

Los Alamos

NATIONAL LABORATORY

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Mr. Glenn Saums, Health Program Manager
Surface Water Quality Bureau
New Mexico Environment Dept.
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Santa Fe, New Mexico 87502

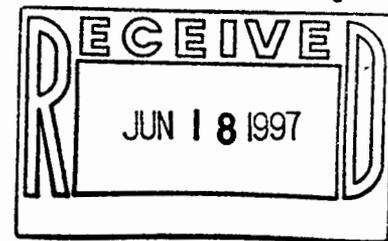


Date: June 18, 1997
In Reply Refer To: ESH-18/WQ&H:97-0179
Mail Stop: K497
Telephone: (505) 665-1859

CC -> Stu Dinwiddie
HRMB

Dale Doremus
GWQB

Note maps are
to large to copy,



please
call
Barbara
Hodtscher
at
7-0596
to review
maps
H

SUBJECT: LANL RESPONSE TO MAY 22, 1997, LETTER FROM THE NEW MEXICO ENVIRONMENT DEPARTMENT, SURFACE WATER QUALITY BUREAU (NMED/SWQB) REGARDING REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. Saums:

This correspondence is in response to your letter dated May 22, 1997, requesting additional information on the Notice of Intent (NOI) for Discharge of Potable Water for Decontamination of Tools and Personal Protective Equipment at Environmental Restoration Interim Action Activities Sites at Los Alamos National Laboratory. The following information is provided in order to address your concerns as outlined in your letter (Copy enclosed).

(1) Contaminants may consist of Depleted Uranium (DU) and other types of debris such as shrapnel from these ER sites. Very little quantitative data is available at this time. The best source for information concerning existing data can be found in the Resource Conservation and Recovery Act, Facility Investigation Documents (RFI's) prepared by the Environmental Restoration Group at Los Alamos National Laboratory. The following is a list of RFI documents and associated map plot numbers pertaining to the areas referenced for the NOI in question.

- RFI for Operable Unit 1086 covers the TA-15 locations. Map Plot ID G101769
- RFI for Operable Unit 1130 covers the TA-36 locations. Map Plot ID G101871
- RFI for Operable Unit 1100 covers the TA-53 area. Map Plot ID G101775

Also included are the executive summaries for each Technical Area listed as taken from the referenced RFI documents.



TA15

TC

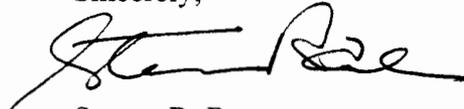
(2) Paragraph 2 of the NOI should read:

“These de-minimus discharges will be attributable to decontamination of tools and PPE. These tools and PPE are to be used to pick up visible surface contamination in order to prepare each site for the installation of Best Management Practices (BMP's). BMP's are being placed at these sites in order to impede any possible surface transport of suspected contaminants from the area”.

(3) Enclosed are maps which detail topography and location of the PRS sites listed. All discharges will occur on the SWMU or PRS and will not be discharged into a watercourse or in a manner which may impact a watercourse. BMP's utilized may consist of various methods of controlling run-off and will be developed for each location as needed.

Please call Harvey Decker (665-2014) or Steve Veenis (665-9735) of the Laboratories Water Quality and Hydrology Group (ESH-18) if you need any additional information.

Sincerely,



Steven R. Rae
Water Quality and Hydrology Group

Attach: a/s

SR:HD/tp

Cy: S. Yanicak, NMED DOE OB, w/o att., MS J993
F. Sisneros, ESH/DX, w/o att., MS K999
G. Gould, ER, Field Unit 2, FPL, w/o att., MS G787
R. Michelotti, ER, Field Unit 3, FPL, w/o att., MS E525
J. Graham, ESH/AOT, w/o att., MS H814
D. Erickson, ESH Division Director, w/o att., MS K491
C. Jacquez, ESH-18, w/att., MS K497
M. Saladen, ESH-18, w/att., MS K497
M. Alexander, ESH-18, w/att., MS K497
S. Veenis, ESH-18, w/att., MS K497
H. Decker, ESH-18, w/att., MS K497
WQ&H File, w/o att., MS K497
CIC-10, w/o att., MS A150



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GOVERNOR

May 22, 1997

Mr. Steve R. Rae, Group Leader
Water Quality and Hydrology Group (ESH-18)
Mail Stop K497
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Re: ESH-18/WQ&H:97-0153 -- NOTICE OF INTENT TO DISCHARGE (NOI). POTABLE WATER FOR DECONTAMINATION OF TOOLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE) AT ENVIRONMENTAL RESTORATION (ER), INTERIM ACTION ACTIVITIES AT LOS ALAMOS NATIONAL LABORATORY

Dear Mr. Rae:

This office is in receipt of the referenced NOI. It is noted that a courtesy copy was not provided to the NMED Hazardous and Radioactive Materials Bureau (HRMB). Since decontamination wastes may be regulated under RCRA, I have forwarded a copy of your notice to HRMB. This letter only represents the Surface Water Quality Bureau's response. The Ground Water Quality Bureau and HRMB may respond under separate cover.

Key information is missing from your 17 page submittal. Please address the following:

- 1) the pollutants/materials rinsed off the equipment are not qualitatively or quantitatively described. LANL has only provided characterization of the rinse water prior to contacting the equipment and being discharged. What pollutants may be rinsed off the equipment?
- 2) it is unclear as to whether discharges will occur in or near watercourses. The NOI contains conflicting statements regarding possible runoff to surface water. Paragraph 3 of the NOI states "... there are no storm-water conveyances on-site ..." but paragraph 2 states "... discharges ... will result from procedures such as placing Storm Water run-on/off BMP's (sic)." If there are no storm water conveyances, why will there be discharges from storm water BMP placement? In light of the aforementioned conflict, the final sentence of paragraph 3, which states: "[n]o liquid will be discharged in a manner that will impact a water course (sic)", does not assure us; and
- 3) while there are several large scale maps of the firing sites which are involved in this project, no information is given as to where the proposed discharges will actually occur. Will the washdown occur at designated sites, if so where? How will these sites be related to surface watercourses? What kind of BMPs will be utilized to prevent surface water contamination?

If you have any questions, please contact me at (505) 827-2827.

Sincerely,

Glenn E. Saums
Health Program Manager
Point Source Regulation Section
Surface Water Quality Bureau

cc: Marcy Leavitt, Chief, NMED GWQB
Robert "Stu" Dinwiddie, NMED HRMB
John Parker, Chief, NMED DOEOB

Background

TA-20 was used by the Laboratory during the Manhattan Project beginning in 1944. This site was used to perform tests related to the development of initiators (devices used to generate neutrons needed to initiate nuclear chain reactions). These tests utilized high explosives and small amounts of radioactive and hazardous materials. Following World War II, the firing sites at TA-20 were occasionally used to conduct various explosives tests. All experimental operations at TA-20 ceased in 1948, at which time the access road to TA-20 was extended to provide access to Los Alamos. In anticipation of public access to TA-20, extensive cleanup operations were undertaken in 1948 to remove contaminated structures and materials.

TA-53 is the location of the Los Alamos Meson Physics Facility (LAMPF), a 0.5-mile-long proton accelerator and associated experimental and support facilities used for research with subatomic particles. Construction of LAMPF began in 1967 and LAMPF became fully operational in 1974. TA-53 has expanded considerably since initial operations began. Major facilities added during this period include the Los Alamos Neutron Scattering Center and the Ground Test Accelerator.

TA-72 is primarily a land reserve, but does include the small-arms firing range used by the Laboratory's security force and two municipal supply wells. The firing range has been active since 1966 and includes several structures associated with former TA-20.

The area comprising OU 1100 includes the Mesita de los Alamos and portions of adjacent Sandia and Los Alamos canyons. TA-53 is located on the mesita and TAs-20 and -72 are located in Sandia Canyon. The entire operable unit is underlain by volcanic deposits comprising the Bandelier Tuff. The tuff outcrops throughout the sides of the canyons that are nearly vertical, and the floors of the canyons are filled with alluvial material derived from the Bandelier Tuff and older formations. An ephemeral stream is located in Sandia Canyon. Flow upstream of OU 1100 is due primarily to effluent discharges from TA-3. An alluvial groundwater body is suspected in upper Sandia Canyon, though its presence has not been confirmed. An alluvial groundwater body does exist in Los Alamos Canyon. The piezometric surface of the main aquifer lies at a depth of approximately 1,000 ft below the Mesita de los Alamos and approximately 700 ft below Sandia Canyon. Intermediate deep perched groundwater was detected above the main aquifer in wells located in Sandia and Los Alamos canyons. It is not known if there is a hydraulic connection between the shallow and deep groundwater bodies.

The PRSs in OU 1100 consist of inactive landfills, inactive firing sites, waste and chemical product storage areas, underground storage tanks, septic systems, and surface impoundments. Many of the inactive PRSs, such as the firing sites used in the 1940s, have been entirely decommissioned and subjected to previous cleanup efforts. Some PRSs, such as underground waste storage tanks at LAMPF, are active and will remain so for the foreseeable future. Former releases at some PRSs, such as leaks from polychlorinated biphenyl (PCB) transformers, were cleaned up at the time of the release.

Former investigations to characterize levels of potential contaminants associated with environmental releases within OU 1100 are limited and consist primarily of investigations related to the surface impoundments at TA-53. These investigations have detected the presence of tritium in the vadose zone in the vicinity of the impoundments. Information concerning potential contamination at other PRSs is limited to archival data. Many PRSs are being proposed for no further action (NFA) on the basis of archival data. Other PRSs in this operable unit require some field investigations before determining if an NFA is appropriate. Some active PRSs that do not currently pose a risk have been proposed for deferred action.

Technical Approach

For the purposes of designing and/or implementing the sampling and analysis plans described in this work plan, most PRSs are grouped into aggregates, although selected PRSs are investigated individually as necessary. This work plan presents the description and operating history of each PRS or aggregate, together with an evaluation of the existing data, if any, in order to develop a preliminary conceptual exposure model for the site. For some PRSs, NFA or deferred action can be proposed on the basis of this review; these PRSs are discussed in Chapter 6. The remaining PRSs, for which RFI field work is proposed, are discussed in Chapter 5.

The technical approach to field sampling is primarily designed to establish the presence or absence of hazardous and/or radioactive constituents at concentrations of concern. Concentrations of concern are levels of constituents in environmental samples that exceed the screening action levels as defined in the IWP. A phased approach to the RFI is used to ensure that any environmental impacts associated with past and present activities are investigated in a manner that is both cost-effective and complies with the HSWA Module. This phased approach permits intermediate data evaluation, with opportunities for additional sampling, if required.

For most PRSs in OU 1100, there are no existing data and little or no historical evidence that a release has occurred. For these, the Phase I sampling strategy for OU 1100 will focus on determining the presence or absence of hazardous and/or radioactive constituents. If constituents are detected at concentrations above conservative screening action levels, a baseline risk assessment may be required, or a voluntary corrective action (VCA) may be proposed. If conducted, the baseline risk assessment will be used to determine the need for corrective action. If the data collected during Phase I are not sufficient to support a baseline risk assessment, but indicate the presence of hazardous and/or radioactive constituents above screening action levels, additional RFI Phase II sampling will be undertaken to characterize in more detail the nature and extent of the release if a VCA is not proposed.

The surface impoundments at TA-53 are active RCRA-regulated waste management units. Deferred action is proposed for these PRSs because the impoundments are subject to RCRA closure requirements for mixed waste surface impoundments. Specific technical requirements for closure are currently being developed for these impoundments. A closure plan has been submitted to the New Mexico Environment Department and is currently under review.

This work plan addresses PRSs that may contain radioactive materials and hazardous substances not subject to RCRA regulations. Sites that potentially contain only non-RCRA materials are called areas of concern (AOCs). The term PRS is the inclusive term for both SWMUs and AOCs. It is understood that the language in this work plan pertaining to subjects outside the scope of RCRA is not applicable to the Laboratory's operating permit.

Background

TA-36 is an active unit that has been used for explosives detonation testing since it was established in the late 1940s. TAs -68 and -71 are considered buffer areas and have not been used for Laboratory operations. They are not SWMUs, but they may receive firing site debris, particularly TA-68.

OU 1130 borders TA-15 on the northwest. To the northeast, it is bounded by TA-18 and Pajarito Road. On the south and east, it extends past State Road 4 and borders the community of White Rock. It also shares the boundary with TA-39 to the west. OU 1130 straddles Potrillo Canyon, and is bounded to the north by Pajarito Canyon and to the south by Water Canyon. Topography is rugged, characterized by narrow mesa tops separated by long, narrow canyons. The differences in elevation range from 100 ft to approximately 1,510 ft between the mesas and the canyons. The entire OU is underlain by volcanic deposits comprising the Bandelier Tuff, which outcrops along the sides of the nearly vertical canyon walls. Precipitation or snowmelt causes ephemeral streamflow in Potrillo, Pajarito, Fence, and Water Canyons and their respective tributaries. There is no evidence that this water enters the deep groundwater aquifer.

There are 24 PRSs identified at OU 1130. They are all at TA-36 and include six SWMUs that are listed in the HSWA Module. The SWMUs listed in the HSWA Module consist of a material disposal area [36-001], a sump (36-002), three septic systems [36-003(a), 36-003(b), and 36-003(c)], and a boneyard (surface storage area for large waste items) (36-005). The other PRSs include five active firing sites, a surface disposal area, a septic system, several satellite storage areas, a portable chamber used for confining shots, and a bazooka impact area. The chamber used for confining shots has been subjected to previous

decontamination activities. The potential contaminants of concern include depleted uranium, mercury, lead, beryllium, chromium, barium, other metals, explosives, and organic compounds.

Previous investigations have included surface radiological surveys, soil sampling at various sites, and a study of uranium transport in the Potrillo watershed, which is the drainage area for most of the firing sites. Ten PRSs have been identified as requiring no further action (NFA). The NFAs include six satellite storage areas, two septic systems, a magazine, and a surface disposal area.

Technical Approach

For the purposes of designing and/or implementing the sampling and analysis plans described in this work plan, a few PRSs (e.g., the active firing sites) are grouped into aggregates. Most of the PRSs, however, are investigated individually as necessary. This work plan presents the description and operating history of each PRS or aggregate, together with an evaluation of the existing data (if any), to develop a preliminary conceptual exposure model for the site. On the basis of this review, NFA was proposed for ten sites; these sites are discussed in Chapter 6. The units that are proposed for NFA consist of septic systems [36-003(c) and 36-003(d)], Moe magazine 36-004(f), satellite storage areas [36-007(a), 36-007(b), 36-007(c), 36-007(d), 36-007(e) and 36-007(f)], and the surface disposal area (C-36-002). For active sites, this review is sufficient to determine that investigation and remediation (if required) may be deferred until the site is decommissioned; these sites are discussed in Section 5.4. The remaining sites for which RFI field work and/or voluntary corrective actions are proposed are also discussed in Chapter 5.

The technical approach to field sampling followed in this work plan is designed to refine the conceptual exposure models for the PRSs or aggregates to a level of detail sufficient for baseline risk assessment and the evaluation of remedial alternatives (including voluntary corrective actions). A phased approach to the RFI is used to ensure that any environmental impacts associated with past and present activities are investigated in a manner that is cost-effective and that

complies with the HSWA Module. This phased approach permits intermediate data evaluation with opportunities for additional sampling, if required.

For PRSs in which there are insufficient data and little or no historical evidence that a release may have occurred, the Phase I sampling strategy will consist of reconnaissance sampling of the areas most likely to have been contaminated to find possible release sites. If hazardous or radioactive contaminants are detected at concentrations above screening action levels, it may be necessary to perform a baseline risk assessment or a CMS to assess the need for further corrective action, or a voluntary corrective action may be proposed. If conducted, the baseline risk assessment will be used to determine the need for further corrective action. If the data collected during Phase I are insufficient to support a baseline risk assessment, additional RFI Phase II sampling will be undertaken to characterize the nature and extent of the release in more detail.

For some PRSs in OU 1130, there are existing data and/or strong historical evidence to support the hypothesis that a release has occurred. In these cases, the existing information has been evaluated to determine whether it is sufficient to support a baseline risk assessment and/or the evaluation of remedial alternatives. If the evidence or data are found to be insufficient, more data will be collected as part of the Phase I investigation to refine the site conceptual exposure model; however, the pathways and human receptors components will not be evaluated during the Phase I investigation.

Data quality objectives, developed for the RFI Phase I sampling and analysis plans, provide means of assuring that the right type, amount, and quality of data are collected. Field work for many sites includes field surveys, and field mobile laboratory screening of samples on which the selection of samples for laboratory analysis will be based. Sample analyses will be performed primarily in fixed analytical laboratories.

The body of the text in this work plan is followed by five annexes that consist of project plans that correspond to the five program plans listed in the IWP: project management, quality assurance, health and safety, records management, and community relations.

E.3 Background

Landfills, experimental releases from laboratories septic systems, and outfalls are the main types of PRSs, in addition to active and inactive firing sites that are located within OU 1086. Of these, the firing sites are of the greatest concern to potential receptors because they comprise surface PRSs with significant contaminant inventories.

Receptors who are at risk potentially are the current and future occupational workers and future users if the land reverts to the public domain. The most important pathways of contaminants to these receptors are airborne resuspension of hazardous materials and radiation from radioactive materials within the PRSs.

Technical Area-15, also known as R-Site, occupies a portion of Three-Mile Mesa on Pajarito Mesa near the southwestern boundary of the Laboratory. Technical Area-15 occupies approximately 1200 acres. Its boundaries are defined by TA-66 and TA-67 to the north; TA-14, TA-16, TA-37, and TA-49 to the west and south; and TA-36 to the east. Figure EXEC-1 shows the regional location of the Laboratory and Figure EXEC-2 shows the location of TA-15 with respect to other Laboratory TAs, as well as public and private properties surrounding the Laboratory. Figure EXEC-3 identifies the location of PRSs and other salient site features and Figure EXEC-4 identifies the buildings at TA-15. The PRSs are indicated on Figure EXEC-3 by their SWMU or AOC (C) number and are classified both geographically, (10 areas, depending on location) and numerically (depending on the nature of the SWMU). Table EXEC-1 lists the PRSs geographically.

The key to the numerical designation is given below:

001	Storage area
002	Pit
003	Open detonation
004	Inactive firing site
005	Container storage area
006	Active firing site
007	Landfill
008	Surface disposal
009	Active septic system
010	Inactive septic system
011	Sump
012	Operational release
013	Underground tank
014	Outfall

Much of TA-15 has been used from the mid-1940s to the present time for explosives experiments. In that capacity, test explosions ranging from a few kilograms of high explosive to as much as 650 kg were conducted in arrangements that duplicate many of the components of a nuclear weapon, with the exception of the fissionable materials. These components sometimes

contained multi-kilogram quantities of natural uranium metal, depleted uranium metal, and lesser quantities of beryllium and other metals. In most cases, the tests were carried out aboveground, which resulted in the test materials being scattered over areas with radii up to several hundreds of meters. Based on Laboratory records, some 75 metric tons of natural and depleted uranium have been expended at the firing sites on TA-15 since the mid-1940s.

E.4 Technical Approach

For the purposes of describing and implementing the sampling and analysis plans described in this work plan, most PRSs are grouped into aggregates. This work plan presents the description and operating history of each PRS and aggregates, together with an evaluation of the existing data, if any, in order to develop a preliminary conceptual exposure model for the site. For some sites, no further action can be proposed on the basis of this review; these sites are discussed in Chapter 5. For other sites, this review is sufficient to determine that investigation and remediation (if required) may be deferred until the site is decommissioned; these sites are discussed in Chapter 6. The remaining sites, for which RFI work is proposed, are discussed in Chapters 7 through 10.

The technical approach to field sampling followed in this work plan is designed to refine the conceptual exposure models for the PRSs and aggregates to a level of detail sufficient for preliminary risk assessment and the evaluation of remedial alternatives (including voluntary corrective actions). A phased approach to the RFI is used to ensure that any environmental impacts associated with past and present activities are investigated in a manner that is both cost-effective and complies with the HSWA Module. This phased approach permits intermediate data evaluation, with opportunities for additional sampling, if required.

For PRSs for which there is no existing data and little or no historical evidence that a release has occurred, the Phase I sampling strategy for OU 1086 will focus on determining the presence or absence of hazardous and radioactive contaminants. If contaminants are detected at concentrations above screening action levels (SALs) based on a screening assessment, a voluntary corrective action (VCA) may be proposed. The goal of screening assessments is to identify contaminants of concern (COCs) that is, constituents whose concentration levels in one or more environmental media are above a level of concern defined by media-specific SALs. Although the derivation of SALs is frequently based on risk calculations, these calculations use very conservative assumptions. Baseline risk assessments, on the other hand, use site-specific land-use scenarios and exposure assumptions for the individual with reasonable maximum exposure to estimate the risks associated with the observed contaminants of concern (COCs). If the data collected during Phase I are insufficient to support a VCA based on screening assessment, additional RFI Phase II sampling will be undertaken to characterize in more detail the nature and extent of the release, and to provide data for baseline risk assessments and corrective measure studies.

For some PRSs in OU 1086, it is known that a release has occurred. In these cases, the existing information has been evaluated to compare it to the SALs as they are developed and/or the evaluation of remedial alternatives, which would

be utilized in a VCA. Phase I investigation for these sites will collect data as required to identify the presence of COCs and to refine the site conceptual exposure model for these purposes.

Data quality objectives to support the required decisions are developed for RFI Phase I sampling and analysis plans described in this work plan to ensure that the right type, amount, and quality of data are collected. Field work for many sites includes field surveys and field screening of samples on which the selection of samples for laboratory analysis will be based. Laboratory analyses will be performed in mobile and fixed analytical laboratories. Quality assurance samples will constitute an additional body of samples to those being submitted for analysis in fixed analytical laboratories. Table EXEC-2 shows a summary of all sampling plans for OU 1086. It presents an estimate of the total number of field screening analyses and laboratory analyses (the latter being subject to wide changes from initial estimates depending on the field screening analyses).

The body of the text in this work plan is followed by five annexes, which consist of project plans corresponding to the program plans in the IWP: project management, quality assurance, health and safety, records management, and public involvement.

In addition to the annexes, there are also 9 appendices which provide ancillary information for OU 1086. These include maps (site and soils), field and laboratory investigation methods, engineering drawings, National Environmental Policy Act (NEPA) documentation, health risk assessment for PHERMEX, radiological survey methods, aerial radiological survey and a list of work plan contributors.

E.5 Schedule, Costs, and Reports

The RFI field work described in this document requires 3 yr. (Figure EXEC-5) to complete Phase I: two years for field work and one year for completing laboratory analysis, evaluation and phased reports, (Figure EXEC-6). A single phase of field work is expected to be sufficient to complete the RFI for most PRSs. However, a second phase will occur if warranted by the results of the first phase, in which case the field work probably will take longer than 5 yr (Phase I and Phase II) to complete.

Cost and scheduling estimates for baseline activities for OU 1086 are provided in Figure EXEC-7. The total estimated cost for the corrective action process at OU 1086 is approximately \$24.8 million (without escalation).

At the conclusion of the RFI, a final RFI report will be submitted to the EPA.

E.6 Public Involvement

Regulations issued pursuant to HSWA mandate public involvement in the corrective action process. In addition, the Laboratory is providing a variety of opportunities for public involvement, including meetings held as needed to disseminate information, to discuss significant milestones, and to solicit informal public review of this and the other draft work plans. The Laboratory also

TABLE EXEC-1

**LOCATION of TA-15 POTENTIAL RELEASE SITES
(Total of 66* SWMUs and 13 AOCS)**

LOCATION	SWMU/AOC NO.	DESCRIPTION
<u>Office Buildings, R - 40 and R - 183</u>		
R - 40	15 - 002	Pit
	15 - 007(a)	Landfill
	15 - 008(d)	Surface disposal
	15 - 009(d)	Active septic system
	15 - 010(a), (b)	Inactive septic system
	15 - 014(h)	Outfall
	C - 15 - 005, C - 15 - 006	Site of removed building
	C - 15 - 009	Site of removed tank
R - 183	15 - 004(b), (c)	Inactive firing sites
	15 - 005(b)	Container storage area
	15 - 008(e)	Surface disposal
	15 - 009(f), (k), (j)	Active septic system
	15 - 012(b)	Operational release
	15 - 014(a), (b), (c)	Outfall
	C - 15 - 002	Contaminated soil
<u>Laboratory Complex</u>		
The Hollow	15 - 005(a), (d)	Container storage area
	15 - 009(a)	Active septic system
	15 - 011(a), (b), (c)	Sump
	15 - 014(g), (i), (j), (k)	Outfall
	C - 15 - 007	Stained oil
	C - 15 - 008	Site of clear liquid
	C - 15 - 010	Site of removed inactive tank
<u>Inactive Firing Sites</u>		
Firing Site C (R-41)	15 - 004(a), (d), (e)	Inactive firing sites
	15 - 005(c)	Container storage area
E-F Site	15 - 004(f)	Inactive firing sites
	15 - 008(a)	Surface disposal
	15 - 009(e)	Active septic system
	C - 15 - 004	Site of removed transformer station
Firing Site G	15 - 001	Storage area
	15 - 004(g)	Inactive firing site
	15 - 007(b)	Landfill
	15 - 008(c)	Surface disposal
	15 - 009(i)	Active septic system
	C - 15 - 001	Soil pile

TABLE EXEC-1

LOCATION OF TA-15 POTENTIAL RELEASE SITES (cont.)
(Total of 66* SWMUs and 13 AOC)

LOCATION	SUMU/AOC NO.	DESCRIPTION
Active Firing Sites		
PHERMEX	15 - 003	Burn pad
	15 - 004 (h)	Inactive firing Site
	15 - 006 (a)	Active firing site
	15 - 009 (g)	Active firing site
	15 - 010 (c)	Inactive septic system
	15 - 013 (a), (b)	Underground tank
	15 - 014 (e), (d), (l)	Outfall
	C - 15 - 011	Inactive underground storage tank (UST)
	C - 15 - 012	Active (UST)
	C - 15 - 013	Inactive (UST)
Ector	15 - 006 (b)	Active firing sites
	15 - 009 (h)	Active septic system
	15 - 014 (m)	Outfall
R - 44	15 - 006 (c)	Active firing site
	15 - 008 (b)	Surface disposal
	15 - 009 (c)	Active septic system
R - 45	15 - 006 (d)	Active firing site
	15 - 007 (c), (d)	Landfill
	15 - 008 (g)	Surface disposal
	15 - 009 (b)	Active septic system
	15 - 014 (f)	Outfall
	C - 15 - 003	Black granular material

*of these 66 SWMUs, four are not shown: 15 - 006 (e) and 15 - 008 (f) were transferred to TA - 36, 15 - 004 (i) and 15 - 012 (a) were never located