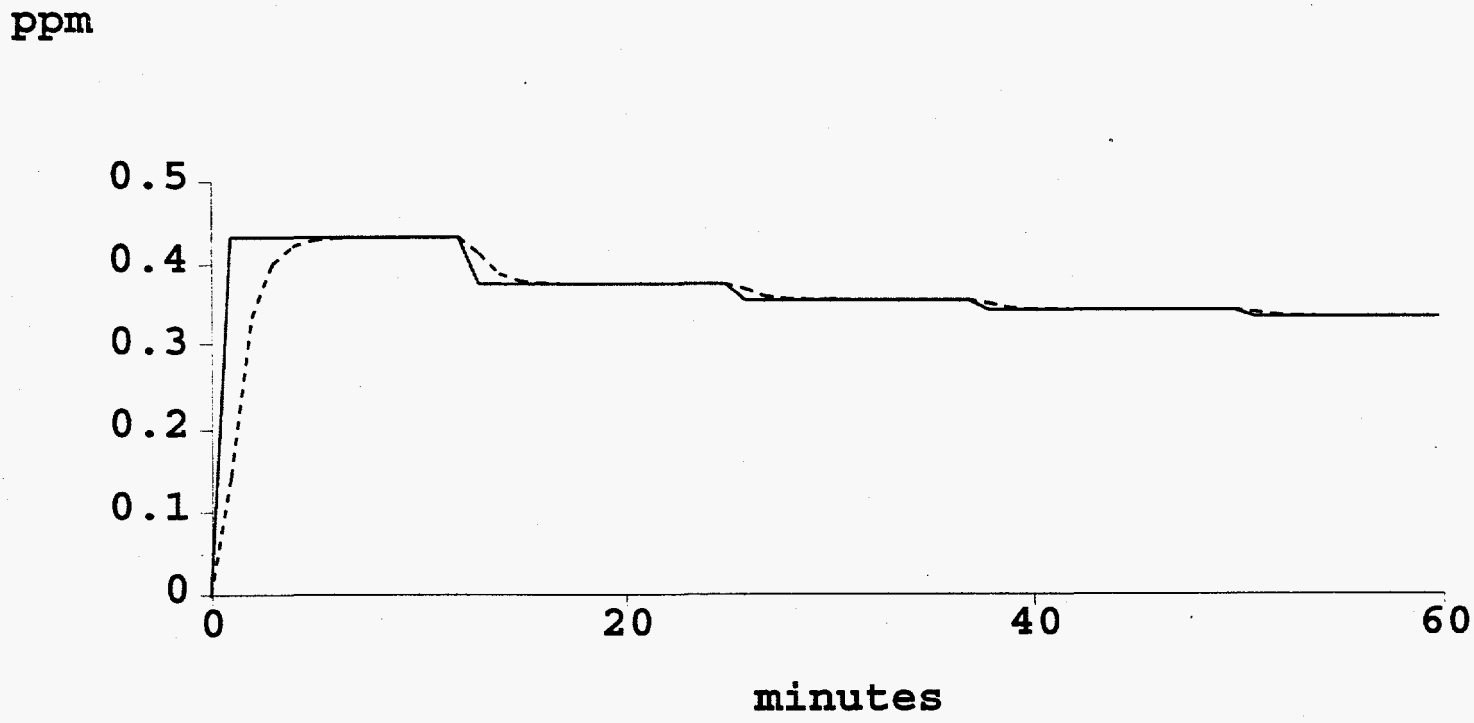
```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.113 square meters
  Puddle Volume: 1.13 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 8.19 grams/min
  Max Average Sustained Release Rate: 6.76 grams/min
     (averaged over a minute or more)
  Total Amount Released: 348 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:        30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 0.434 ppm
     Indoor:  0.434 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window

2888486677

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.434 ppm
Indoor: 0.434 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-5

Nitric Acid, 100%

The release of 2 liters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

2 liters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .2 square meters
  Puddle Volume: 2 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.1 grams/min
  Max Average Sustained Release Rate: 4.79 grams/min
     (averaged over a minute or more)
  Total Amount Released: 270 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  88 meters
  Max Threat Zone for IDLH: 12 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .2 square meters
  Puddle Volume: 2 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.1 grams/min
  Max Average Sustained Release Rate: 4.79 grams/min
     (averaged over a minute or more)
  Total Amount Released: 270 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  32 meters
  Max Threat Zone for IDLH: 12 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .2 square meters
  Puddle Volume: 2 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.1 grams/min
  Max Average Sustained Release Rate: 4.79 grams/min
     (averaged over a minute or more)
  Total Amount Released: 270 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 30 ppm
  Max Threat Zone for LOC:  22 meters
  Max Threat Zone for IDLH: 12 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

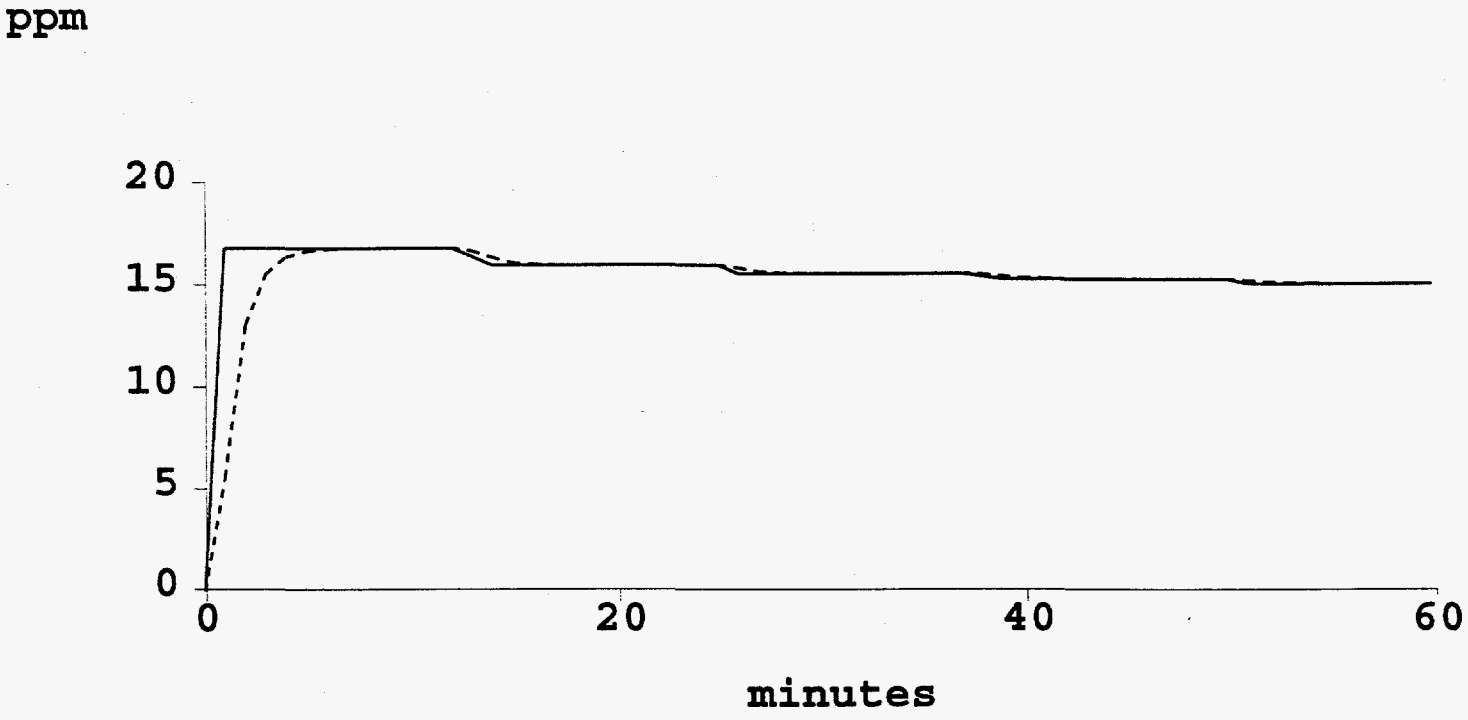
```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.2 square meters
  Puddle Volume: 2 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 5.1 grams/min
  Max Average Sustained Release Rate: 4.79 grams/min
     (averaged over a minute or more)
  Total Amount Released: 270 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:        30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 16.8 ppm
     Indoor:  16.8 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window

2888486965

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16.8 ppm
Indoor: 16.8 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-6

Nitric Acid, 100%

The release of 2 liters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

2 liters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.2 square meters
Puddle Volume: 2 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.9 grams/min
Max Average Sustained Release Rate: 11.6 grams/min
(averaged over a minute or more)
Total Amount Released: 597 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 18 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 15 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C             Air Temperature: 68° F
   Relative Humidity: 25%         Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.2 square meters
   Puddle Volume: 2 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 13.9 grams/min
   Max Average Sustained Release Rate: 11.6 grams/min
      (averaged over a minute or more)
   Total Amount Released: 597 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 15 ppm
   Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.2 square meters
Puddle Volume: 2 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.9 grams/min
Max Average Sustained Release Rate: 11.6 grams/min
(averaged over a minute or more)
Total Amount Released: 597 grams

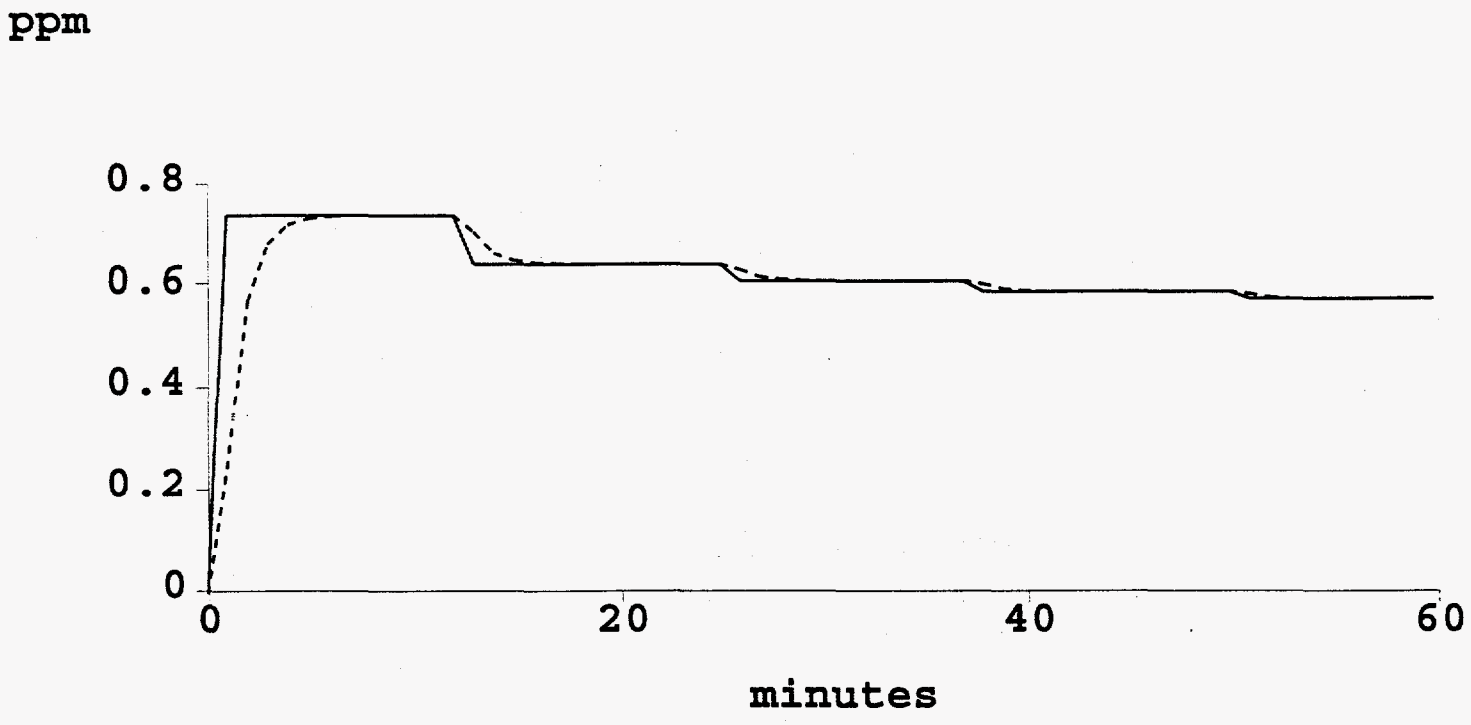
FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.2 square meters
  Puddle Volume: 2 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 13.9 grams/min
  Max Average Sustained Release Rate: 11.6 grams/min
     (averaged over a minute or more)
  Total Amount Released: 597 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 0.742 ppm
     Indoor:  0.742 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888487015

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.742 ppm
Indoor: 0.742 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-7

Nitric Acid, 100%

The release of 1 liter of nitric acid due to spilling or partially fracturing the bottles.

1 liter
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.1 square meters
  Puddle Volume: 1 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.68 grams/min
  Max Average Sustained Release Rate: 2.51 grams/min
     (averaged over a minute or more)
  Total Amount Released: 141 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  64 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.1 square meters
  Puddle Volume: 1 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.68 grams/min
  Max Average Sustained Release Rate: 2.51 grams/min
     (averaged over a minute or more)
  Total Amount Released: 141 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  23 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

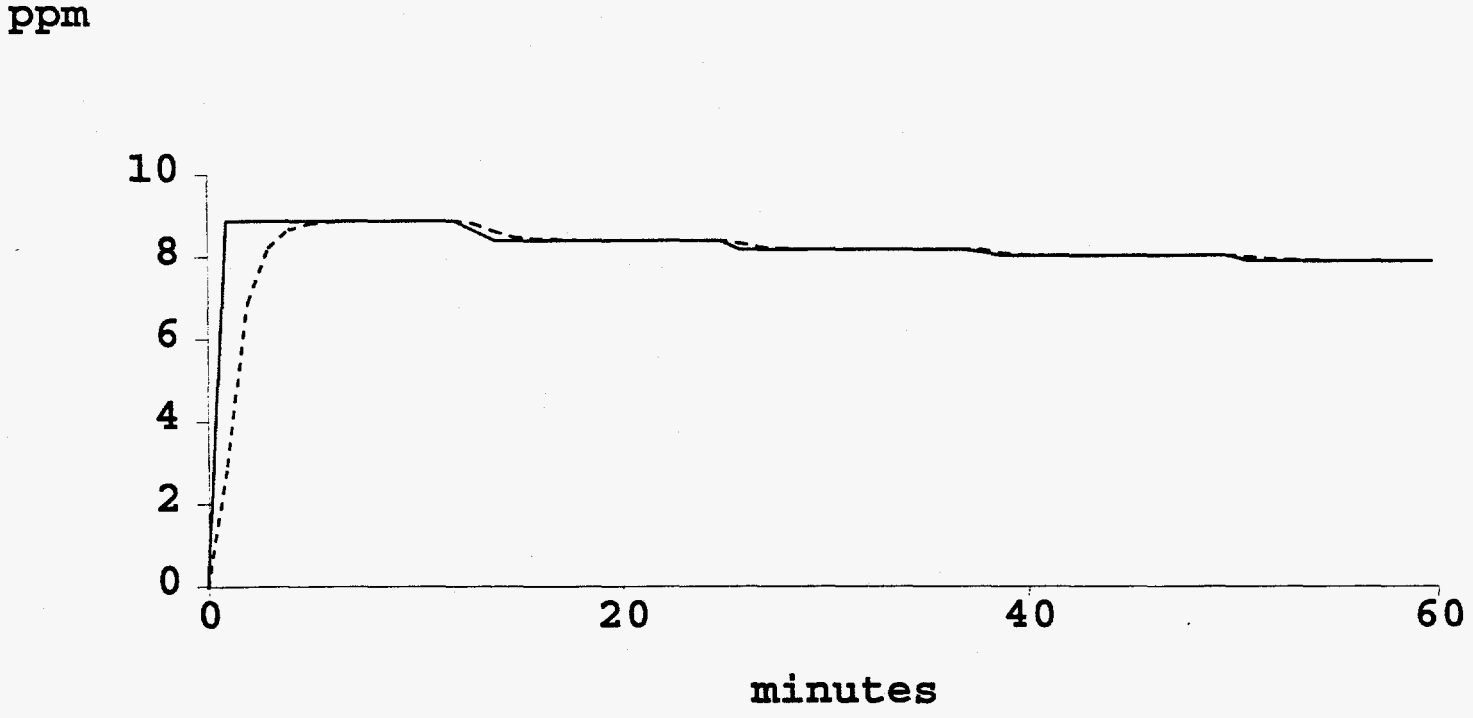
```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.1 square meters
  Puddle Volume: 1 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.68 grams/min
  Max Average Sustained Release Rate: 2.51 grams/min
     (averaged over a minute or more)
  Total Amount Released: 141 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 30 ppm
  Max Threat Zone for LOC:  16 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.1 square meters
  Puddle Volume: 1 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.68 grams/min
  Max Average Sustained Release Rate: 2.51 grams/min
     (averaged over a minute or more)
  Total Amount Released: 141 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 8.87 ppm
     Indoor:  8.87 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888487052

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 8.87 ppm
Indoor: 8.87 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-8

Nitric Acid, 100%

The release of 1 liter of nitric acid due to spilling or partially fracturing the bottles.

1 liter
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.1 square meters
Puddle Volume: 1 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.32 grams/min
Max Average Sustained Release Rate: 6.02 grams/min
(averaged over a minute or more)
Total Amount Released: 310 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 13 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.1 square meters
  Puddle Volume: 1 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 7.32 grams/min
  Max Average Sustained Release Rate: 6.02 grams/min
     (averaged over a minute or more)
  Total Amount Released: 310 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.1 square meters
  Puddle Volume: 1 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 7.32 grams/min
  Max Average Sustained Release Rate: 6.02 grams/min
     (averaged over a minute or more)
  Total Amount Released: 310 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 30 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.1 square meters
Puddle Volume: 1 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.32 grams/min
Max Average Sustained Release Rate: 6.02 grams/min
(averaged over a minute or more)
Total Amount Released: 310 grams

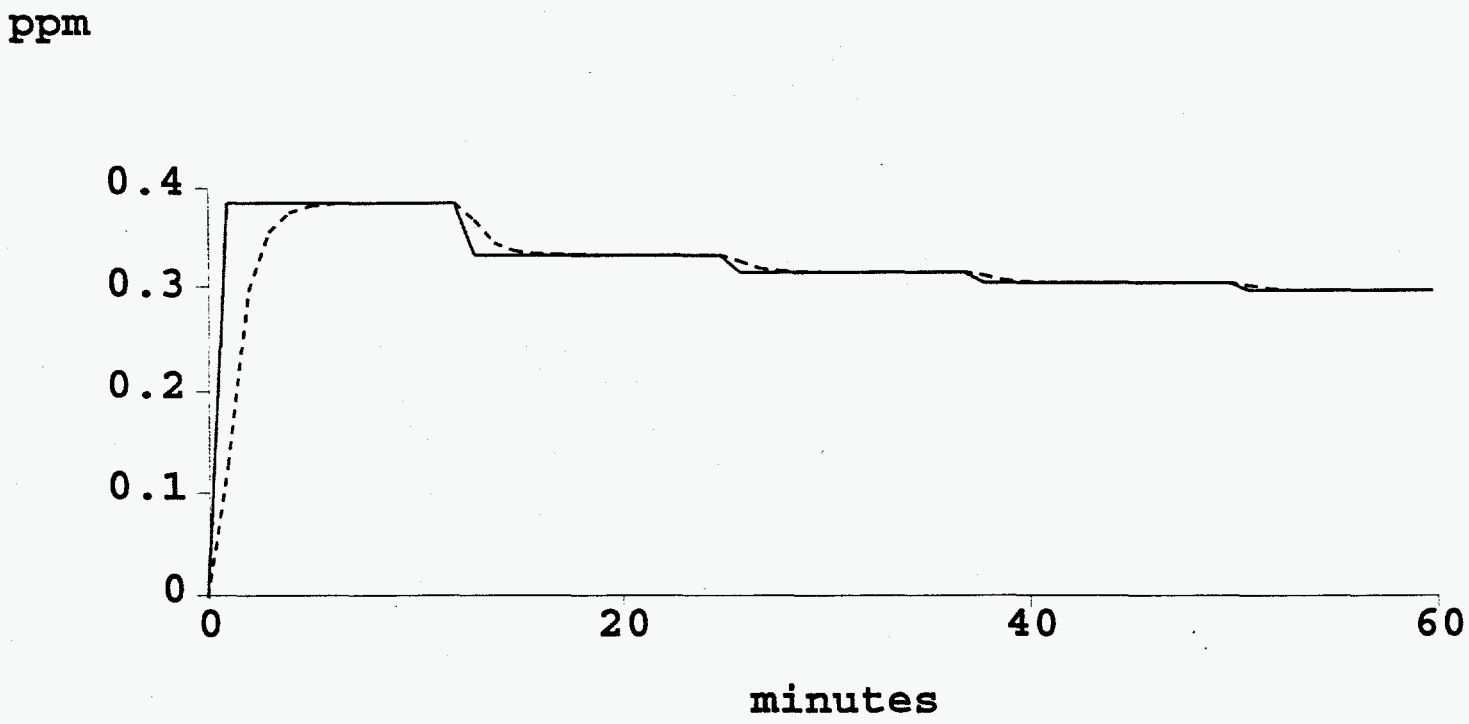
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.387 ppm
Indoor: 0.387 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888487083

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.387 ppm
Indoor: 0.387 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-9

Nitric Acid, 69/71%

The release of 1.77 liters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

1.77 liters
Worst Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .177 square meters
Puddle Volume: 1.77 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.55 grams/min
Max Average Sustained Release Rate: 4.27 grams/min
(averaged over a minute or more)
Total Amount Released: 241 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 83 meters
Max Threat Zone for IDLH: 11 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .177 square meters
  Puddle Volume: 1.77 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 4.55 grams/min
  Max Average Sustained Release Rate: 4.27 grams/min
     (averaged over a minute or more)
  Total Amount Released: 241 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  30 meters
  Max Threat Zone for IDLH: 11 meters
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .177 square meters
Puddle Volume: 1.77 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.55 grams/min
Max Average Sustained Release Rate: 4.27 grams/min
(averaged over a minute or more)
Total Amount Released: 241 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: 21 meters
Max Threat Zone for IDLH: 11 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.177 square meters
Puddle Volume: 1.77 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.55 grams/min
Max Average Sustained Release Rate: 4.27 grams/min
(averaged over a minute or more)
Total Amount Released: 240 grams

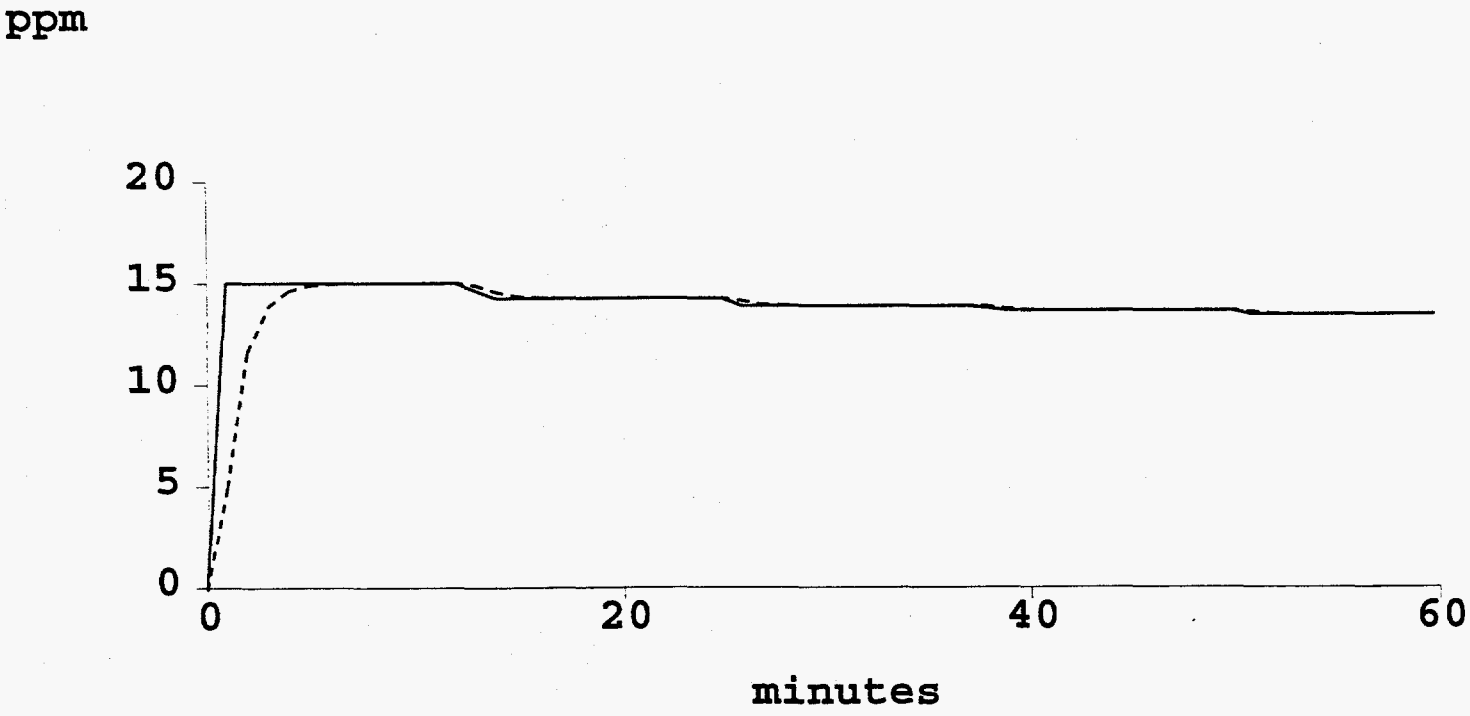
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm
Indoor: 15 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888487310

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm
Indoor: 15 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-10

Nitric Acid, 69/71%

The release of 1.77 liters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

1.77 liters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.177 square meters
Puddle Volume: 1.77 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12.4 grams/min
Max Average Sustained Release Rate: 10.3 grams/min
(averaged over a minute or more)
Total Amount Released: 532 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 17 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm            IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C           Air Temperature: 68° F
  Relative Humidity: 25%       Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.177 square meters
  Puddle Volume: 1.77 liters
  Soil Type: Default           Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 12.4 grams/min
  Max Average Sustained Release Rate: 10.3 grams/min
     (averaged over a minute or more)
  Total Amount Released: 532 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.177 square meters
  Puddle Volume: 1.77 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 12.4 grams/min
  Max Average Sustained Release Rate: 10.3 grams/min
     (averaged over a minute or more)
  Total Amount Released: 532 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 30 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.177 square meters
Puddle Volume: 1.77 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12.4 grams/min
Max Average Sustained Release Rate: 10.3 grams/min
(averaged over a minute or more)
Total Amount Released: 532 grams

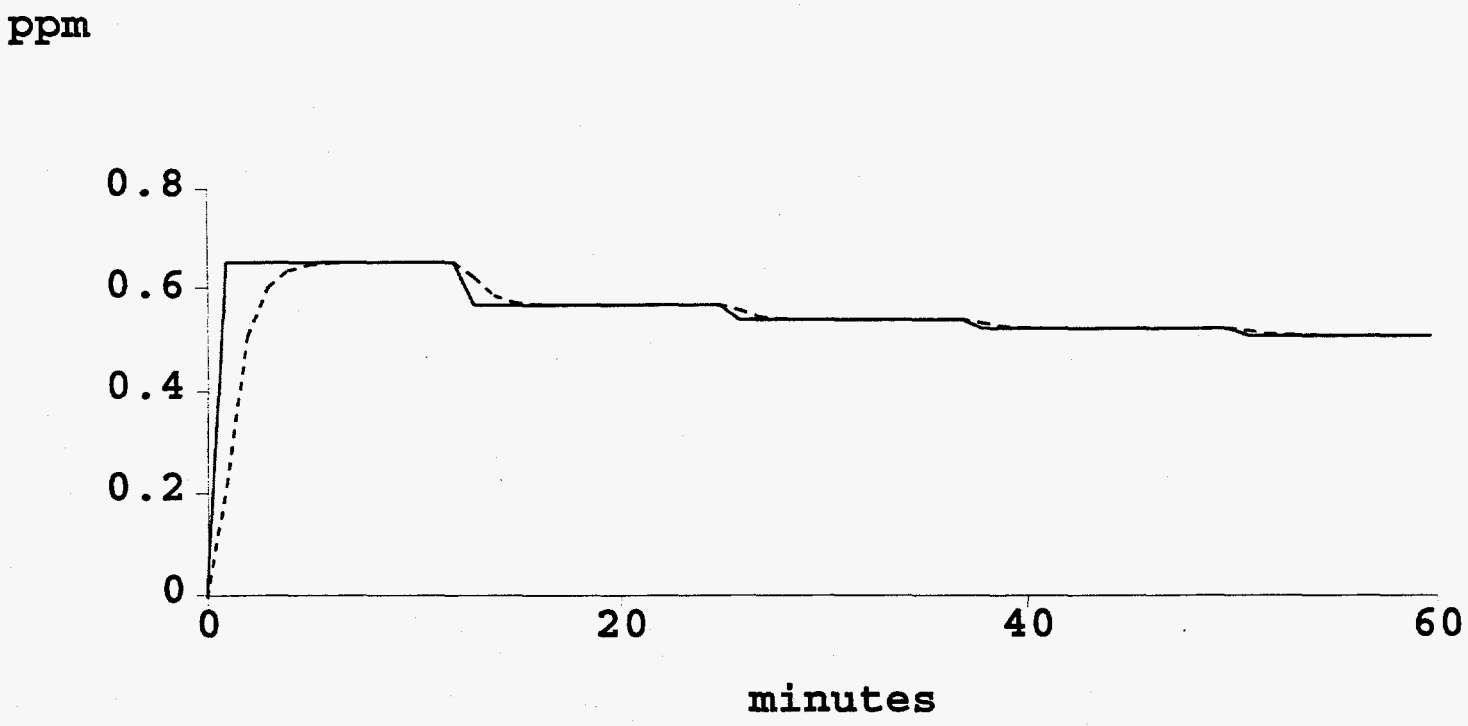
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.661 ppm
Indoor: 0.661 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888487334

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.661 ppm
Indoor: 0.661 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-11

Nitric Acid, 69/71%

The release of 890 milliliters of nitric acid due to spilling or partially fracturing the bottles.

890 milliliters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.089 square meters
  Puddle Volume: 0.89 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.41 grams/min
  Max Average Sustained Release Rate: 2.25 grams/min
     (averaged over a minute or more)
  Total Amount Released: 126 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  60 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.089 square meters
  Puddle Volume: 0.89 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.41 grams/min
  Max Average Sustained Release Rate: 2.25 grams/min
     (averaged over a minute or more)
  Total Amount Released: 126 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  22 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.089 square meters
Puddle Volume: 0.89 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.41 grams/min
Max Average Sustained Release Rate: 2.25 grams/min
(averaged over a minute or more)
Total Amount Released: 126 grams

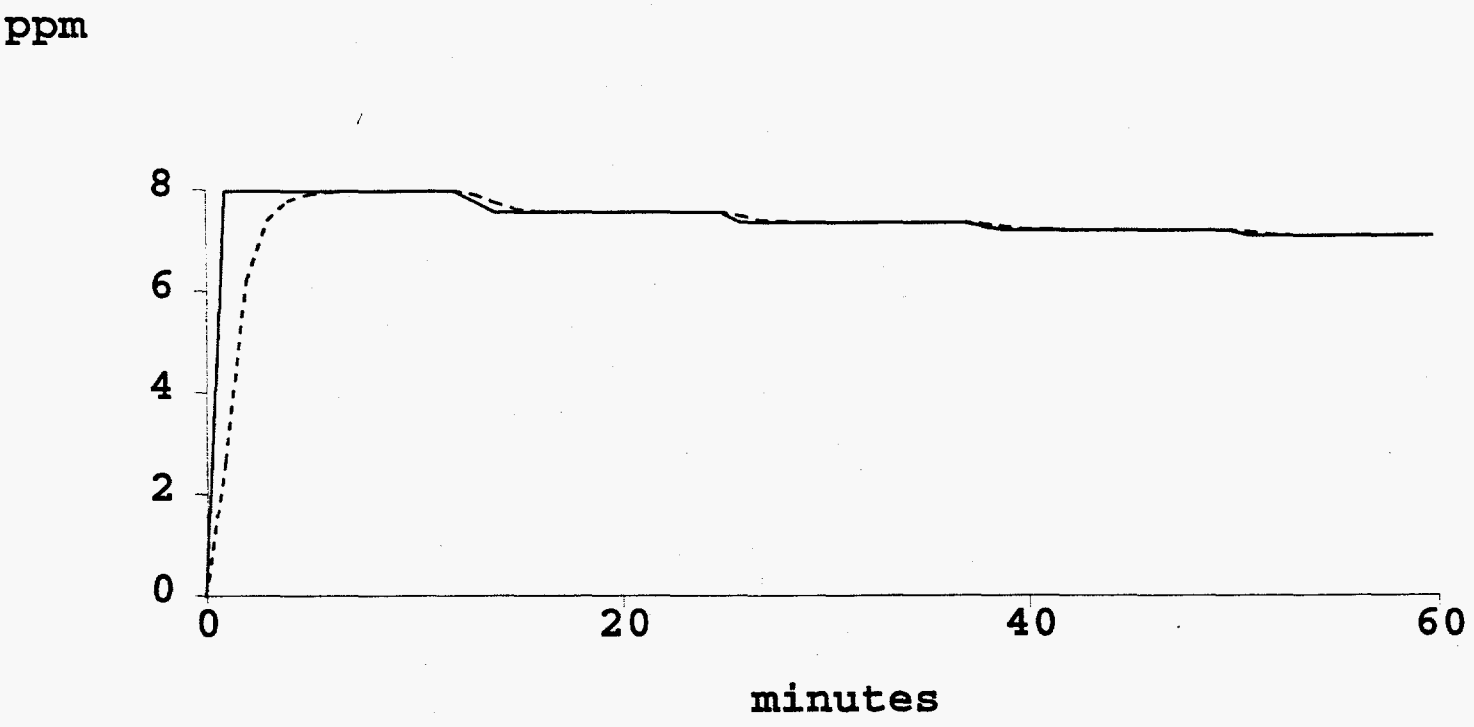
FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: 16 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.089 square meters
  Puddle Volume: 0.89 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.41 grams/min
  Max Average Sustained Release Rate: 2.25 grams/min
     (averaged over a minute or more)
  Total Amount Released: 126 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:        30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 7.96 ppm
     Indoor:  7.96 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888487375

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.96 ppm
Indoor: 7.96 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-12

Nitric Acid, 69/71%

The release of 890 milliliters of nitric acid due to spilling or partially fracturing the bottles.

890 milliliters
Average Case Meteorological Conditions

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 2 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C             Air Temperature: 68° F
   Relative Humidity: 25%         Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.089 square meters
   Puddle Volume: 0.89 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 6.57 grams/min
   Max Average Sustained Release Rate: 5.4 grams/min
      (averaged over a minute or more)
   Total Amount Released: 277 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 2 ppm
   Max Threat Zone for LOC:  13 meters
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.089 square meters
  Puddle Volume: 0.89 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 6.57 grams/min
  Max Average Sustained Release Rate: 5.4 grams/min
     (averaged over a minute or more)
  Total Amount Released: 277 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.089 square meters
Puddle Volume: 0.89 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.57 grams/min
Max Average Sustained Release Rate: 5.4 grams/min
(averaged over a minute or more)
Total Amount Released: 277 grams

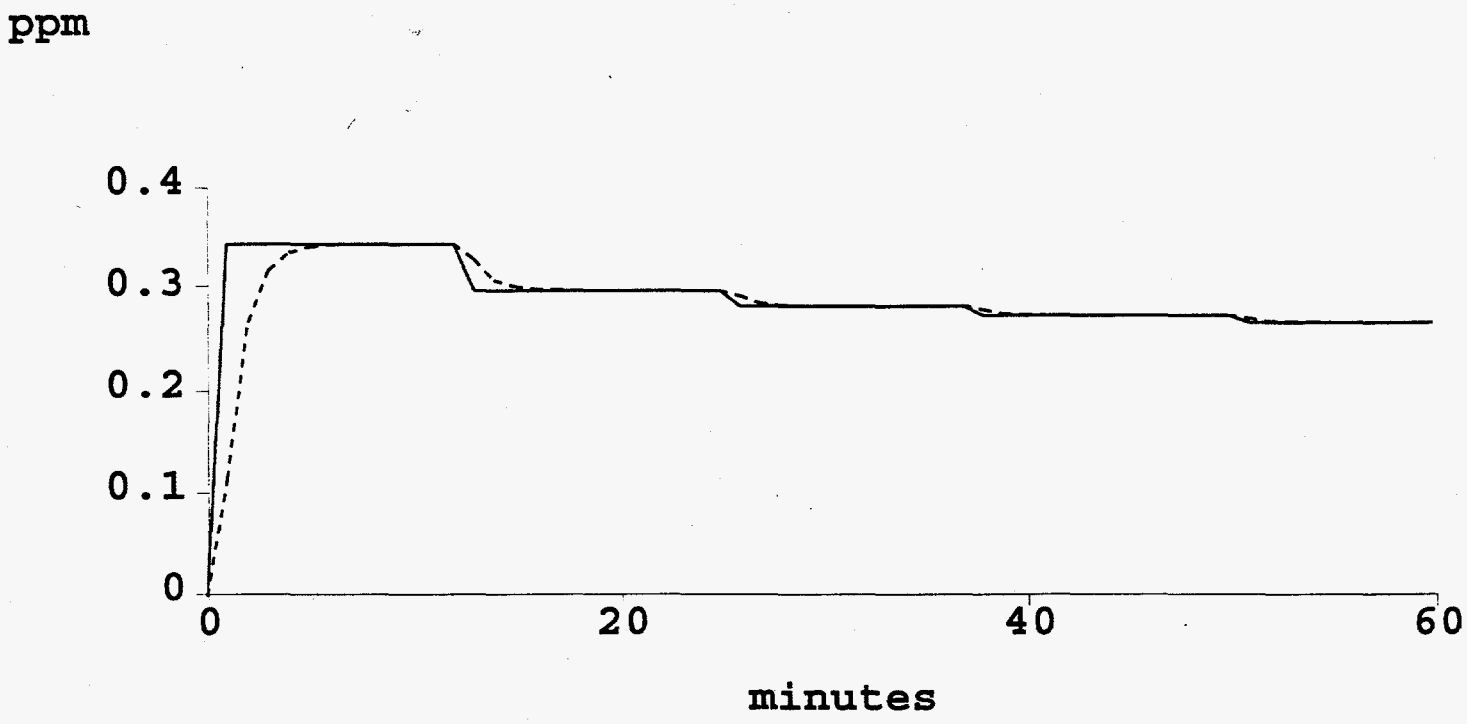
FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.089 square meters
  Puddle Volume: 0.89 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 6.57 grams/min
  Max Average Sustained Release Rate: 5.4 grams/min
     (averaged over a minute or more)
  Total Amount Released: 277 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:        30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 0.346 ppm
     Indoor:  0.346 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888487412

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.346 ppm
Indoor: 0.346 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-13

Nitric Acid, 90%

The release of 900 milliliters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

900 milliliters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .09 square meters
  Puddle Volume: .9 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 2.43 grams/min
  Max Average Sustained Release Rate: 2.19 grams/min
     (averaged over a minute or more)
  Total Amount Released: 118 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  60 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .09 square meters
Puddle Volume: .9 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.43 grams/min
Max Average Sustained Release Rate: 2.19 grams/min
(averaged over a minute or more)
Total Amount Released: 118 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 22 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .09 square meters
Puddle Volume: .9 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.43 grams/min
Max Average Sustained Release Rate: 2.19 grams/min
(averaged over a minute or more)
Total Amount Released: 118 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: 15 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.09 square meters
Puddle Volume: 0.9 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.43 grams/min
Max Average Sustained Release Rate: 2.27 grams/min
(averaged over a minute or more)
Total Amount Released: 127 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 8.04 ppm
Indoor: 8.04 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888487817

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.35 ppm
Indoor: 0.35 ppm
Note: Indoor graph is shown with a dotted line.

Release Designation
HNO_3-14

Nitric Acid, 90%

The release of 900 milliliters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

900 milliliters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.09 square meters
Puddle Volume: 0.9 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.64 grams/min
Max Average Sustained Release Rate: 5.46 grams/min
(averaged over a minute or more)
Total Amount Released: 280 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 13 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.09 square meters
  Puddle Volume: 0.9 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 6.64 grams/min
  Max Average Sustained Release Rate: 5.46 grams/min
     (averaged over a minute or more)
  Total Amount Released: 280 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.09 square meters
Puddle Volume: 0.9 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.64 grams/min
Max Average Sustained Release Rate: 5.46 grams/min
(averaged over a minute or more)
Total Amount Released: 280 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.09 square meters
Puddle Volume: 0.9 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.64 grams/min
Max Average Sustained Release Rate: 5.46 grams/min
(averaged over a minute or more)
Total Amount Released: 280 grams

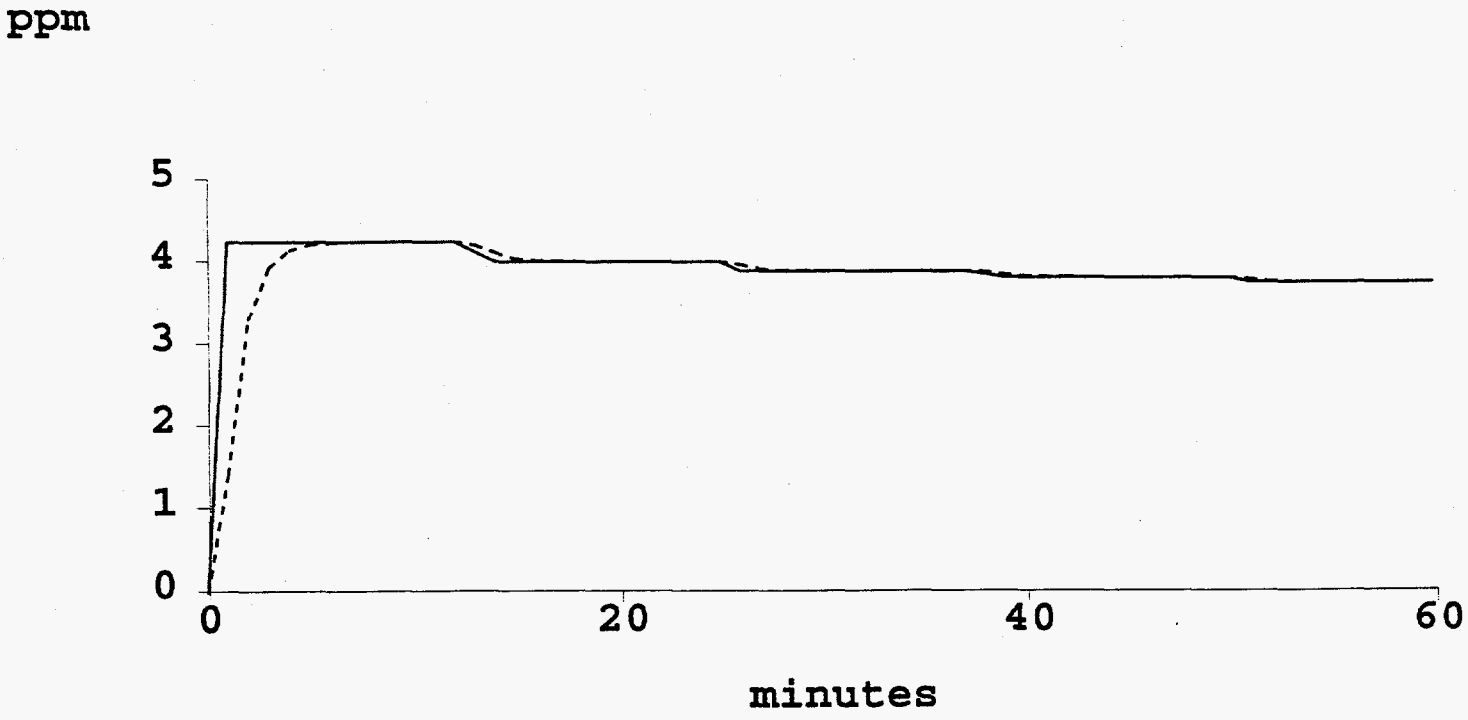
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.35 ppm
Indoor: 0.35 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888487874

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.23 ppm
Indoor: 4.23 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-15

Nitric Acid, 90%

The release of 450 milliliters of nitric acid due to spilling or partially fracturing the bottles.

450 milliliters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.045 square meters
  Puddle Volume: 0.45 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 1.29 grams/min
  Max Average Sustained Release Rate: 1.19 grams/min
     (averaged over a minute or more)
  Total Amount Released: 66.6 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  44 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.045 square meters
Puddle Volume: 0.45 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.29 grams/min
Max Average Sustained Release Rate: 1.19 grams/min
(averaged over a minute or more)
Total Amount Released: 66.6 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 16 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 30 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.045 square meters
  Puddle Volume: 0.45 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 1.29 grams/min
  Max Average Sustained Release Rate: 1.19 grams/min
     (averaged over a minute or more)
  Total Amount Released: 66.6 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 30 ppm
  Max Threat Zone for LOC:  11 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.045 square meters
Puddle Volume: 0.45 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.29 grams/min
Max Average Sustained Release Rate: 1.19 grams/min
(averaged over a minute or more)
Total Amount Released: 66.7 grams

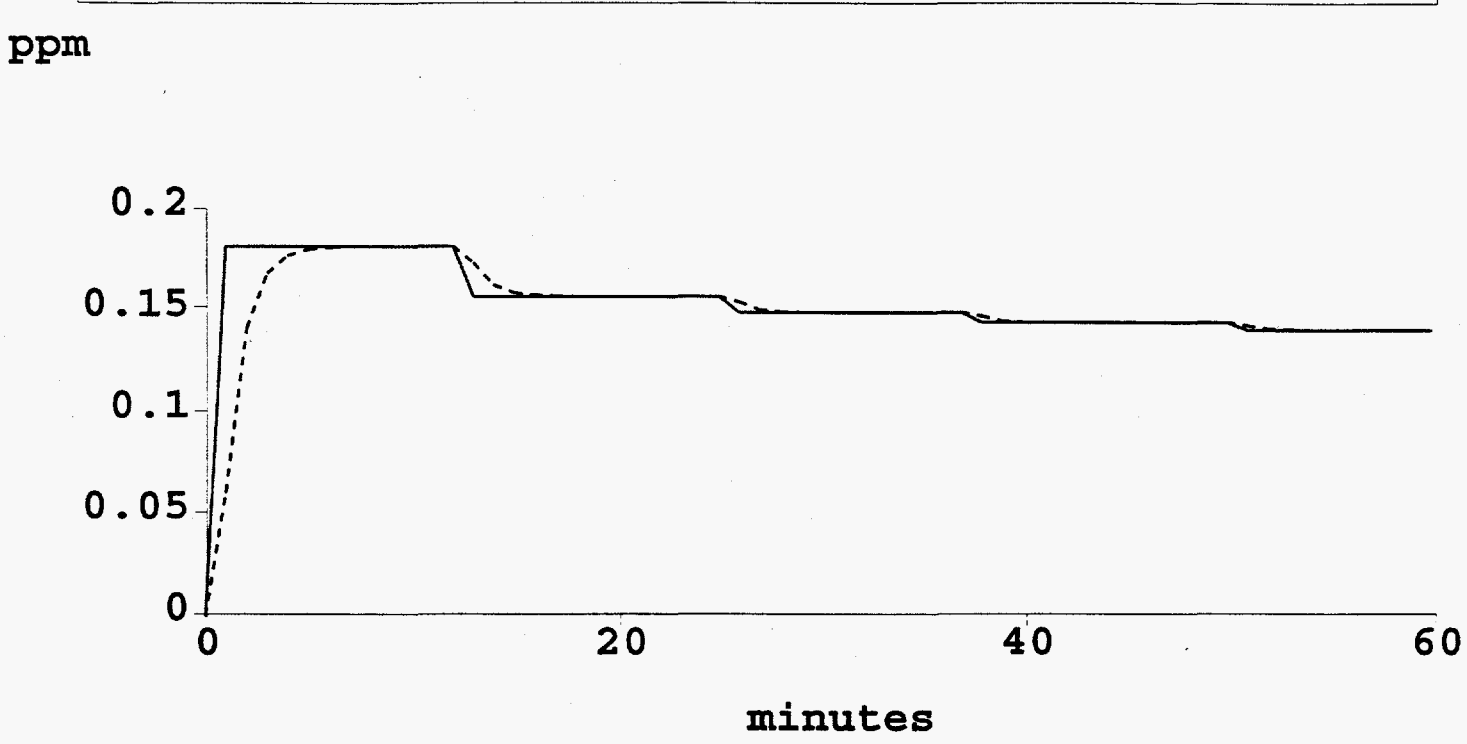
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.23 ppm
Indoor: 4.23 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window

2888487902

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.183 ppm
Indoor: 0.183 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-16

Nitric Acid, 90%

The release of 450 milliliters of nitric acid due to spilling or partially fracturing the bottles.

450 milliliters
Average Case Meteorological Conditions

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 2 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C             Air Temperature: 68° F
   Relative Humidity: 25%         Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.045 square meters
   Puddle Volume: 0.45 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 3.49 grams/min
   Max Average Sustained Release Rate: 2.85 grams/min
      (averaged over a minute or more)
   Total Amount Released: 146 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 2 ppm
   Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 15 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C             Air Temperature: 68° F
  Relative Humidity: 25%         Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.045 square meters
  Puddle Volume: 0.45 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 3.49 grams/min
  Max Average Sustained Release Rate: 2.85 grams/min
     (averaged over a minute or more)
  Total Amount Released: 146 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 15 ppm
  Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

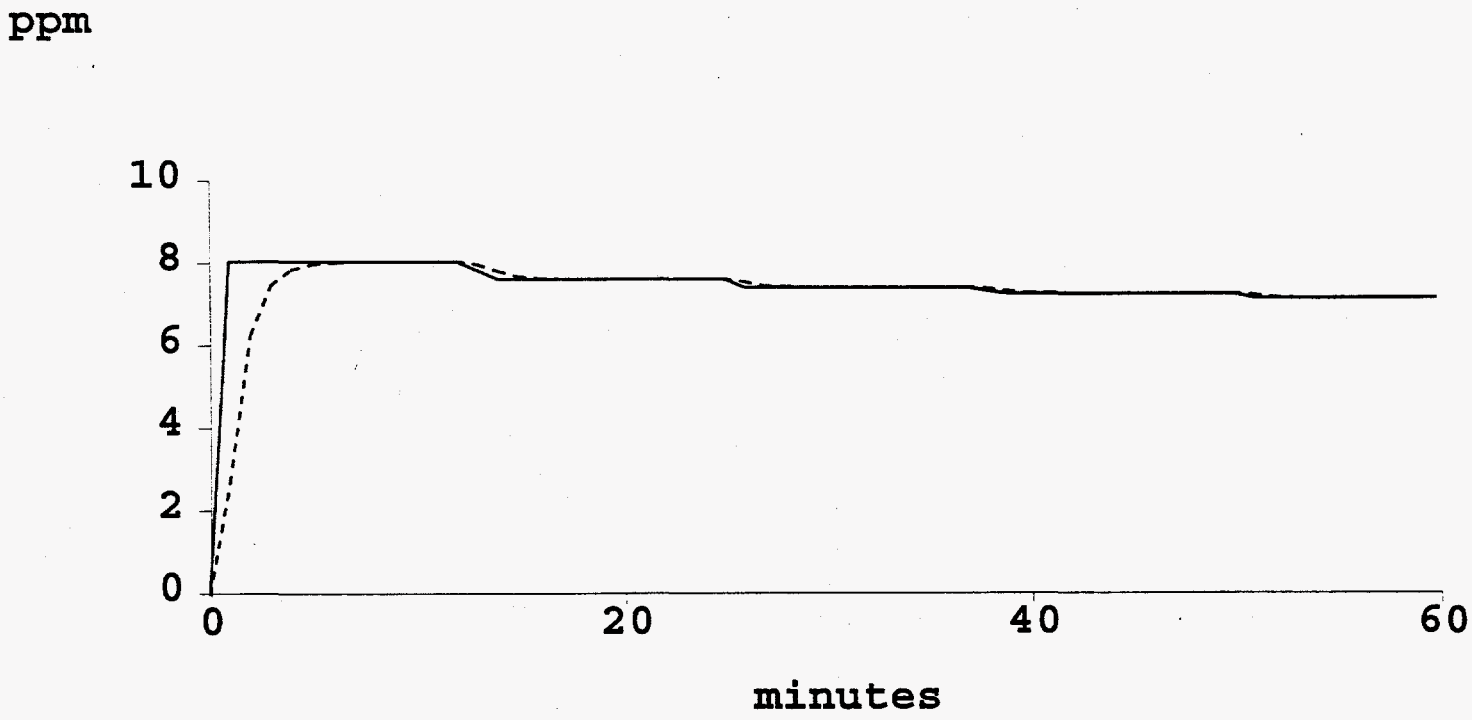
```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 30 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C             Air Temperature: 68° F
   Relative Humidity: 25%         Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.045 square meters
   Puddle Volume: 0.45 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 3.49 grams/min
   Max Average Sustained Release Rate: 2.85 grams/min
      (averaged over a minute or more)
   Total Amount Released: 146 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 30 ppm
   Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm            IDLH: 100.00 ppm
  Footprint Level of Concern: 100 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 4 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: C           Air Temperature: 68° F
  Relative Humidity: 25%       Ground Roughness: Open country
  Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.045 square meters
  Puddle Volume: 0.45 liters
  Soil Type: Default           Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 3.49 grams/min
  Max Average Sustained Release Rate: 2.85 grams/min
     (averaged over a minute or more)
  Total Amount Released: 146 grams

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 0.183 ppm
     Indoor:  0.183 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888487778

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 8.04 ppm
Indoor: 8.04 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-17

Nitric Acid, 70%

The release of 350 milliliters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

350 milliliters
Worst Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .035 square meters
Puddle Volume: .350 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.02 grams/min
Max Average Sustained Release Rate: 0.946 grams/min
(averaged over a minute or more)
Total Amount Released: 52.7 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: 39 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 15 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 1 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: F             Air Temperature: 68° F
   Relative Humidity: 5%          Ground Roughness: Open country
   Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: .035 square meters
   Puddle Volume: .350 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 1.02 grams/min
   Max Average Sustained Release Rate: 0.946 grams/min
      (averaged over a minute or more)
   Total Amount Released: 52.7 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 15 ppm
   Max Threat Zone for LOC:  14 meters
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .035 square meters
Puddle Volume: .350 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.02 grams/min
Max Average Sustained Release Rate: 0.946 grams/min
(averaged over a minute or more)
Total Amount Released: 52.7 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: 10 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

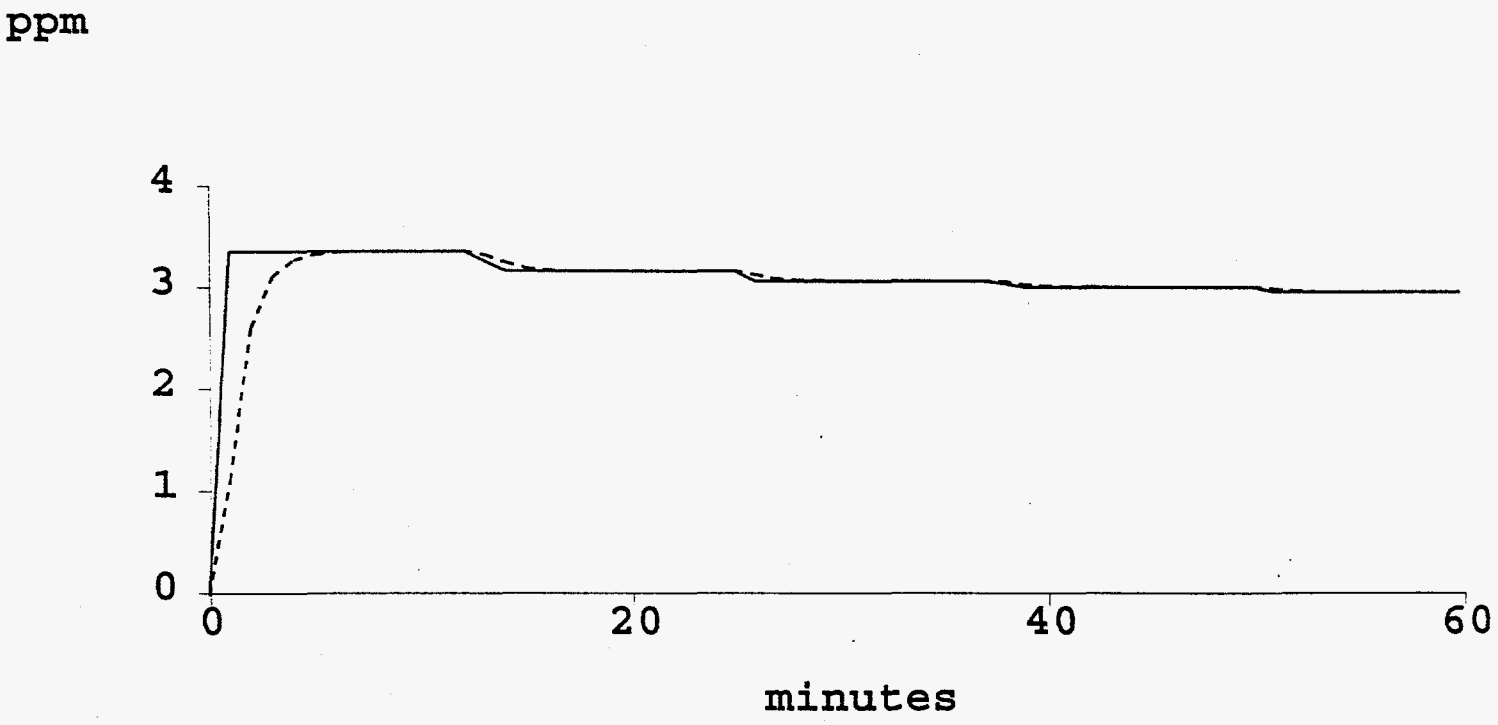
SOURCE STRENGTH INFORMATION:
Puddle Area: 0.035 square meters
Puddle Volume: 0.35 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.02 grams/min
Max Average Sustained Release Rate: 0.946 grams/min
(averaged over a minute or more)
Total Amount Released: 52.7 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.36 ppm
Indoor: 3.36 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888488348

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.36 ppm
Indoor: 3.36 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-18

Nitric Acid, 70%

The release of 350 milliliters of nitric acid due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

350 milliliters
Average Case Meteorological Conditions

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 2 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C             Air Temperature: 68° F
   Relative Humidity: 25%         Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.035 square meters
   Puddle Volume: 0.35 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 2.77 grams/min
   Max Average Sustained Release Rate: 2.25 grams/min
      (averaged over a minute or more)
   Total Amount Released: 115 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 2 ppm
   Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.035 square meters
Puddle Volume: 0.35 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.77 grams/min
Max Average Sustained Release Rate: 2.25 grams/min
(averaged over a minute or more)
Total Amount Released: 115 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.035 square meters
Puddle Volume: 0.35 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.77 grams/min
Max Average Sustained Release Rate: 2.25 grams/min
(averaged over a minute or more)
Total Amount Released: 115 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

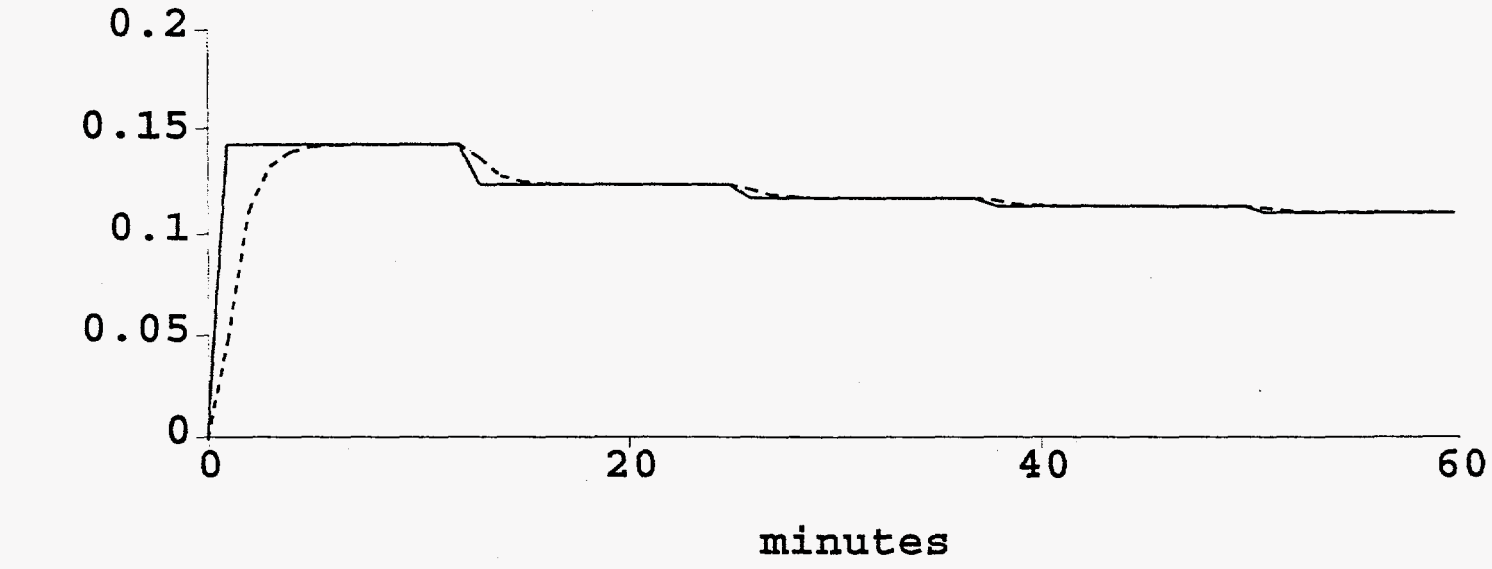
SOURCE STRENGTH INFORMATION:
Puddle Area: 0.035 square meters
Puddle Volume: 0.35 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.77 grams/min
Max Average Sustained Release Rate: 2.25 grams/min
(averaged over a minute or more)
Total Amount Released: 115 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.144 ppm
Indoor: 0.144 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888488381

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.144 ppm
Indoor: 0.144 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-19

Nitric Acid, 70%

The release of 180 milliliters of nitric acid due to spilling or partially fracturing the bottles.

180 milliliters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: NITRIC ACID
  Molecular Weight: 63.01 kg/kmol
  TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
  Footprint Level of Concern: 2 ppm
  Boiling Point: 83.00° C
  Vapor Pressure at Ambient Temperature: 0.063 atm
  Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F             Air Temperature: 68° F
  Relative Humidity: 5%          Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.018 square meters
  Puddle Volume: 0.18 liters
  Soil Type: Default             Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 0.555 grams/min
  Max Average Sustained Release Rate: 0.511 grams/min
     (averaged over a minute or more)
  Total Amount Released: 28.4 grams

FOOTPRINT INFORMATION:
  Dispersion Module: Gaussian
  User specified LOC: 2 ppm
  Max Threat Zone for LOC:  28 meters
  Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
  Note: Footprint was not drawn because
     effects of near-field patchiness make plume
     presentation unreliable for short distances.
```

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: NITRIC ACID
   Molecular Weight: 63.01 kg/kmol
   TLV-TWA: 2.00 ppm              IDLH: 100.00 ppm
   Footprint Level of Concern: 15 ppm
   Boiling Point: 83.00° C
   Vapor Pressure at Ambient Temperature: 0.063 atm
   Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 1 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: F             Air Temperature: 68° F
   Relative Humidity: 5%          Ground Roughness: Open country
   Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.018 square meters
   Puddle Volume: 0.18 liters
   Soil Type: Default             Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 0.555 grams/min
   Max Average Sustained Release Rate: 0.511 grams/min
      (averaged over a minute or more)
   Total Amount Released: 28.4 grams

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 15 ppm
   Max Threat Zone for LOC:  10 meters
   Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

Text Summary

2888470907

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.018 square meters
Puddle Volume: 0.18 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 0.555 grams/min
Max Average Sustained Release Rate: 0.511 grams/min
(averaged over a minute or more)
Total Amount Released: 28.4 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

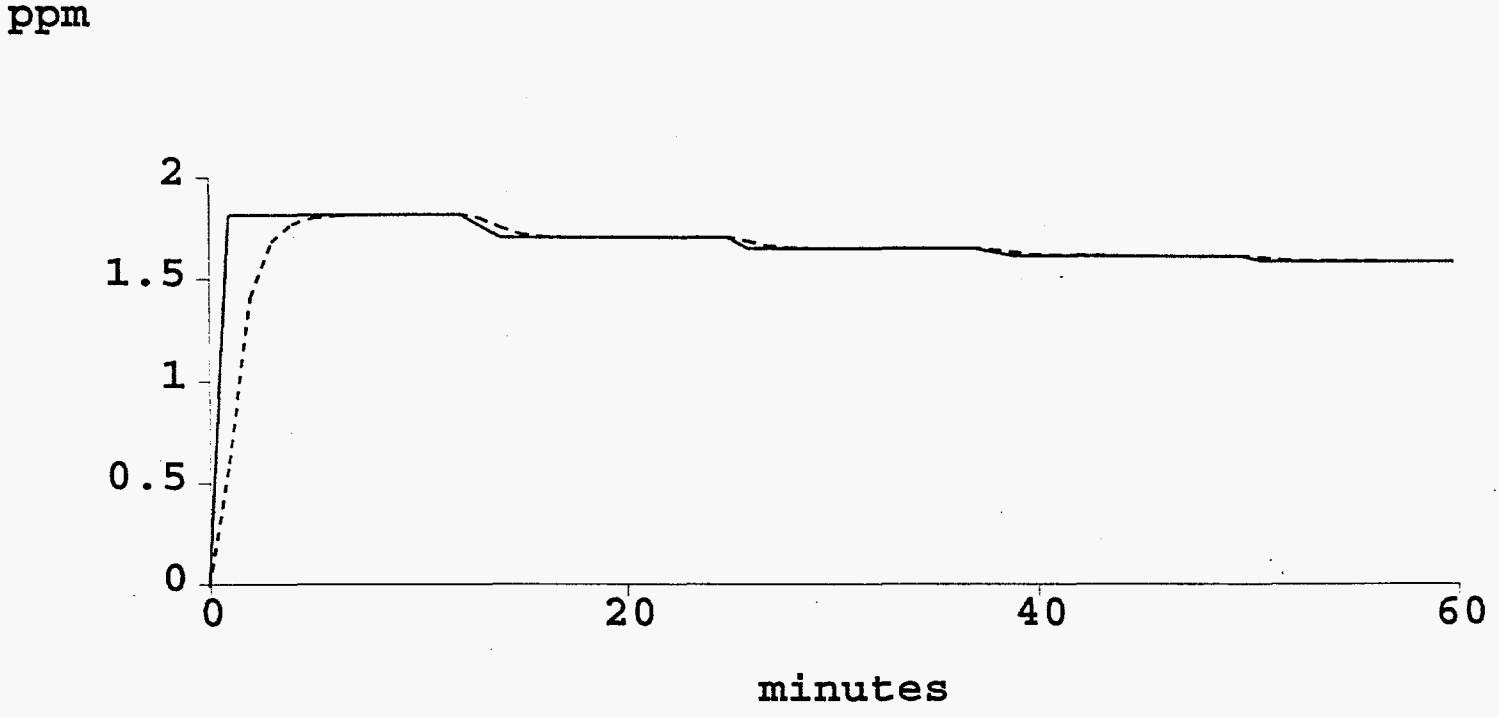
SOURCE STRENGTH INFORMATION:
Puddle Area: 0.018 square meters
Puddle Volume: 0.18 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 0.555 grams/min
Max Average Sustained Release Rate: 0.511 grams/min
(averaged over a minute or more)
Total Amount Released: 28.4 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.82 ppm
Indoor: 1.82 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888488450

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.82 ppm
Indoor: 1.82 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
HNO_3-20

Nitric Acid, 70%

The release of 180 milliliters of nitric acid due to spilling or partially fracturing the bottles.

180 milliliters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 2 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.018 square meters
Puddle Volume: 0.18 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.5 grams/min
Max Average Sustained Release Rate: 1.21 grams/min
(averaged over a minute or more)
Total Amount Released: 61.5 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 2 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.018 square meters
Puddle Volume: 0.18 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.5 grams/min
Max Average Sustained Release Rate: 1.21 grams/min
(averaged over a minute or more)
Total Amount Released: 61.5 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.018 square meters
Puddle Volume: 0.18 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.5 grams/min
Max Average Sustained Release Rate: 1.21 grams/min
(averaged over a minute or more)
Total Amount Released: 61.5 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 30 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.063 atm
Ambient Saturation Concentration: 75,930 ppm or 7.59%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

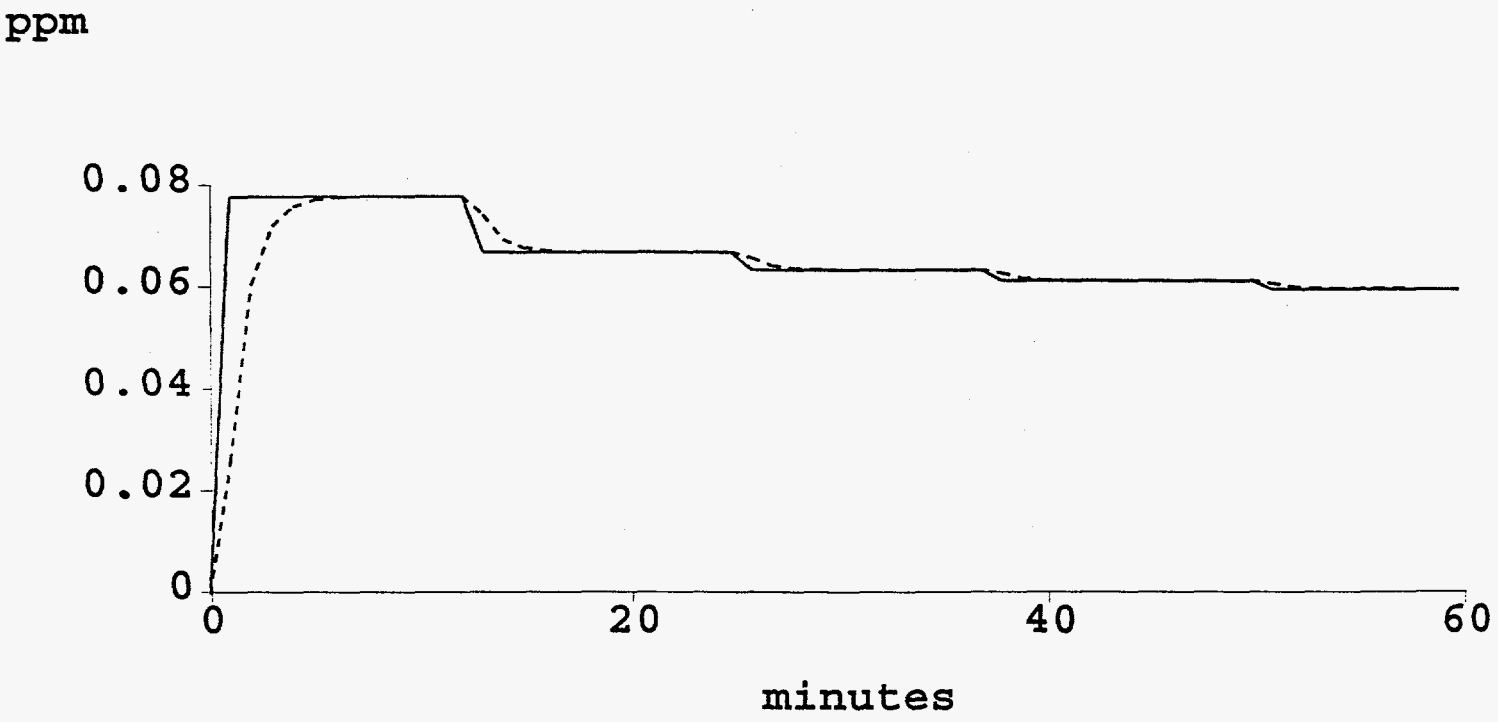
SOURCE STRENGTH INFORMATION:
Puddle Area: 0.018 square meters
Puddle Volume: 0.18 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.5 grams/min
Max Average Sustained Release Rate: 1.21 grams/min
(averaged over a minute or more)
Total Amount Released: 61.5 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0776 ppm
Indoor: 0.0776 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888488480

Chemical Name: NITRIC ACID
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0776 ppm
Indoor: 0.0776 ppm
Note: Indoor graph is shown with a dotted line.



Release Designation
$C_4H_6O_2$-1

Vinyl Acetate

The release of 4 liters of vinyl acetate due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

4 liters
Worst Case Meteorological Conditions

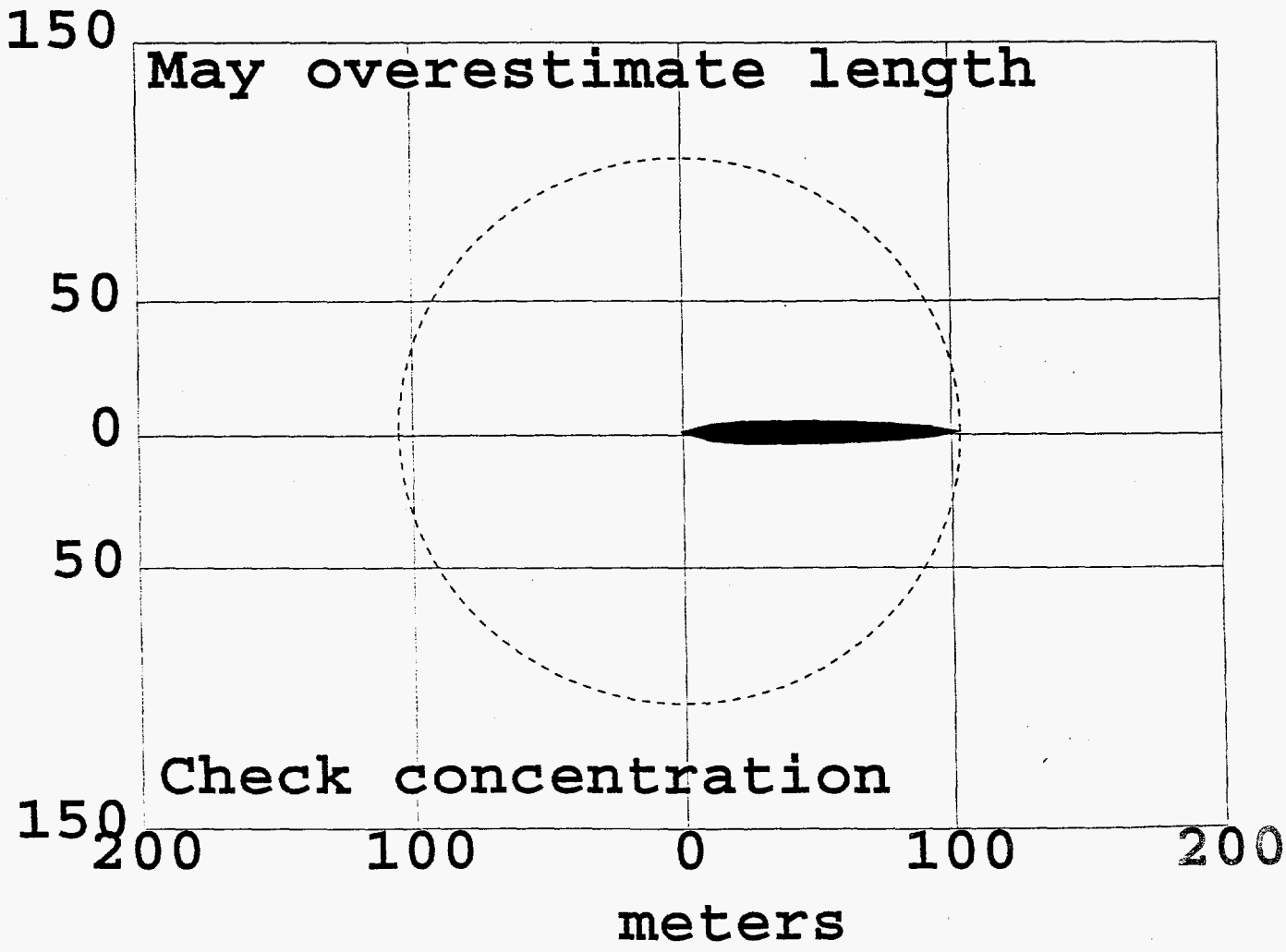
Text Summary 2873722278

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
  Chemical Name: VINYL ACETATE
  Molecular Weight: 86.09 kg/kmol
  TLV-TWA: 10.00 ppm           IDLH: -unavail-
  Note: Potential or confirmed human carcinogen.
  Footprint Level of Concern: 5 ppm
  Boiling Point: 72.50° C
  Vapor Pressure at Ambient Temperature: 0.12 atm
  Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F           Air Temperature: 68° F
  Relative Humidity: 5%        Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .4 square meters
  Puddle Volume: 4 liters
  Soil Type: Default           Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 38.3 grams/min
  Max Average Sustained Release Rate: 32.9 grams/min
     (averaged over a minute or more)
  Total Amount Released: 1.72 kilograms

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 5 ppm
  Max Threat Zone for LOC: 104 meters
  Note: The Heavy Gas footprint is an initial screening.
    For short releases it may be an overestimation.
    Be sure to check concentration information at specific
locations.
```

Chemical Name: VINYL ACETATE
  Note: Potential or confirmed human carcinogen.
Model Run: Heavy Gas
Wind: 1 meters/sec from 0° true

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 5 ppm
  Max Threat Zone for LOC: 104 meters
  Note: The Heavy Gas footprint is an initial screening.
    For short releases it may be an overestimation.
    Be sure to check concentration information at specific locations.

meters



SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .4 square meters
Puddle Volume: 4 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 38.3 grams/min
Max Average Sustained Release Rate: 33 grams/min
(averaged over a minute or more)
Total Amount Released: 1.70 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 18 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Using computer's internal clock

CHEMICAL INFORMATION:
  Chemical Name: VINYL ACETATE
  Molecular Weight: 86.09 kg/kmol
  TLV-TWA: 10.00 ppm           IDLH: -unavail-
  Note: Potential or confirmed human carcinogen.
  Footprint Level of Concern: 500 ppm
  Boiling Point: 72.50° C
  Vapor Pressure at Ambient Temperature: 0.12 atm
  Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F           Air Temperature: 68° F
  Relative Humidity: 5%        Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: .4 square meters
  Puddle Volume: 4 liters
  Soil Type: Default           Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 38.3 grams/min
  Max Average Sustained Release Rate: 32.9 grams/min
     (averaged over a minute or more)
  Total Amount Released: 1.70 kilograms

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 500 ppm
  Max Threat Zone for LOC: 11 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.4 square meters
Puddle Volume: 4 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 38.3 grams/min
Max Average Sustained Release Rate: 33.9 grams/min
(averaged over a minute or more)
Total Amount Released: 1.82 kilograms

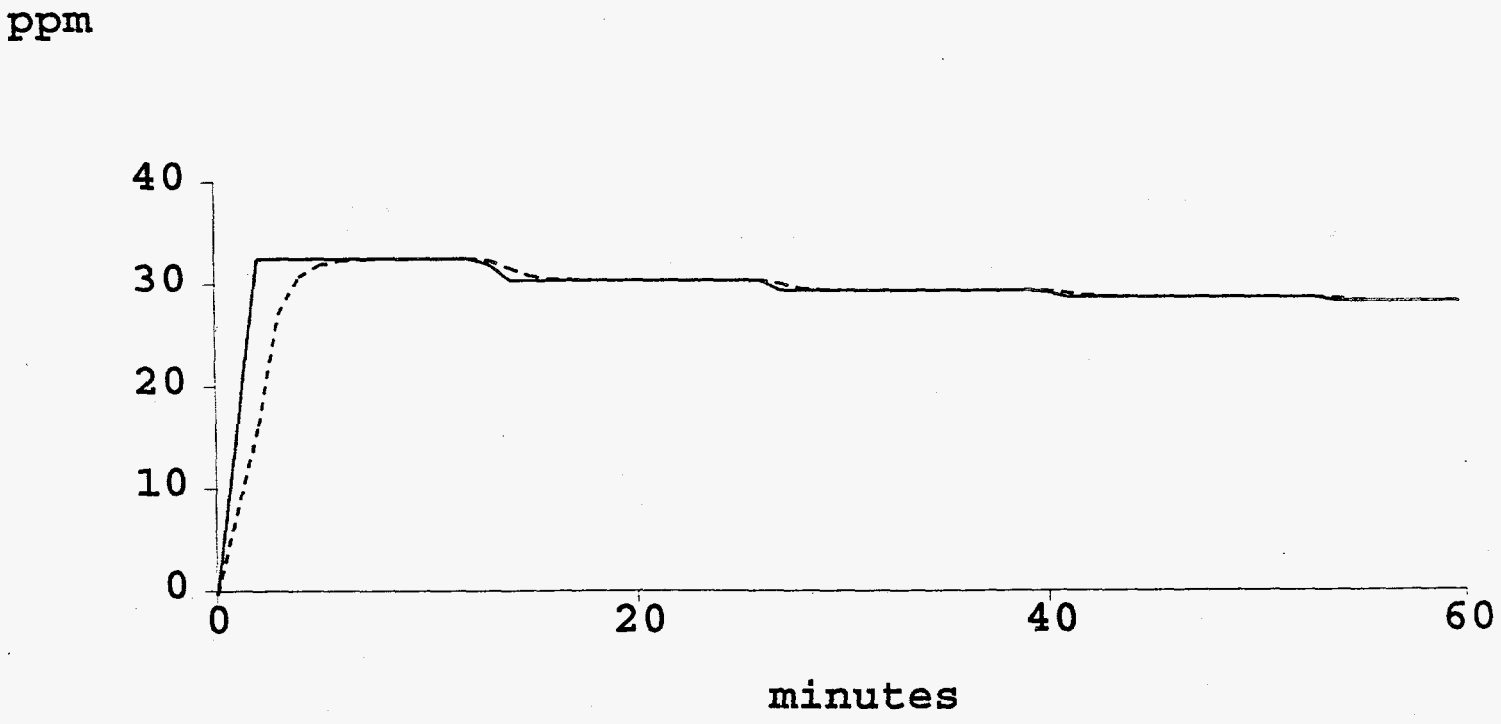
FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 11 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 32.7 ppm
Indoor: 32.7 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888488804

Chemical Name: VINYL ACETATE
  Note: Potential or confirmed human carcinogen.
Model Run: Heavy Gas
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind: 30 meters
  Off Centerline: 0 meters
  Max Concentration:
    Outdoor: 32.7 ppm
    Indoor: 32.7 ppm
  Note: Indoor graph is shown with a dotted line.



Release Designation
$C_4H_6O_2$-2

Vinyl Acetate

The release of 4 liters of vinyl acetate due to dropping or breaking the bottles during delivery, or an accident crushing the chemical cabinet.

4 liters
Average Case Meteorological Conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 5 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.4 square meters
Puddle Volume: 4 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 57 minutes
Max Computed Release Rate: 108 grams/min
Max Average Sustained Release Rate: 81.6 grams/min
(averaged over a minute or more)
Total Amount Released: 3.73 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 5 ppm
Max Threat Zone for LOC: 26 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

Text Summary

2888402258

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: VINYL ACETATE
   Molecular Weight: 86.09 kg/kmol
   TLV-TWA: 10.00 ppm           IDLH: -unavail-
   Note: Potential or confirmed human carcinogen.
   Footprint Level of Concern: 75 ppm
   Boiling Point: 72.50° C
   Vapor Pressure at Ambient Temperature: 0.12 atm
   Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 4 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: C           Air Temperature: 68° F
   Relative Humidity: 25%       Ground Roughness: Open country
   Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.4 square meters
   Puddle Volume: 4 liters
   Soil Type: Default           Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: 57 minutes
   Max Computed Release Rate: 108 grams/min
   Max Average Sustained Release Rate: 81.6 grams/min
      (averaged over a minute or more)
   Total Amount Released: 3.73 kilograms

FOOTPRINT INFORMATION:
   Dispersion Module: Gaussian
   User specified LOC: 75 ppm
   Max Threat Zone for LOC:  less than 10 meters(10.9 yards)
   Note: Footprint was not drawn because
      effects of near-field patchiness make plume
      presentation unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.4 square meters
Puddle Volume: 4 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 57 minutes
Max Computed Release Rate: 108 grams/min
Max Average Sustained Release Rate: 81.6 grams/min
(averaged over a minute or more)
Total Amount Released: 3.73 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.4 square meters
Puddle Volume: 4 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 57 minutes
Max Computed Release Rate: 108 grams/min
Max Average Sustained Release Rate: 81.6 grams/min
(averaged over a minute or more)
Total Amount Released: 3.73 kilograms

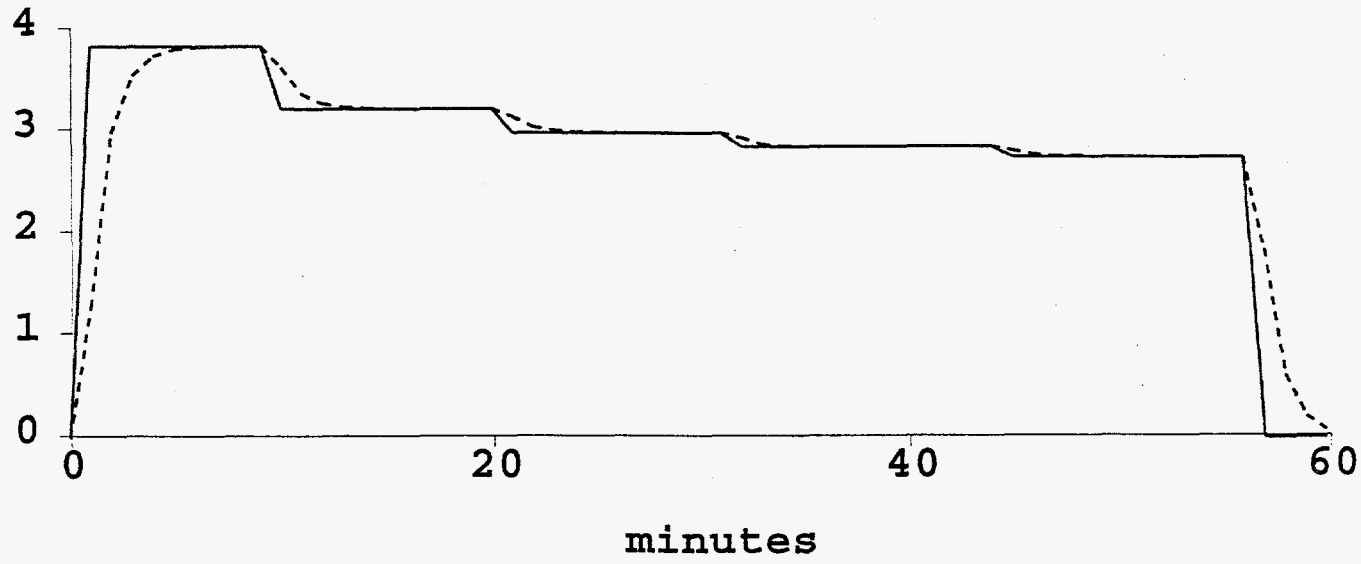
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.83 ppm
Indoor: 3.83 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888488837

Chemical Name: VINYL ACETATE
Note: Potential or confirmed human carcinogen.
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.83 ppm
Indoor: 3.83 ppm
Note: Indoor graph is shown with a dotted line.

ppm



Release Designation
$C_4H_6O_2$-3

Vinyl Acetate

The release of 2 liters of vinyl acetate due to spilling or partially fracturing the bottles.

2 liters
Worst Case Meteorological Conditions

```
 SITE DATA INFORMATION:
   Location: ALBUQUERQUE, NEW MEXICO
   Building Air Exchanges Per Hour: 60 (User specified)
   Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
   Chemical Name: VINYL ACETATE
   Molecular Weight: 86.09 kg/kmol
   TLV-TWA: 10.00 ppm           IDLH: -unavail-
   Note: Potential or confirmed human carcinogen.
   Footprint Level of Concern: 5 ppm
   Boiling Point: 72.50° C
   Vapor Pressure at Ambient Temperature: 0.12 atm
   Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
   Wind: 1 meters/sec from 0° true
   Inversion Height: 500 meters
   Stability Class: F           Air Temperature: 68° F
   Relative Humidity: 5%        Ground Roughness: Open country
   Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
   Puddle Area: 0.2 square meters
   Puddle Volume: 2 liters
   Soil Type: Default           Ground Temperature: 68° F
   Initial Puddle Temperature: Ground temperature
   Release Duration: ALOHA limited the duration to 1 hour
   Max Computed Release Rate: 20.1 grams/min
   Max Average Sustained Release Rate: 17.7 grams/min
      (averaged over a minute or more)
   Total Amount Released: 942 grams

FOOTPRINT INFORMATION:
   Model Run: Heavy Gas
   User specified LOC: 5 ppm
   Max Threat Zone for LOC: 73 meters
   Note: Footprint wasn't drawn because effects of
     near-field patchiness make plume presentation
     unreliable for short distances.
```

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.2 square meters
Puddle Volume: 2 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 20.1 grams/min
Max Average Sustained Release Rate: 17.7 grams/min
(averaged over a minute or more)
Total Amount Released: 942 grams

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 11 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: F Air Temperature: 68° F
Relative Humidity: 5% Ground Roughness: Open country
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.2 square meters
Puddle Volume: 2 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 20.1 grams/min
Max Average Sustained Release Rate: 17.7 grams/min
(averaged over a minute or more)
Total Amount Released: 942 grams

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 11 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

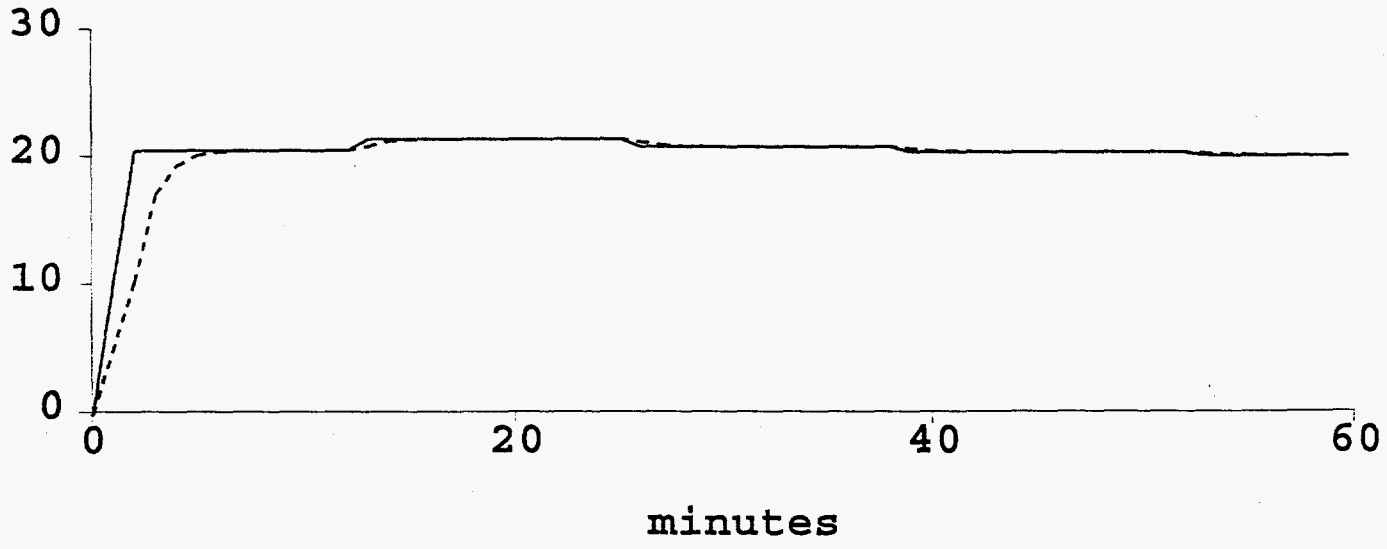
```
 SITE DATA INFORMATION:
  Location: ALBUQUERQUE, NEW MEXICO
  Building Air Exchanges Per Hour: 60 (User specified)
  Date and Time: Fixed at January 1, 1995  0900 hours

CHEMICAL INFORMATION:
  Chemical Name: VINYL ACETATE
  Molecular Weight: 86.09 kg/kmol
  TLV-TWA: 10.00 ppm           IDLH: -unavail-
  Note: Potential or confirmed human carcinogen.
  Footprint Level of Concern: 500 ppm
  Boiling Point: 72.50° C
  Vapor Pressure at Ambient Temperature: 0.12 atm
  Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
  Wind: 1 meters/sec from 0° true
  Inversion Height: 500 meters
  Stability Class: F           Air Temperature: 68° F
  Relative Humidity: 5%        Ground Roughness: Open country
  Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
  Puddle Area: 0.2 square meters
  Puddle Volume: 2 liters
  Soil Type: Default           Ground Temperature: 68° F
  Initial Puddle Temperature: Ground temperature
  Release Duration: ALOHA limited the duration to 1 hour
  Max Computed Release Rate: 20.1 grams/min
  Max Average Sustained Release Rate: 17.7 grams/min
     (averaged over a minute or more)
  Total Amount Released: 943 grams

FOOTPRINT INFORMATION:
  Model Run: Heavy Gas
  User specified LOC: 500 ppm
  Max Threat Zone for LOC: 11 meters
  Note: Footprint wasn't drawn because effects of
    near-field patchiness make plume presentation
    unreliable for short distances.


TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind:       30 meters
  Off Centerline: 0 meters
  Max Concentration:
     Outdoor: 21.4 ppm
     Indoor:  21.4 ppm
  Note: Indoor graph is shown with a dotted line.
```

Concentration Window 2888488898

Chemical Name: VINYL ACETATE
  Note: Potential or confirmed human carcinogen.
Model Run: Heavy Gas
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind: 30 meters
  Off Centerline: 0 meters
  Max Concentration:
    Outdoor: 21.4 ppm
    Indoor: 21.4 ppm
  Note: Indoor graph is shown with a dotted line.

ppm



Release Designation
$C_4H_6O_2$-4

Vinyl Acetate

The release of 2 liters of vinyl acetate due to spilling or partially fracturing the bottles.

2 liters
Average case meteorological conditions

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 5 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.2 square meters
Puddle Volume: 2 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 55 minutes
Max Computed Release Rate: 56.4 grams/min
Max Average Sustained Release Rate: 42.5 grams/min
(averaged over a minute or more)
Total Amount Released: 1.87 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 5 ppm
Max Threat Zone for LOC: 19 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4 meters/sec from 0° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 68° F
Relative Humidity: 25% Ground Roughness: Open country
Cloud Cover: 3 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.2 square meters
Puddle Volume: 2 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 55 minutes
Max Computed Release Rate: 56.4 grams/min
Max Average Sustained Release Rate: 42.5 grams/min
(averaged over a minute or more)
Total Amount Released: 1.87 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 75 ppm
Max Threat Zone for LOC: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

SITE DATA INFORMATION:
Location: ALBUQUERQUE, NEW MEXICO
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at January 1, 1995 0900 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 142,524 ppm or 14.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
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CHEMICAL INFORMATION:
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ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
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SOURCE STRENGTH INFORMATION:
Puddle Area: 0.2 square meters
Puddle Volume: 2 liters
Soil Type: Default Ground Temperature: 68° F
Initial Puddle Temperature: Ground temperature
Release Duration: 55 minutes
Max Computed Release Rate: 56.4 grams/min
Max Average Sustained Release Rate: 42.5 grams/min
(averaged over a minute or more)
Total Amount Released: 1.87 kilograms

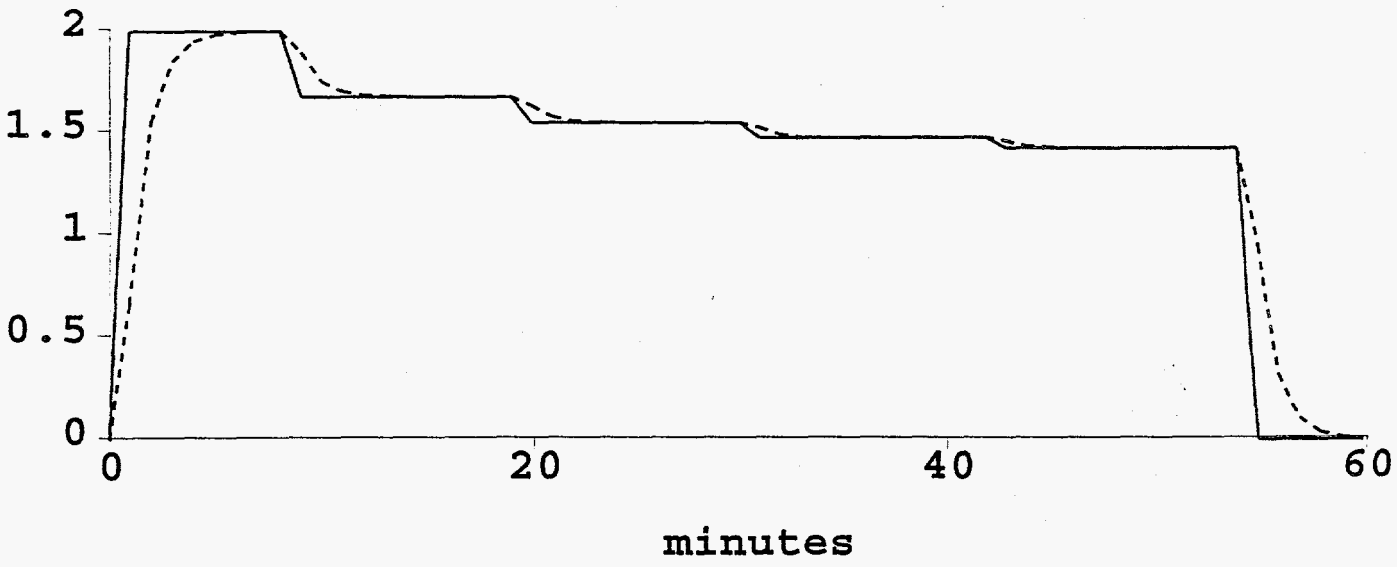
TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.99 ppm
Indoor: 1.99 ppm
Note: Indoor graph is shown with a dotted line.

Concentration Window 2888488937

Chemical Name: VINYL ACETATE
  Note: Potential or confirmed human carcinogen.
Model Run: Gaussian
Building Air Exchanges Per Hour: 60 (User specified)

TIME DEPENDENT INFORMATION:
  Concentration Estimates at the point:
  Downwind: 30 meters
  Off Centerline: 0 meters
  Max Concentration:
    Outdoor: 1.99 ppm
    Indoor: 1.99 ppm
  Note: Indoor graph is shown with a dotted line.

ppm



Appendix C

Calculation Sheets

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of hydrogen fluoride in a 4.73 liter mixture of hydrofluoric acid, 49%

CALCULATION ID: HF-1-2, (release designations for 4.7 liters of hydrofluoric acid, 49%)

REVISION: 0

Prepared by:	Brent Barnett	Brent Barnett	10/5/95
	Signature	Printed Name	Date
Checked by:	Michael Williams	MICHAEL WILLIAMS	10/9/95
	Signature	Printed Name	Date
Approved by:	L.L. Oakes	L.L. Oakes	10/10/95
	Signature	Printed Name	Date

The following equation is used to calculate the quantity of hydrogen fluoride in 4.7 liters of hydrofluoric acid, 49%.

EQUATION 1: $QF = TM \times 49\%$

where: QF= Total quantity of hydrogen fluoride in the mixture

TM= Total quantity of the mixture

QF= 4.7 x 49%= 2.3 liters of hydrogen fluoride

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of hydrogen fluoride in a 2.3 liter mixture of hydrofluoric acid, 49%

CALCULATION ID: HF-3-4, (release designations for 2.3 liters of hydrofluoric acid, 49%)

REVISION: 0

	Signature	Printed Name	Date
Prepared by:	Brent Barnett	Brent Barnett	10/5/95
Checked by:	Michael Williams	MICHAEL WILLIAMS	10/9/95
Approved by:	[signature]	L.L. Oakes	10/10/95

The following equation is used to calculate the quantity of hydrogen fluoride in 2.3 liters of hydrofluoric acid, 49%.

EQUATION 1: QF= TM x 49%

where: QF= Total quantity of hydrogen fluoride in the mixture

TM= Total quantity of the mixture

QF= 2.3 x 49%= 1.15 liters of hydrogen fluoride

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 2.5 liter mixture of nitric acid, 90%

CALCULATION ID: HNO_3-1-2, (release designations for 2.5 liters of nitric acid, 90%)

REVISION: 0

Prepared by:	Brent Barnett Signature	Brent Barnett Printed Name	10/5/95 Date
Checked by:	Michael Williams Signature	MICHAEL WILLIAMS Printed Name	10/9/95 Date
Approved by:	L.L. Oakes Signature	L.L. Oakes Printed Name	10/10/95 Date

---

The following equation is used to calculate the quantity of nitric acid in a 2.5 liter mixture of nitric acid, 90%

EQUATION 1: QF= TM x 90%

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 2.5 x 90%= 2.25 liters of nitric acid

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 1.25 liter mixture of nitric acid, 90%

CALCULATION ID: HNO_3-3-4, (release designations for 1.25 liters of nitric acid, 90%)

REVISION: 0

Prepared by:	Brent Barnett Signature	Brent Barnett Printed Name	10/5/95 Date
Checked by:	Michael Williams Signature	MICHAEL WILLIAMS Printed Name	10/9/95 Date
Approved by:	L.L. Dukes Signature	L.L. Dukes Printed Name	10/10/95 Date

---

The following equation is used to calculate the quantity of nitric acid in a 1.25 liter mixture of nitric acid, 90%

EQUATION 1: QF= TM x 90%

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 1.25 x 90%= 1.13 liters of nitric acid

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 2.5 liter mixture of nitric acid, 69/71%

CALCULATION ID: HNO_3-9-10, (release designations for 2.5 liters of nitric acid, 69/71%)

REVISION: 0

Prepared by:	Brent Barnett Signature	Brent Barnett Printed Name	10/5/95 Date
Checked by:	Michael Williams Signature	MICHAEL WILLIAMS Printed Name	10/9/95 Date
Approved by:	L L Dukes Signature	L. L. Dukes Printed Name	10/10/95 Date

---

The following equation is used to calculate the quantity of nitric acid in a 2.5 liter mixture of nitric acid, 69/71%.

EQUATION 1: QF= TM x 71%

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 2.5 x 71%= 1.77 liters of nitric acid

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 1.25 liter mixture of nitric acid, 69/71%

CALCULATION ID: HNO_3-11-12, (release designations for 1.25 liters of nitric acid, 69/71%)

REVISION: 0

Prepared by:	Brent Barnett	Brent Barnett	10/5/95
	Signature	Printed Name	Date
Checked by:	Michael Williams	MICHAEL WILLIAMS	10/9/95
	Signature	Printed Name	Date
Approved by:	L.L. Dukes	L.L. Dukes	10/10/95
	Signature	Printed Name	Date

The following equation is used to calculate the quantity of nitric acid in a 1.25 liter mixture of nitric acid, 69/71%

EQUATION 1: QF= TM x 71%

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 1.25 x 71%= 0.89 liters of nitric acid

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 1 liter mixture of nitric acid, 90%

CALCULATION ID: HNO_3-13-14, (release designations for 1 liter of nitric acid, 90%)

REVISION: 0

Prepared by:	Brent Barnett Signature	Brent Barnett Printed Name	10/5/95 Date
Checked by:	Michael Williams Signature	MICHAEL WILLIAMS Printed Name	10/9/95 Date
Approved by:	L.L. Dukes Signature	L.L. Dukes Printed Name	10/10/95 Date

---

The following equation is used to calculate the quantity of nitric acid in a 1 liter mixture of nitric acid, 90%

EQUATION 1: QF= TM x 90%

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 1 x 90%= 0.9 liters of nitric acid

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 500 milliliter mixture of nitric acid, 90%

CALCULATION ID: HNO_3-15-16, (release designations for 500 milliliters of nitric acid, 90%)

REVISION: 0

Prepared by:	Brent Barnett Signature	Brent Barnett Printed Name	10/5/95 Date
Checked by:	Michael Williams Signature	MICHAEL WILLIAMS Printed Name	10/9/95 Date
Approved by:	 Signature	L. L. Oakes Printed Name	10/10/95 Date

---

The following equation is used to calculate the quantity of nitric acid in a 500 milliliter mixture of nitric acid, 90%

EQUATION 1: QF= TM x 90%

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 500 x 90%= 0.45 liters of nitric acid

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 500 milliliter mixture of nitric acid, 70%

CALCULATION ID: HNO_3-17-18, (release designations for 500 milliliters of nitric acid, 70%)

REVISION: 0

Prepared by:	Brent Barnett Signature	Brent Barnett Printed Name	10/5/95 Date
Checked by:	Michael Williams Signature	MICHAEL WILLIAMS Printed Name	10/9/95 Date
Approved by:	 Signature	L. L. Oakes Printed Name	10/10/95 Date

---

The following equation is used to calculate the quantity of nitric acid in a 500 milliliter mixture of nitric acid, 70%

EQUATION 1: $QF = TM \times 70\%$

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 500 x 70%= 0.35 liters of nitric acid

CALCULATION SHEET

CALCULATION TITLE: Estimation of the quantity of nitric acid in a 250 milliliter mixture of nitric acid, 70%

CALCULATION ID: HNO_3-19-20, (release designations for 250 milliliters of nitric acid, 70%)

REVISION: 0

Prepared by:	Brent Barnett Signature	Brent Barnett Printed Name	10/5/95 Date
Checked by:	Michael Williams Signature	MICHAEL WILLIAMS Printed Name	10/9/95 Date
Approved by:	[signature] Signature	L. L. Nikes Printed Name	10/10/95 Date

---

The following equation is used to calculate the quantity of nitric acid in a 250 milliliter mixture of nitric acid, 70%

EQUATION 1: QF= TM x 70%

where: QF= Total quantity of nitric acid in the mixture

TM= Total quantity of the mixture

QF= 250 x 70%= 0.18 liters of nitric acid