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Evaluation of Nevada Test Site Ground Motion and Rock Property Data to Bound Ground Motions at the Yucca Mountain Repository

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March 17, 2005

This work was performed under the auspices of the U.S. Department of Energy by University of California, Lawrence Livermore National Laboratory under Contract W-7405-Eng-48.

Final Report for LDRD Exploratory Project on

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Tracking Code: 04-FS-029

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Yucca Mountain Project
Lawrence Livermore National Laboratory

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Background

Yucca Mountain licensing will require estimation of ground motions from probabilistic seismic hazard analyses (PSHA) with annual probabilities of exceedance on the order of 10^{-6} to 10^{-7} per year or smaller, which correspond to much longer earthquake return periods than most previous PSHA studies. These long return periods for the Yucca Mountain PSHA result in estimates of ground motion that are extremely high (~10 g) and that are believed to be physically unrealizable. However, there is at present no generally accepted method to bound ground motions either by showing that the physical properties of materials cannot maintain such extreme motions, or the energy release by the source for such large motions is physically impossible.

The purpose of this feasibility study is to examine recorded ground motion and rock property data from nuclear explosions to determine its usefulness for studying the ground motion from extreme earthquakes. Our premise is that nuclear explosions are an extreme energy density source, and that the recorded ground motion will provide useful information about the limits of ground motion from extreme earthquakes. The data were categorized by the source and rock properties, and evaluated as to what extent non-linearity in the material has affected the recordings. We also compiled existing results of non-linear dynamic modeling of the explosions carried out by LLNL and other institutions. We conducted an extensive literature review to outline current understanding of extreme ground motion. We also analyzed the data in terms of estimating maximum ground motions at Yucca Mountain.

Compilation of Nuclear Explosion Data

Strong ground motions were routinely recorded for many nuclear tests conducted at the Nevada Test Site (NTS). In addition to routine surface monitoring within 1 km of ground-zero, monitoring included more extensive strong- and weak-motion surface arrays and borehole-emplaced sensors for selected shots. The recordings span ground motions ranging from ~0.01 g to tens of g. Both raw and processed data collected for LLNL, LANL and Defense Nuclear Agency (DNA) tests have been gathered into archives at the respective laboratories (Sandia in the case of DNA tests). The strong motion data, together with rock properties (P-wave velocities, densities, moduli, porosities, etc) collected by coring and logging the emplacement hole for every test, have been used at LLNL and elsewhere to constrain finite difference modeling of wave propagation from selected explosions. These models include rock fracture and crushing under dynamic loading and the resulting non-linear wave propagation behavior in rock types similar to those at Yucca Mountain. Appendices 2 and 3 provide documentation of test data appropriate for ground motion studies.

Analysis of Nuclear Explosion Data

We evaluate whether the data available has been recorded in the linear-elastic or nonlinear regime near a nuclear explosion in Appendix 1. This is determined by examining the decay rate of the amplitude of recorded arrivals to determine whether they diminish due to geometrical spreading and attenuation, or whether rock non-linearities occur that affect the amplitude. If the waves are not elastic, then we determine their decay rate and decide whether extreme ground motions near a source propagate significantly far enough to be meaningful for earthquake hazard studies. We conducted an extensive literature review to see what has been done previously to describe the material response to nuclear explosions, and describe the cause of non-linearity. We also examined the theoretical relationship between failure in rock due to compressional loading and failure due to shear loading. Rock under confining stress (i.e. at depth) fail in shear under compressional loading. Rock subjected to shear also fail in shear. Finite difference modeling of NTS shots by John Rambo (LLNL, personal communication) confirms from his finite difference modeling that rock damage surrounding nuclear tests result in deformation adding to non-linear behavior usually results from shear failure under the first compressional arrival, and this may have relevance to non-linearity in shear waves. We also analyzed the data in terms of estimating maximum ground motions at Yucca Mountain due to shear waves based on observed rock damage, and constraining the form of modulus reduction curves at large strains.

Conclusion of Feasibility Study

The vast amount of ground motion data recorded during the U.S. underground nuclear testing program provides unique insights into material response and wave propagation and attenuation within the near-source regions of seismic events as large as ~M6. These regions extend from the zone of intense macroscopic damage and highly non-linear

behavior under high strain and strain rate loading close to the detonation point through the transition to elastic wave propagation to the response of the free-surface, where material response again becomes non-linear owing to spalling under tensional failure. Much of this data set, together with instrument calibrations and material properties, is available to researchers through the archiving efforts at LLNL, LANL and SNL and will be useful to study extreme earthquakes.

There appears to be sufficient similarity in the damage and subsequent attenuation mechanisms produced by the two types of sources that it is likely that free-field recordings can provide important information to characterize highly non-linear energy dissipation mechanisms in the immediate source vicinity that limit extreme ground motions, and the transition through weak non-linearity to elastic wave propagation.

LIST OF APPENDICES

Appendix 1
Extreme Ground Motion Recorded in the Near-source Region of Underground Nuclear Explosions

William Foxall

Appendix 2
(Attached as excel spreadsheet)

Jeff Wagoner

This spreadsheet shows the status of strong ground motion measurements for LLNL nuclear explosion events. Most of this information is from the containment library (T1406 Room 1110).

Appendix 3A
Memorandum for Excel Spread Sheet

John Rambo

Appendix 3B
(Attached as excel spreadsheet)

John Rambo

This spreadsheet shows the existence of free field ground motion data and the inclusion of some containment diagnostics. The information is stored in the LLNL DNT Containment Program Libraries. To access data see Gayle Pawloski or John Rambo.

Appendix 1

Extreme Ground Motion Recorded in the Near-source Region of Underground Nuclear Explosions

William Foxall

EXTREME GROUND MOTION RECORDED IN THE NEAR-SOURCE REGION OF UNDERGROUND NUCLEAR EXPLOSIONS

Bill Foxall
Lawrence Livermore National Laboratory

Introduction

Free-field recordings of underground nuclear explosions constitute a unique data set within the near-source region of seismic events ranging in magnitude from M3 to M6.5. The term "free-field" in this context refers to recordings from instruments emplaced in boreholes or tunnel walls such that the initial portions of the records (~0.1 to 1 second) do not contain effects resulting from reflections at the free surface. In addition to the free-field instruments deployed to record ground motions from selected underground nuclear explosions at the Nevada Test Site (NTS) and elsewhere, surface arrays were routinely deployed to record surface accelerations and velocities from underground nuclear tests conducted at NTS.

Underground explosions are quite different from earthquakes in that they are compressional rather than shear seismic sources, have a much higher energy density, and are detonated much closer to the surface - generally on the order of 1 km or less - than typical earthquake focal depths. The loading and failure mechanisms in the surrounding materials are therefore fundamentally different. However, there appears to be sufficient similarity in the damage and subsequent attenuation mechanisms produced by the two types of sources that it is likely that free-field recordings can provide important information to characterize highly non-linear energy dissipation mechanisms in the immediate source vicinity that limit extreme ground motions, and the transition through weak non-linearity to elastic wave propagation. The data also hold the potential of constraining the mechanical properties of materials analogous to those at Yucca Mountain under high strain loading. Furthermore, both free-field and surface recordings are a rich source of information on near-surface spall produced by explosions, which can be used to calibrate field observations that J. Brune has proposed as a potential means of placing limits on ground motions from earthquakes.

In this paper we provide an overview of the types of data recorded during the U.S. underground nuclear testing program and their availability, and briefly discuss potential uses of the data in investigating the limits on ground motions generated by earthquakes.

Instrument Arrays

The vast majority of the U.S. underground nuclear tests carried out between the mid-1950s and the end of testing in 1992 took place within three main areas at NTS, Yucca Flat, Pahute Mesa and Rainier Mesa. Detonation points of tests under Yucca Flat were in various tuff units or in the thick overlying alluvium section. Tests under Pahute Mesa and Rainier Mesa were detonated in tuffs, and were recorded on tuff and/or in thin

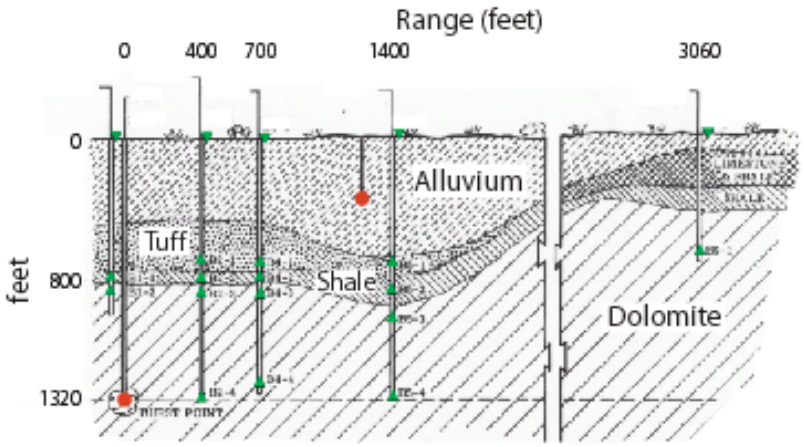
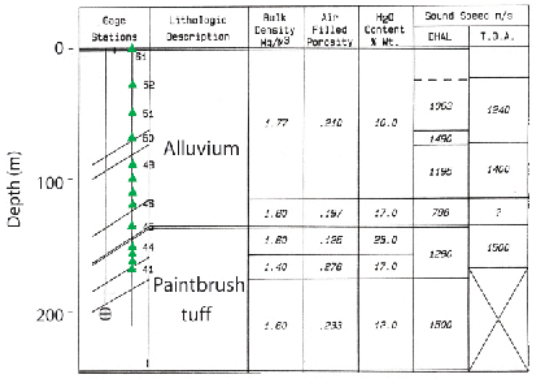


***Figure 1**: Surface and subsurface arrays (green) deployed for the HANDCAR_MUDPACK shots (red)*

superficial alluvium layers. The mechanical properties of shot point tuffs vary over a wide range, but include densely welded materials such as the Rainier Mesa member analogous to materials at repository depth at Yucca Mountain. Elaborate free-field and surface arrays of accelerometers and velocity sensors were deployed for several of the earlier (pre 1974) events conducted as weapons tests or as part of the Plowshare program (peaceful uses), or for non-proliferation experiments. For example, Figure 1 shows the array deployed for the 1964 HANDCAR-MUDPACK events. A more typical layout consisted of a string of accelerometers and/or velocity sensors deployed in a single borehole offset 10-30 m from the device emplacement hole, as shown in Figure 2. Lawrence Livermore National Laboratory (LLNL), for example, deployed such arrays on average once per year from 1978 onwards with the specific objective of calibrating dynamic models of wave propagation and material response conducted for containment purposes. The surface arrays routinely deployed by LLNL, LANL and Sandia (SNL) generally recorded strong ground motions within surface ranges ~1 km or less from surface ground zero, but extended to regional distances for certain special studies.

Data Availability

We have compiled spread sheets of events for which we know free-field and/or surface ground motion exist [Appendices 2 and 3]. These include tests carried out by all agencies involved in the test program, including LLNL, LANL, and the Department of Defense (DOD). Most of the ground motion data are held by LLNL, LANL and SNL. Of the 381 events presently in the spread sheet, 169 have free-field data, 164 surface data, and 44 ground motion data from containment plugs in the emplacement hole. The LLNL containment program archive includes CDs of digital ground motion data for 189 NTS events between 1977 and 1992. LANL maintain a computerized data base that contains ground motion data for about 150 NTS events, including digitized analog data (App, 1994). The waveform data in both of these archives are unclassified and are available as ASCII or LLNL Seismic Analysis Code (SAC) files. (The yields of most of the tests remain classified.) In addition to the waveforms themselves, instrument calibrations are included in the archives, at least for the mid-1970s onwards. *In situ* geologic and material property data routinely compiled from the logs for every test emplacement hole are available either as printed reports or computer files. Material properties routinely compiled include P-wave velocity, bulk density and porosity, and water saturations for each lithologic unit. Other material property data were determined for specific units from



laboratory tests. SNL are in the process of compiling a data base for 17 Rainier Mesa tunnel shots, which includes raw ground motion waveforms in ASCII format and associated calibration and other metadata. We have also located an archive of paper analog records at the DOE Nevada Operations Office in Las Vegas. These are presumably from early tests, but we have not yet examined the record catalogs in detail.

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Overview of the Explosion Source

In order to describe the characteristics of free-field motion recorded in the near-source region, we first provide a brief overview of the explosion source. Figure 3 shows a generalized cartoon of the near-source region within an homogeneous half-space following a nuclear explosion. The rapidly expanding high temperature, high pressure bubble of gas (vaporized rock) created by the detonation creates a shock wave that first melts and then pulverizes the rock immediately surrounding the detonation point to create a cavity, radius R_c. At a short distance (less than the final cavity radius) from the detonation, the shock wave separates into an elastic precursor traveling at the P-wave speed of the undisturbed medium and the peak pressure pulse that propagates at a subsonic plastic wave speed. The peak stress of the shock wave as it propagates beyond the final cavity radius exceeds the yield shear stress of the rock and creates a zone of macroscopic damage out to a distance of about three cavity radii.

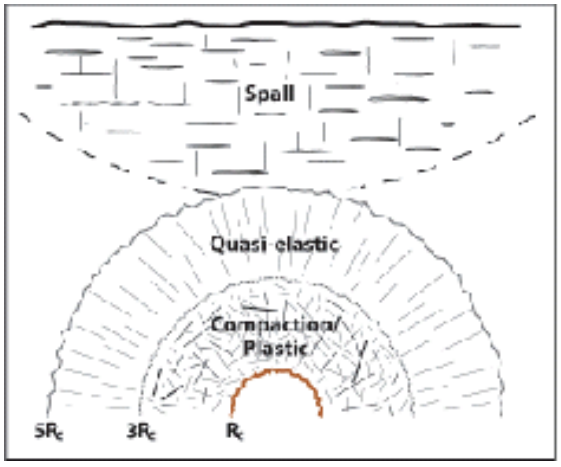

***Figure 3**: Explosion source*

The principal stresses (one radial, two tangential) within this zone are all compressive, and the predominant damage modes are pore compaction and collapse, and shear failure accompanied by dilatation. Damage and plastic yielding within the compaction zone rapidly attenuate the plastic wave such that the peak pressure falls below the yield stress and the tangential principal stresses become tensile on reaching the boundary of the zone, resulting in relatively minor tensile failure out to about five cavity radii. Within this zone the peak stress (main wave) propagates at the elastic P-wave speed but it attenuates quasi-elastically. Beyond this wave propagation is essentially elastic, but with minor non-linear behavior at ~10^{-6} strain.

At about the time the shock wave has traversed the compaction zone the cavity wall rebounds, followed by re-expansion and re-compaction and, finally, damped oscillations. These pulses propagate outwards to become later arriving peaks of an elastically propagating wave train beyond the quasi-elastic zone. When the main compressional peak reaches the free surface it is reflected as a tensional wave front that exceeds the tensional strength of the material, resulting in tensional failure, or spall, down to some depth such that near-surface layers actually detach and go ballistic. Table 1 summarizes empirical scaling of magnitude (m_b) and R_c and normal depth of burial with explosive yield, W, in kilotons.

Ground Motion Characteristics

To illustrate some of the general characteristics of near-source waveforms recorded by free-field arrays we summarize the analysis by Terhune and Heusinkveld (1983) of data recorded on the PERA array shown in Figure 2 and on similar vertical arrays for events NORBO, KARAB and TILCI. All of these tests were conducted under Yucca Flat. The first three were detonated in tuff, and TILCI, in alluvium. Figure 4a shows travel time curves for the main (peak velocity) wave for PERA (P), NORBO (N) and TILCI (T), and for the elastic precursor for KARAB (X); the detonation depths are indicated on the figure. Close to the source, the main waves propagate at subsonic (plastic) speeds before abruptly accelerating to elastic P-wave speeds similar to the speed of the elastic precursor from X. This transition defines the sharp boundary between the compaction and quasi-static zones (Figure 3), which Terhune and Heusinkveld show is also well defined by the limits of residual volumetric strain derived from the velocity data. Figure 4b shows peak velocity as a function of slant range (normalized to PERA) for events P, N and T. Out to a normalized range of about 80 m, again corresponding to the perimeter of the compaction zone, the peak velocity attenuates rapidly at ~R^{-3}, indicative of strong energy dissipation by pore compaction and plastic yielding. At the perimeter of the zone, the attenuation rate abruptly changes to ~R^{-1}, indicating quasi-elastic behavior. Note that the transitions in both velocity and attenuation rate are clearly defined by the data.

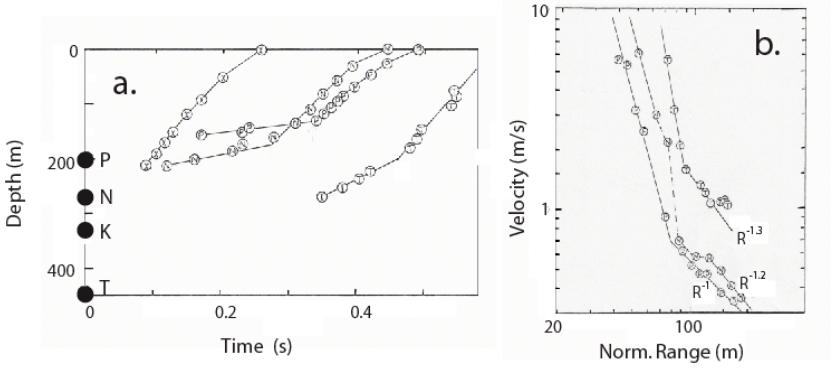

***Figure 4**: Travel time (**a**) and attenuation (**b**) curves*

Figure 5 shows the velocity waveforms recorded on the four sensors closest to shot NORBO [yield < 20 kt (DOE, 2000)], within the compaction zone (Figure 3). The waveforms are time-shifted to the first (elastic precursor) arrival time at one sensor, and amplitudes V_i are normalized such that $V_i' = V_i(R_i/R_0)^{\alpha}$, where R_i and R_0 are the slant ranges to sensor *i* and the reference sensor, respectively, and α is the average of the attenuation rates of the elastic precursor and the main wave across the four sensors. The first, compaction, pulse comprises the elastic precursor (PC) and the peak

(main) velocity wave (PW), followed by the rebound (negative) and recompaction (positive) pulses and the damped oscillations. The entire wave train propagates in-phase across the zone, each of the pulses having a constant duration. The compaction pulse attenuates very rapidly across the zone, but the later pulses attenuate at the same rate as the elastic precursor, suggesting quasi-elastic behavior within the compaction zone after the main compaction pulse has passed. Figure 6 shows the PERA [yield < 20 kt (DOE, 2000)] waveforms recorded just outside the compaction zone, where the pulses that developed in the compaction zone are still clearly defined and propagate in-phase at the P-wave speed.

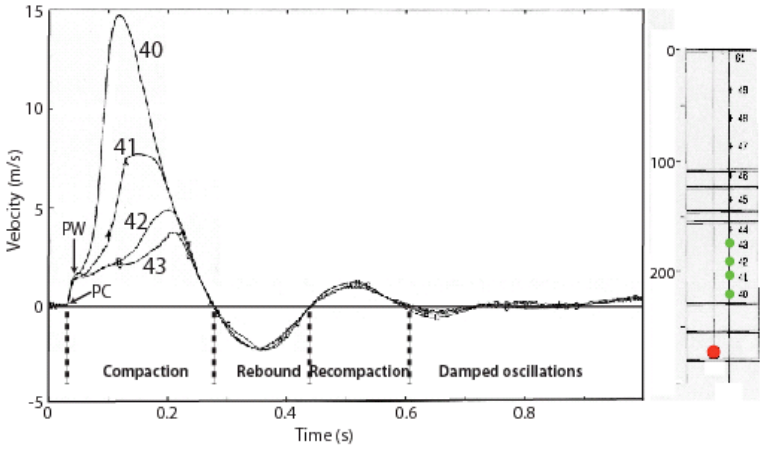

***Figure 5**: Velocity time histories for four sensors (green) within the compaction zone of event NORBO (red).*

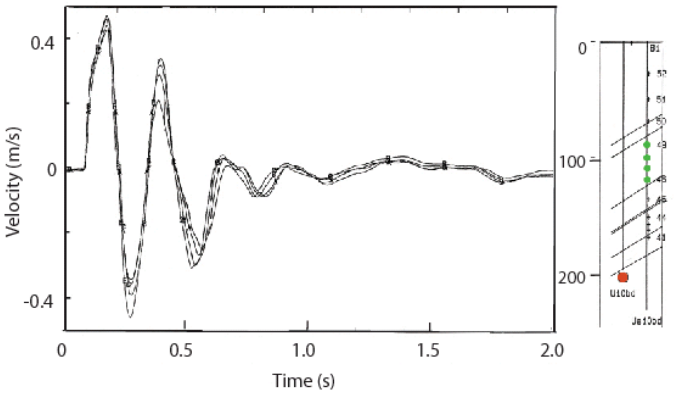

***Figure 6**: Velocity time histories for four sensors (green) within the quasi-elastic zone of event PERA (red).*

The entire wave train attenuates at the same rate as the precursor, so that the overall behavior is quasi-elastic. Figures 5 and 6 illustrate the general quality of the data recorded on the free-field arrays. We chose these examples because they clearly show the near-source phenomenology. More generally, however, the waveforms are complicated by refractions, reflections and wave conversions from lithological boundaries, which often have strong impedance contrasts in the highly stratified lithologies at NTS. Figure 6 shows a typical surface accelerogram recorded at a slant range of 1.1 km. The main wave peak acceleration at about 0.5 sec is almost 5g. This is followed by spall onset at about 0.6 sec, and ballistic free-fall (-1g) followed by the large slap-down peak at 0.9 sec.

Discussion and Conclusions

The vast amount of ground motion data recorded during the U.S. underground nuclear testing program provides unique insights into material response and wave propagation and attenuation within the near-source regions of seismic events as large as ~M6. These regions extend from the zone of intense macroscopic damage and highly non-linear

behavior under high strain and strain rate loading close to the detonation point through the transition to elastic wave propagation to the response of the free-surface, where material response can again becomes non-linear owing to spalling under tensional failure. Much of this data set, together with instrument calibrations and material properties, is available to researchers through the archiving efforts at LLNL, LANL and SNL.

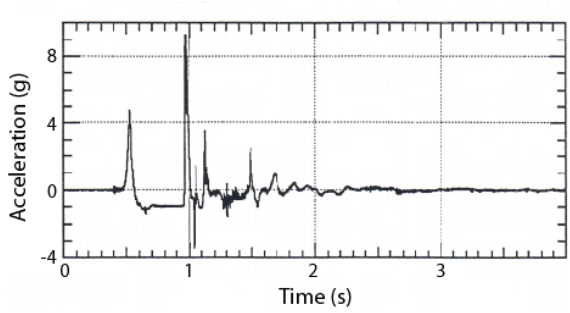

***Figure 7**: Ground surface vertical acceleration time history at a slant range of 1.1 km from event MOLBO.*

The data show that ground motions generated by nuclear explosions are severely attenuated by highly non-linear damage mechanisms and yielding within a few hundred meters of the detonation point, but that the transition to quasi-elastic and elastic material response is sharp and well defined. Although explosions and earthquakes are quite different seismic sources, this behavior is likely analogous to damage and non-linear attenuation mechanisms within a fault zone resulting from dynamic shear rupture that inherently limit the energy that can be propagated elastically. Although shear failure is one of the primary damage mechanisms close to an explosion source, pore compaction under a purely compressive stress regime also predominates in many of the materials at NTS. Therefore, the extent to which explosion data can be applied to the earthquake source should be one of the first topics of research in this field. Irrespective of the loading and damage mechanisms themselves, the ground motion and other data available for NTS have the potential to provide significant insights into the properties of materials analogous to the tuffs at the repository level at Yucca Mountain at high strains and strain rates. One way to achieve this is to use the recorded data to constrain the parameters in dynamic models of wave propagation and damage from selected explosions. This was done extensively as part of the containment programs at the national laboratories, and the data continue to be used to constrain more sophisticated models of explosion effects (e.g. Antoun et al., 1999).

Acknowledgments

I would like to thank Jeff Wagoner and John Rambo for detective work and assembling the spread sheets, and the LLNL D&NT Containment program for support. This work was performed under the auspices of the U.S. Department of Energy by University of California, Lawrence Livermore National Laboratory under Contract W-7405-Eng-48.

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Appendix 2
(Attached as excel spreadsheet)

Jeffrey L. Wagoner

This spreadsheet shows the status of strong ground motion measurements for LLNL nuclear explosion events. Most of this information is from the containment library (T1406 Room 1110).

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
						North	East	
Ace	U2N	6/11/64	Shaft	<20 kt	263.35			
Agile	U2V	2/23/67	Shaft	20 to 200 kt	733.35	263865.961	205740.445	
Agrini	U2EV	3/31/84	Shaft	<20 kt	320.00	266029.887	204155.805	UCRL-ID-128934 (10/97) surface only
Ahtanum	U2L	9/13/63	Shaft	Low	226.16	267910.543	204448.139	
Ajax	U9AL	11/11/66	Shaft	<20 kt	239.88	264719.342	207203.122	
Akavi	U2ES	12/3/81	Shaft	20 to 150 kt	494.00	266258.430	205328.952	UCRL-ID-122069 surface only
Akbar	U10AX	11/9/72	Shaft	<20 kt	266.70	267790.269	208666.424	
AKBAR	U9X	11/9/72						
Allegheny	U9x	9/29/62	Shaft	Low	210.92	262756.502	208733.410	
Alpaca	U2A	2/12/65	Shaft	330 tons	224.94	268041.699	204811.059	
Alumroot	U9CJ	2/14/73	Shaft	<20 kt	182.88	266121.424	207172.886	
Alva by aircraft only	U2J	8/19/64	Shaft	4.4 kt	166.12	267425.992	204232.804	
Alviso	U2DU	6/11/75	Shaft	<20 kt	183.00	262189.435	205100.303	
Anacostia	U9I	11/27/62	Shaft	Low	226.77	263439.106	209063.104	
Antler	U12E.03	9/15/61	Tunnel	2.6 kt	402.03	270577.000	193144.000	
Apshapa	U9AI	6/6/63	Shaft	Low	89.00	263637.333	208087.501	
Arabis-Blue Simultaneous, separate holes	U9IZ26	3/6/70	Shaft		100.58	265298.481	208849.073	
Arabis-Green	U9IX28	3/6/70	Shaft	<20 kt	258.71	265542.291	208605.604	
Arabis-Red	U9IV26	3/6/70	Shaft	<20 kt	249.91	265298.518	208361.517	
Arikaree	U9R	5/10/62	Shaft	Low	166.42	263958.020	207346.293	
Armada	U9CS	4/22/83	Shaft	<20 kt	265.00	262189.598	209657.124	UCOPKL 83 (6/2/83-Stubbs) surface only
Arnica-Violet Simultaneous, separate holes	U2DD2	6/26/70	Shaft	<20 kt	263.65	262777.768	204167.698	
Arnica-Yellow	U2DD3	6/26/70	Shaft	<20 kt	309.37	262421.172	203993.925	
Arsenate	U9CI	11/9/72	Shaft	<20 kt	250.24	263285.840	208770.145	
Asco	U10BC	4/25/78	Shaft	<20 kt	183.00	266959.651	208529.313	
Asiago	U2AR	12/21/76	Shaft	<20 kt	330.70	263539.266	205646.457	
Avens-Alkermes	U9IU24	12/16/70	Shaft	<20 kt	306.02	265054.839	208239.676	
Avens-Andorre	U9IT28	12/16/70	Shaft	<20 kt	379.48	265542.151	208117.771	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Avens-Asamlte	U9IW21	12/16/70	Shaft	<20 kt	306.32	264689.020	208483.452	
Avens-Cream Simultaneous, separate holes	U9IX29	12/16/70	Shaft	<20 kt	294.13	265664.028	208605.708	
Azul Detonation destroyed Peninsula device that was damaged during emplacement on 10/23/75 Peninsula device was not tested	U2EM	12/14/79	Shaft	<20 kt	205.00	265035.399	206026.635	UCRL-ID-127719 surface only
Backswing	U9AW	5/14/64	Shaft	<20 kt	160.63	262827.597	208184.769	
Baltic	U9IS25	8/6/71	Shaft	<20 kt	411.48	265176.625	207995.820	
Baneberry	U8D	12/18/70	Shaft	10 kt	277.98	268983.816	202823.247	
Banon	U2DZ	8/26/76	Shaft	20 to 150 kt	536.40	263652.735	204353.727	
Barnwell	U20AZ	12/8/89	Shaft	20 to 150 kt	600.80	275295.911	175229.871	misc-5035 surface only
Bellow	U4AC	5/16/84	Shaft	<20 kt	207.30	260040.644	203378.140	
Belmont	U20AS	10/16/86	Shaft	20 to 150 kt	605.00	274077.135	170596.627	UOPKL 87-2 (3/20/87) surface only
Benham	U20C	12/19/68	Shaft	1.15 Mt	1402.08	275325.129	169534.525	
Biggin	U9BZ	1/30/69	Shaft	<20 kt	243.84	264597.098	208056.844	
Black	U9P	4/27/62	Shaft	Low	217.63	262951.251	208288.535	
Blanca	U12E.05	10/30/58	Tunnel	22 kt	301.14	270355.000	193656.000	
Bodie	U20AP	12/13/86	Shaft	20 to 150 kt	635.00	278831.461	175016.718	UCRL-ID-117558 (6/94) surface only
Bogey	U9AU	4/17/64	Shaft	<20 kt	119.18	263067.456	208632.338	
Borate	U2GE	10/23/87	Shaft	20 to 150 kt	542.50	265528.880	204635.205	UCRL-ID-117557 (6/94) surface only
Bowl-1	U2BO1	6/26/69	Shaft	<20 kt	198.12	267813.281	204627.926	
Bowl-2 Simultaneous, separate holes	U2BO2	6/26/69	Shaft	<20 kt	228.60	267624.140	204582.157	
Boxcar	U20I	4/26/68	Shaft	1.3 Mt	1165.86	282424.947	171104.483	surface and FF boreholes (>1KM from GZ), Perret, 1968, SC-TM-68-458.
Bracken	U10AQ	7/9/71	Shaft	<20 kt	304.80	268057.716	208702.168	
Branco	U2EW	9/21/83	Shaft	<20 kt	293.00	263262.383	206703.429	UCRL-ID-125019 surface only
Brazos	U9D	3/8/62	Shaft	8.4 kt	256.34	263355.834	207298.577	
Breton	U4AR	9/13/84	Shaft	20 to 150 kt	483.00	259406.305	205341.992	misc-4685 surface only

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Brie	U10CC	6/18/87	Shaft	<20 kt	203.00	271285.893	208478.039	UCRL-ID-120651 (3/95) surface and free field (UE10aa)
Bristol	U4AV	11/26/91	Shaft	<20 kt	457.20	260494.702	205474.321	Stubbs and others (CDR) surface only
Buggy-A	U30A	3/12/68	Crater	1.08 kt	41.15	250493.749	178805.471	
Buggy-B	U30B	3/12/68	Crater	1.08 kt	41.15	250509.900	178762.680	
Buggy-C	U30C	3/12/68	Crater	1.08 kt	41.15	250526.021	178719.862	
Buggy-D	U30D	3/12/68	Crater	1.08 kt	41.15	250542.117	178677.129	
Buggy-E Simultaneous, separate holes Row charge experiment -- five simultaneous detonations	U30E	3/12/68	Crater	1.08 kt	41.15	250558.220	178634.353	
Bullfrog	U4AU	8/30/88	Shaft	<150 kt	489.20	259324.197	205578.843	misc-4686 surface only
Bullion	U20BD	6/13/90	Shaft	20 to 150 kt	673.90	278679.228	174269.444	UCRL-MI-104746 none
Bunker	U9BB	2/13/64	Shaft	<20 kt	227.08	264458.822	208760.986	
Burzet	U4AI	8/3/79	Shaft	20 to 150 kt	450.00	259103.406	205458.480	UCRL-ID-129058 (10/97) surface and free field (UE4ah)
Bye	U10I	7/16/64	Shaft	20 to 200 kt	390.75	270020.940	207568.813	
Caboc	U2CP	12/16/81	Shaft	<20 kt	335.00	262468.024	200727.512	UCRL-ID-125021 (4/96) surface only
Cabra	U20AJ	3/26/83	Shaft	20 to 150 kt	542.50	283007.510	170718.791	UCOPKL 83-41, UCRL-ID-125018 surface only
Cabrillo	U2DR	3/7/75	Shaft	20 to 200 kt	600.50	264650.707	204147.874	
Cabriolet	U20L	1/26/68	Crater	2.3 kt	51.82	280797.491	165898.647	
CAERPHILLY	U8E	9/27/78			420.00	268755.024	203863.404	
Calabash	U2AV	10/29/69	Shaft	110 kt	624.84	265694.813	205953.720	
Cambric	U5E	5/14/65	Shaft	750 tons	294.74	230252.041	214832.970	
Camembert	U19Q	6/26/75	Shaft	200 to 1000 kt	1310.60	280614.562	178833.909	
Camphor	U12G.10	6/29/71	Tunnel	<20 kt	423.67	269334.956	192819.036	
Campos	U9CP	2/13/78	Shaft	<20 kt	320.00	263804.769	208818.898	
CAN	U2DD4	4/21/70			399.29	262607.714	204525.766	
Can-Green	U2DD1	4/21/70	Shaft	20 to 200 kt	274.32	262250.371	204353.648	
CANNA	U9IYZ26	11/17/72			213.42	265298.466	208753.399	
CANNA	U9IYZ26	11/17/72			182.88	265298.466	208753.399	
Cannikin Test of warhead for Spartan missile	A1	11/6/71	Shaft	<5 Mt	1790.70	-99.900	-99.900	surface stations and free field measurements in UA-1 satellite holes
Carmel	U2H	2/21/63	Shaft	Low	164.29	266960.952	204521.258	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Carnelian	U4AF	7/28/77	Shaft	<20 kt	208.00	260604.486	203576.400	UCRL-ID-131332 (7/98) surface only
Carpetbag	U2DG	12/17/70	Shaft	220 kt	661.70	264109.759	204262.253	
Cashmere	U2AD	2/4/65	Shaft	<20 kt	233.17	264300.783	206162.426	
Casselman	U10G	2/8/63	Shaft	Low	302.97	266318.067	207013.116	
Cathay	U9CH	10/8/71	Shaft	<20 kt	377.95	262433.340	208331.238	
Cebrero	U9CW	8/14/85	Shaft	<20 kt	183.00	262146.386	210373.043	UCRL-ID-121262 (5/95) surface only
Centaur	U2AK	8/27/65	Shaft	<20 kt	173.74	265024.045	205404.972	
Chaenactis	U2DL	12/14/71	Shaft	20 to 200 kt	330.71	263530.982	203682.788	
Chantilly	U2DI	9/29/71	Shaft	<20 kt	330.71	263591.528	203911.711	
Chateaugay	U20T	6/28/68	Shaft	20 to 200 kt	607.23	276880.791	168707.473	
Chatty	U2BN	3/18/69	Shaft	<20 kt	195.07	267791.723	204871.334	
Cheedam	U2ET	2/17/83	Shaft	<20 kt	343.00	267858.849	205984.301	UCRL-ID-125015 (4/96) surface only
Chena	U12B.09	10/10/61	Tunnel	Low	255.42	271279.730	193206.885	
Chenille	U9BG	4/22/65	Shaft	<20 kt	140.82	262174.695	208940.827	
Cheshire	U20N	2/14/76	Shaft	200 to 500 kt	1167.00	276574.186	174266.098	
Chevre	U10AY	11/23/76	Shaft	<20 kt	317.00	268851.146	206926.089	
Chiberta	U2EK	12/20/75	Shaft	20 to 200 kt	716.00	263957.288	206167.096	
Cimarron	U9H	2/23/62	Shaft	11.9 kt	304.80	264098.716	207344.650	
Clarksmobile	U2AS	5/17/68	Shaft	20 to 200 kt	472.44	263115.316	206415.886	
Clearwater	U12Q	10/16/63	Shaft		544.98	271701.351	191207.982	
Club	U2AA	1/30/64	Shaft	<20 kt	180.75	264902.179	205353.516	
Clymer	U9CE	3/12/66	Shaft	<20 kt	398.07	265740.585	206959.529	
Codsaw	U9G	2/19/62	Shaft	Low	212.14	263949.650	208339.669	
Coffer	U2DE	3/21/69	Shaft	<100 kt	464.82	264561.303	203933.907	
Colby	U20AA	3/14/76	Shaft	500 to 1000 kt	1273.40	283594.455	169702.662	
Colwick	U20AC	4/26/80	Shaft	20 to 150 kt	633.00	277216.493	174070.308	
Commodore	U2AM	5/20/67	Shaft	250 kt	745.24	264262.202	205953.766	
Comstock	U20AY	6/2/88	Shaft	<150 kt	620.30	278511.557	172410.465	misc-4687 surface only
Contact	U20AW	6/22/89	Shaft	20 to 150 kt	544.10	281041.329	174955.514	misc-4893 surface only
Corduroy	U10K	12/3/65	Shaft	20 to 200 kt	678.79	268078.336	206959.654	
Cornice-Green Simultaneous, separate holes	U10AP3	5/15/70	Shaft	20 to 200 kt	443.48	267773.292	208160.659	
Cornice-Yellow	U10AP1	5/15/70	Shaft	20 to 200 kt	390.14	268219.873	208456.164	
Cornucopia	U2GAS	7/24/86	Shaft	<20 kt	381.00	265627.453	205308.265	UCRL-ID-120665 surface only
Coso-Bronze	U4AN	3/8/91	Shaft	<20 kt	333.00	261366.572	205075.998	UCRL-MI-107445 surface only
Coso-Gray	U4AN	3/8/91	Shaft	<20 kt	442.00	261366.572	205075.998	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Coso-Silver Simultaneous, same hole	U4AN	3/8/91	Shaft	<20 kt	475.00	261366.572	205075.998	
Cottage	U8J	3/23/85	Shaft	20 to 150 kt	515.00	269748.531	203698.162	
Coulommiers	U2EI	9/27/77	Shaft	20 to 150 kt	530.30	266563.516	205618.580	
Cremino	U8E	9/27/78	Shaft	<20 kt	210.00	268755.024	203863.404	UCRL-ID-131714 (8/98) surface and free field (UE8e)
Crepe	U2Q	12/5/64	Shaft	20 to 200 kt	403.86	262494.209	206898.715	
Crestlake-Briar Simultaneous, same hole	U2DW	7/18/74	Shaft	<20 kt	373.70	263012.477	204079.309	
Crestlake-Tansan	U2DW	7/18/74	Shaft	<20 kt	271.61	263012.477	204079.309	
Crew	U2DB	11/4/68	Shaft	20 to 200 kt	603.50	264257.191	203949.083	UCRL-50867 (9/2/70), free field in satellite hole UE2b.
Crew-2nd	U2db	11/4/68	Shaft	<20 kt	359.66	264257.191	203949.083	
Crock	U10AK	5/8/68	Shaft	<20 kt	181.66	267265.759	208513.533	
Crowdie	U2FE	5/5/83	Shaft	<20 kt	390.00	265938.584	203698.202	UCRL-ID-122262 (10/95) UOPKL 83 (7/25/83) surface only
Cruet	U2CN	10/29/69	Shaft	11 kt	263.65	263240.970	200290.561	
Cumberland	U2E	4/11/63	Shaft	Low	226.47	267173.182	205312.237	
Cup	U9CB	3/26/65	Shaft	20 to 200 kt	538.89	266182.132	207812.224	
Cyathus	U8B	3/6/70	Shaft	8.7 kt	293.88	268986.270	203454.431	
Cypress	U12G.09	2/12/69	Tunnel	<20 kt	411.48	268477.457	192892.258	
Danablu	U2EU	6/9/83	Shaft	<20 kt	320.00	267267.402	203689.021	
Danny Boy DoD Test Crater diameter 265 ft., depth 84 ft. in basalt	U18A	3/5/62	Crater	430 tons	33.53	261986.981	179215.553	
Darwin	U20AQ	6/25/86	Shaft	20 to 150 kt	549.00	278994.636	167244.247	
Dauphin	U9CQ	11/14/80	Shaft	<20 kt	320.00	262189.543	209992.316	UCRL-ID-127714 (6/97) surface only
Dead	U9K	4/21/62	Shaft	Low	193.55	263015.482	208843.163	
Delamar	U20AT	4/18/87	Shaft	20 to 150 kt	544.10	277139.985	166375.322	HARDIN Sat hole (U20av-1I), FF meas., UCID-21151.
Delphinium	U2DP	9/26/72	Shaft	15 kt	295.66	263247.207	204024.305	
Des Moines	U12J.01	6/13/62	Tunnel	2.9 kt	201.17	274400.000	197175.000	
Diablo Hawk DoD Test	U12N.10A	9/13/78	Tunnel	<20 kt	388.00	272888.281	192866.106	
Diagonal Line DoD Test by aircraft only	U11G	11/24/71	Shaft	<20 kt	264.26	236470.174	217651.751	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Diamond Ace DoD Test Simultaneous with Huron Landing	U12N.15	9/23/82	Tunnel	<20 kt	407.26	273247.700	193219.761	
Diamond Beech DoD Test	U12N.19	10/9/85	Tunnel	<20 kt	404.50	272985.190	192926.230	
Diamond Sculls DoD Test	U12T.02	7/20/72	Tunnel	<20 kt	423.98	273536.629	195294.904	
Diana Moon DoD Test	U11E	8/27/68	Shaft	<20 kt	242.01	236249.093	217977.120	
Dianthus	U10AT	2/17/72	Shaft	<20 kt	304.80	268182.986	206613.543	
Dido Queen DoD Test	U12E.14	6/5/73	Tunnel	<20 kt	391.36	270248.541	192494.704	
Diluted Waters DoD Test	U5B	6/16/65	Shaft	<20 kt	192.63	229667.347	215798.567	
Dining Car DoD Test	U12E.18	4/5/75	Tunnel	<20 kt	383.00	270569.639	192601.350	
Disko Elm DoD Test	U12P.03	9/14/89	Tunnel	<20 kt	261.20	275916.000	197099.000	
Dofino	U10BA	3/8/77	Shaft	<20 kt	183.00	269349.223	206897.788	
Dofino-Lawton Simultaneous, same hole	U10BA	3/8/77	Shaft	<20 kt	282.00	269349.223	206897.788	
Double Play DoD Test	U16A.03	6/15/66	Tunnel	<20 kt	327.66	250793.469	193670.862	
DRILL	U2AI	12/5/64						
Drill (Source-Lower	U2AI	12/5/64	Shaft	3.4 kt	188.37	264688.968	205435.428	
Drill (Target-Upper) Simultaneous, same hole	U2ai	12/5/64	Shaft	<20 kt	218.85	264688.968	205435.428	
Driver	U9AR	5/7/64	Shaft	<20 kt	149.96	263149.710	208062.788	
Dub	U10A	6/30/64	Shaft	<20 kt	259.08	269151.219	206593.631	
Duffer	U10DS	6/18/64	Shaft	<20 kt	446.84	268225.698	208196.611	
Dumont	U2T	5/19/66	Shaft	20 to 200 kt	670.87	262128.579	206502.276	
Duryea	U20A1	4/14/66	Shaft	70 kt	543.76	276574.702	173322.002	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Eagle	U9AV	12/12/63	Shaft	5.3 kt	164.90	264341.233	207736.542	
Edam	U2DY	4/24/75	Shaft	20 to 200 kt	411.50	262615.605	203880.915	
Eel	U9M	5/19/62	Shaft	4.5 kt	217.63	263409.275	207446.630	
Effendi	U2AP	4/27/67	Shaft	<20 kt	220.98	265191.679	206014.260	
Egmont	U20AL	12/9/84	Shaft	20 to 150 kt	546.00	279604.130	167396.422	
Elkhart	U9BS	9/17/65	Shaft	<20 kt	220.37	262128.576	208574.908	
Emerson	U2AL	12/16/65	Shaft	<20 kt	260.60	265420.054	206014.759	
Emmenthal	U19T	11/2/78	Shaft	<20 kt	576.10	281637.574	185134.126	
Esrom	U7AK	2/4/76	Shaft	20 to 200 kt	655.30	261634.811	208327.910	
Evans Venting	U12B.04	10/29/58	Tunnel	55 tons	256.03	271340.000	193408.000	
event	**location**	**date**			**dob**			**comments**
Event X								UCRL-89408
Fade	U9BE	6/25/64	Shaft	<20 kt	205.13	262143.813	209093.255	
Fajy	U2FC	6/28/79	Shaft	20 to 150 kt	536.00	265664.465	203850.992	
Fallon	U2DV	5/23/74	Shaft	20 to 200 kt	466.34	263597.636	204630.913	
Farallones	U2FA	12/14/77	Shaft	20 to 150 kt	668.00	264856.017	203987.988	
Farm	U20AB	12/16/78	Shaft	20 to 150 kt	689.00	279989.660	175138.372	UCRL-ID-128957 (10/97) UOPKL 79-64 (9/17/79) surface only
Faultless Seismic calibration	C1	1/19/68	Shaft	200 to 1000 kt	975.36	431091.667	191695.465	
Feather	U12B.08	12/22/61	Tunnel	150 tons	247.50	271350.504	193093.829	
Fenton by aircraft only	U2M1	4/23/66	Shaft	1.4 kt	167.34	267595.111	204251.771	
Flask-Green	U2AZ1	5/26/70	Shaft	105 kt	528.52	262372.075	206109.360	
Flask-Red Simultaneous, separate holes	U2AZ3	5/26/70	Shaft	<20 kt	152.40	262683.292	205719.060	
FLAX	U2DJ	12/21/72			688.30	265310.935	204231.901	CONF-930910302, FF-UE2dj Rambo paper.
Flotost	U2AO	8/16/77	Shaft	<20 kt	275.00	266072.684	206016.463	
Fob-Blue Simultaneous, separate holes	U9IY27	1/23/70	Shaft	<20 kt	100.58	265420.188	208727.771	
Fob-Green	U9IV27	1/23/70	Shaft	<20 kt	244.45	265420.508	208361.484	
Fob-Red	U9IV24	1/23/70	Shaft	<20 kt	265.79	265054.909	208361.468	

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Fondutta	U19ZS	4/11/78	Shaft	20 to 150 kt	633.00	282924.095	182539.818	
Fontina	U20F	2/12/76	Shaft	200 to 1000 kt	1219.00	279753.647	168206.380	
Fore	U9AO	1/16/64	Shaft	20 to 200 kt	491.03	265588.057	207264.256	
Forest	U7A	10/31/64	Shaft	<20 kt	386.79	261706.159	208788.073	
Frisco	U8M	9/23/82	Shaft	20 to 150 kt	451.00	269169.391	203804.995	UCRL-ID-125016 (3/96) surface only
Galena-Green Simultaneous, same hole	U9CV	6/23/92	Shaft	<20 kt	401.00	263561.063	208864.627	UCRL-MI-111644 surface only
Garden	U9AJ	10/23/64	Shaft	<20 kt	149.66	262797.092	208878.142	
Gasbuggy Joint Government/industry gas stimulation experiment	ONMRIO	12/10/67	Shaft	29 kt	1292.35	-99.900	-99.900	
Gazook	U2DO	3/23/73	Shaft	<20 kt	326.14	262791.402	203911.547	
Gibne	U20AH	4/25/82	Shaft	20 to 150 kt	570.00	278038.952	174071.756	
Gnome Multiple-purpose experiment in salt Formed cavity 160-170 ft. diameter, 60-80 ft. high	ONMEDY	12/10/61	Shaft	3 kt	360.88	-99.900	-99.900	BSSA, 12/62
Goldstone	U20AO	12/28/85	Shaft	20 to 150 kt	549.00	276027.490	169606.339	
Gorbea	U2CQ	1/31/84	Shaft	20 to 150 kt	388.00	262265.630	200833.296	
Gouda	U2EF	10/6/76	Shaft	<20 kt	200.00	264724.020	206099.573	
Gourd-Amber	U2BF	4/24/69	Shaft	<20 kt	181.30	267977.745	204536.306	
Gourd-Brown Simultaneous, separate holes	U2BL	4/24/69	Shaft	<20 kt	226.80	267532.462	204429.824	
GRADINO	U9CG	8/16/77			320.00	265908.037	207264.335	
Greeley	U20G	12/20/66	Shaft	870 kt	1216.46	283172.980	175305.501	Surface stations, HN-20-1028 (1969).
Greys	U9AX	11/22/63	Shaft	Intermediate	301.14	263042.633	207630.197	
Grove	U2DS	5/22/74	Shaft	<20 kt	313.94	262524.838	205008.899	
Gruyere	U9CG	8/16/77	Shaft	<20 kt	207.00	265908.037	207264.335	
Gum Drop DoD Test	U16A.02	4/21/65	Tunnel	<20 kt	304.80	250516.240	193747.162	
Halfbeak	U19b	6/30/66		365 kt				Surface stations, HN-20-1028 (1969).

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Handcar Effects of contained explosion in carbonate rock	U10B	11/5/64	Shaft	12 kt	403.25	269138.920	205649.008	FF-boreholes, Perret, 1970, POR-2800 (WT-2800)
HANDICAP	U9BA	3/12/64			143.56	264225.491	208407.310	
Handley	U20M	3/26/70	Shaft	More than 1 Mt	1209.00	282972.979	164150.957	
Haplopappus	U9IW22	6/28/72	Shaft	<20 kt	184.40	264810.517	208498.787	
Hard Hat								FF?-vertical boreholes
Hardin	U20AV	4/30/87	Shaft	20 to 150 kt	625.00	275509.357	174010.802	
Harebell	U2BR	6/24/71	Shaft	20 to 200 kt	518.77	266067.731	205685.560	
Harzer	U19AJ	6/6/81	Shaft	20 to 150 kt	637.00	283342.739	182636.270	
Hatchie	U9E	2/8/63	Shaft	Low	60.96	263782.985	208205.014	
Havarti	U10BG	8/5/81	Shaft	<20 kt	200.00	266868.165	208502.039	UCRL-ID-127720 (6/97) surface only
Hazebrook-Apricot (Orange) Simultaneous, same hole	U10BH	2/3/87	Shaft	<20 kt	262.00	269900.894	207294.947	
Hazebrook-Checker	U10BH	2/3/87	Shaft	<20 kt	226.00	269900.894	207294.947	
Hazebrook-Emerald	U10BH	2/3/87	Shaft	<20 kt	186.00	269900.894	207294.947	
Heilman	U2CG	4/6/67	Shaft	<20 kt	152.71	264993.181	199842.520	
HERKIMER	U2EW	9/21/83			427.00	263262.383	206703.429	
Hod-A (Green)	U9IX23	5/1/70	Shaft	<20 kt	240.79	264932.864	208605.528	
Hod-B (Red) Simultaneous, separate holes	U9IX20	5/1/70	Shaft	<20 kt	265.18	264566.950	208605.711	
Hod-C (Blue)	U9IZ25	5/1/70	Shaft		100.58	265176.585	208849.384	
Hook	U9BC	4/14/64	Shaft	<20 kt	204.22	264117.208	208986.562	
Hoosic	U9J	3/28/62	Shaft	3.4 kt	186.84	263603.701	208630.138	
Hornitos	U20BC	10/31/89	Shaft	20 to 150 kt	563.90	278831.534	168006.227	UCRL-MI-103510 surface only
Hoya Treaty verification test	U20BE	9/14/91	Shaft	20 to 150 kt	658.00	274686.176	173568.308	UCRL-MI-110331 surface only
Hudson	U9N	4/12/62	Shaft	Low	150.88	263914.662	207651.603	
Hudson Moon DoD Test	U12E.12	5/26/70	Tunnel	<20 kt	422.45	269980.682	192646.891	
Hudson Seal DoD Test	U12N.04	9/24/68	Tunnel	<20 kt	344.42	272442.370	193256.217	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Hula	U9BU	10/29/68	Shaft	<20 kt	200.56	262372.267	208011.200	
Hulsea	U2BX	3/14/74	Shaft	<20 kt	195.01	267005.401	205923.383	
Hunters Trophy DoD test to ensure reliability of U.S. deterrent forces	U12N.24	9/18/92	Tunnel	<20 kt	385.30	272680.600	192937.171	
Hupmobile	U2Y	1/18/68	Shaft	7.4 kt	246.89	265945.030	205789.469	
Huron Landing DoD Test Simultaneous with Diamond Ace	U12N.15	9/23/82	Tunnel	<20 kt	408.54	273247.700	193219.761	
Husky Pup DoD Test	U12T.03	10/24/75	Tunnel	<20 kt	348.00	274326.563	195617.751	
Hutch	U2DF	7/16/69	Shaft	20 to 200 kt	548.64	265259.570	203860.182	
Hybla Fair DoD Test	U12N.09	10/28/74	Tunnel	<20 kt	404.01	272041.000	193476.000	
Ildrim	U2AU	7/16/69	Shaft	20 to 200 kt	410.26	263049.123	206746.196	
IMP	U2BJ	8/9/68			182.88	267736.764	204755.811	
Ingot	U2GG	3/9/89	Shaft	20 to 150 kt	500.00	265639.748	205679.494	misc-4804 surface only
Islay	U2ER	8/27/81	Shaft	<20 kt	294.00	267590.588	205703.860	UCRL-ID-127718 (6/97) surface only
Izzer	U9BP	7/16/65	Shaft	<20 kt	163.68	262570.622	208788.543	
Jarlsberg	U10CA	8/27/83	Shaft	<20 kt	200.00	271218.215	208564.975	UCRL-ID-119561 surface and free field (UE10aa) 12/94
Jefferson	U20AI	4/22/86	Shaft	20 to 150 kt	609.00	278953.579	172486.809	UCRL-ID-119478 (12/94) surface only
Jorum	U20E	9/16/69	Shaft	<1 Mt	1160.89	284501.041	170657.931	
Kankakee	U10P	6/15/66	Shaft	20 to 200 kt	454.76	268834.321	207263.646	
Kappeli	U20AM	7/25/84	Shaft	20 to 150 kt	640.00	279365.145	175107.743	
Kara	U2DH3	5/11/72	Shaft	<20 kt	259.08	262262.701	204140.105	
Karab	U4AH	3/16/78	Shaft	<20 kt	331.00	259232.626	204414.675	UCRL-ID-131648 surface and free field (UE4ad), memo from Stubbs to Hudson (1/10/83) UOPKL 83-6 free field velocity records
Kash	U20AF	6/12/80	Shaft	20 to 150 kt	645.00	280897.177	171271.748	
Kashan	U10AV	5/24/73	Shaft	<20 kt	265.18	267797.749	206639.625	
Kasseri	U20Z	10/28/75	Shaft	200 to 1000 kt	1265.00	281837.810	175020.722	
Kaweah	U9AB	2/21/63	Shaft	Low	227.08	263152.538	207581.255	
KAWICH	U8N	12/9/88						misc-4803 surface only
Kawich A-Blue Simultaneous, same hole	U8n	12/9/88	Shaft	<20 kt	384.00	269230.379	203454.468	UCRL-ID 120477 (8/94) none

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Kearsarge	U19AX	8/17/88	Shaft	100 to 150 kt	615.70	282656.660	184328.349	misc-4718 surface only
Kennebec	U2AF	6/25/63	Shaft	Low	226.16	264369.656	205587.316	
Kermet	U2C	11/23/65	Shaft	<20 kt	196.29	267752.138	205312.523	
Kernville	U20AR	2/15/88	Shaft	20 to 150 kt	541.60	284531.369	169700.666	
Kesti	U9CN	6/16/82	Shaft	<20 kt	289.00	262494.230	210175.096	UCRL-ID-125017 surface only
Klickitat	U10E	2/20/64	Shaft	20 to 200 kt	492.56	266548.039	208056.728	
Kloster	U2EO	2/15/79	Shaft	20 to 150 kt	536.40	266654.792	205237.884	
Knickerbocker	U20D	5/26/67	Shaft	76 kt	630.63	277151.058	168944.766	
Knox	U2AT	2/21/68	Shaft	20 to 200 kt	644.80	262730.868	206874.532	
Kohocton Simultaneous, separate holes	U9AK	8/23/63	Shaft	Low	254.81	263674.211	208495.407	
Kootanai	U9W	4/24/63	Shaft	Low	181.97	263189.249	208419.499	
KRYDDOST	U2CO	5/6/82			335.00	262722.834	200368.328	UCRL-ID-121261 (9/95) surface and free field UE2co)
Kyack-A	U2BQ1	9/20/69	Shaft	<20 kt	185.93	267404.708	205598.082	
Kyack-B Simultaneous, separate holes	U2BQ2	9/20/69	Shaft	<20 kt	192.02	267258.379	205737.278	
Laban	U2FF	8/3/83	Shaft	<20 kt	326.00	262981.911	203743.995	UCRL-ID-121264 (5/95) surface only
Labis	U10AN	2/5/70	Shaft	25 kt	441.96	267999.944	208160.812	
Labquark	U19AN	9/30/86	Shaft	20 to 150 kt	616.00	282980.849	184248.311	UCRL-ID-121260 (5/95) surface only
Lagoon	U10AR	10/14/71	Shaft	<20 kt	304.80	269747.055	206883.005	
Lanpher	U2X	10/18/67	Shaft	20 to 200 kt	715.06	262620.668	206525.371	
LARKIN	U10BB	2/6/75			274.30	269595.481	207020.458	
Lexington	U2BM	8/24/67	Shaft	<20 kt	226.47	267843.289	205023.972	
Leyden	U9CM	11/26/75	Shaft	<20 kt	326.10	262829.481	209967.914	
Links	U9BF	7/23/64	Shaft	<20 kt	120.40	262433.157	208803.591	
Liptauer	U2eh	4/3/80	Shaft	20 to 150 kt	417.00	266412.177	204313.295	
Logan	U12E.02	10/16/58	Tunnel	5 kt	283.46	270145.000	193731.000	
Longchamps	U2DM	4/19/72	Shaft	<20 kt	326.44	263311.169	204192.268	
Mad	U9A	12/13/61	Shaft	500 tons	181.66	263848.414	207306.047	
Madison	U12G.01	12/12/62	Tunnel	Low	402.34	268829.000	193670.000	
Manatee	U9AF	12/14/62	Shaft	Low	59.74	263591.494	208089.705	
Manteca	U4AL	12/10/82	Shaft	20 to 150 kt	413.00	258684.336	205283.138	UOPKL 83-19 (2/9/83), UCRL-ID-125014 (4/96) surface only

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Maribo	U2CS	6/26/85	Shaft	<20 kt	381.00	263530.729	200800.691	UCRL-ID-121266 (5/95) surface only
Mars	U12D	9/28/58	Tunnel	13 tons	38.10	271146.000	193792.000	
Marshmallow DoD Test	U16A	6/28/62	Tunnel	Low	310.90	250732.538	193838.335	
Marsilly	U2EL	4/5/77	Shaft	20 to 150 kt	690.00	263134.427	206106.133	
Marvel Emplacement technique experiment	U10DS1	9/21/67	Shaft	2.2 kt	175.87	268228.182	208196.248	
Maxwell	U9BR	1/13/66	Shaft	<20 kt	182.88	262707.929	209199.865	
Mercury	U12F.01	9/23/58	Tunnel	Slight	55.78	-99.900	-99.900	
Merida	U2DN	6/7/72	Shaft	<20 kt	204.22	262639.050	204064.148	
Merlin	U3ct	2/16/65		10.1 kt	296			FF boreholes, SC-RR-69-334 (Perret, 1971).
Merrimac	U3BD	7/13/62	Shaft	Intermediate	413.31	255918.983	208724.416	
Metropolis	3/10/90							UCRL-MI-104930 surface only
Mickey	U2GH	5/10/67	Shaft	20 to 200 kt	469.40	262280.338	206745.939	
Middle Note DoD Test	U12N.21	3/18/87	Tunnel	<20 kt	398.70	273048.921	193060.706	
MIDIMIST	U12N.02	6/26/67			377.04	272146.982	193130.761	
Miera	U7ad	3/8/73	Shaft	20 to 200 kt	398.00	272916.412	192716.382	
Mighty Epic DoD Test	U12N.10	5/12/76	Tunnel	<20 kt	394.40	273959.400	195331.500	
MIGHTY OAK	U12T.08	4/10/86						
Milk Shake DoD Test	U5K	3/25/68	Shaft	<20 kt	264.57	235639.474	217976.845	
Milrow		1969						surface stations and free field measurements in UA-2 satellite hole
Miniata experiment	U2BU	7/8/71	Shaft	83 kt	528.83	262018.589	207081.552	
Mint Leaf DoD Test Controlled	U12T.01	5/5/70	Tunnel	<20 kt	405.38	273758.402	195235.763	
Minute Steak DoD Test	U11F	9/12/69	Shaft	<20 kt	264.57	236251.023	218206.704	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Mission Cyber DoD Test	U12P.02	12/2/87	Tunnel	<20 kt	270.60	275778.407	197057.813	
Mississippi	U9AD	10/5/62	Shaft	115 kt	493.78	265268.028	207157.798	
Misty Rain DoD Test Controlled	U12N.17	4/6/85	Tunnel	<20 kt	388.60	272005.534	193189.759	
Molbo	U20AG	2/12/82	Shaft	20 to 150 kt	638.00	274533.925	170505.434	UCRL-ID-127716 (6/97) surface only
Montello	U20BF	4/16/91	Shaft	20 to 150 kt	641.60	276880.692	172364.812	UCRL-MI-107936 (8/91) surface only
Monterey	U4AJ	7/29/82	Shaft	20 to 150 kt	400.00	261137.517	204993.653	
Mudpack DoD Test	U10N	12/16/64	Shaft	2.7 kt	152.10	269519.976	205648.798	FF-boreholes, Perret, 1965, SC-TM-64-1749, Perret, 1970, POR-2900 (WT-2900)
Muenster	U19E	1/3/76	Shaft	200 to 1000 kt	1452.40	282580.679	181965.976	
Mullet	U2AG	10/17/63	Shaft	Low	60.35	264304.822	205685.934	
Mustang	U9AT	11/15/63	Shaft	Low	165.81	264481.201	207468.408	
Nama-Amarylis	U9IXY31	8/5/71	Shaft	<20 kt	272.80	265908.052	208666.482	
Nama-Mephisto Simultaneous, separate holes	U9IZ27	8/5/71	Shaft	<20 kt	243.84	265420.218	208849.497	
Narraguagus	U2f	9/27/63	Shaft	Low	150.27	266961.117	205100.601	
Nash	U2CE	1/19/67	Shaft	39 kt	365.15	265694.329	199614.178	
Natches	U9AK1	8/23/63	Shaft	Low	59.13	263674.040	208507.602	
Natoma	U10AW	4/5/73	Shaft	<20 kt	243.84	269535.191	206813.282	
Neptune	U12C.03	10/14/58	Tunnel	115 tons	30.02	271235.000	193858.000	
Nessel	U2EP	8/29/79	Shaft	20 to 150 kt	464.00	263241.032	205725.684	
Newark	U10U	9/29/66	Shaft	<20 kt	229.21	268516.883	207516.463	
NEWPOINT	U11C	12/13/66			239.27	236249.154	217367.662	
Niza	U9CR	7/10/81	Shaft	<20 kt	341.00	264079.328	208636.076	UOPKL 81-75 (8/10/81), UCRL-ID-127721 (6/97) surface only
Noggin	U9BX	9/6/68	Shaft	20 to 200 kt	582.17	264899.330	207441.364	NVO-21, UCRL-50867, free field satelite hole?
Noor	U2BE	4/10/68	Shaft	20 to 200 kt	381.00	266913.574	204612.829	
Norbo	U8C	3/8/80	Shaft	<20 kt	271.00	269748.512	204216.536	UCRL-89408, surface and free field (UE8c), UCRL-ID-123238 (10/95), memo from Stubbs to Hudson (1/10/83) UOPKL 83-6 free field velocity records
Normanna	U10CB	7/12/84	Shaft	<20 kt	200.00	271112.334	208535.628	UCRL-ID-120478 (3/95) surface and free field (UE10aa)
Oakland	U2BI	4/4/67	Shaft	<20 kt	165.51	267755.217	204308.284	
Oconto Operational	U9AY	1/23/64	Shaft	10.5 kt	264.87	263835.444	208413.674	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Organdy	U9BO	6/11/65	Shaft	<20 kt	168.86	262661.907	209580.555	
Orkney	U10BE	5/2/84	Shaft	<20 kt	210.00	271821.154	206791.922	UCRL-ID-120650 (3/95) surface only
Packard	U2U	1/15/69	Shaft	10 kt	246.89	266204.059	205789.512	FF?-UE2y?, UCRL-51112. Wheeler and Preston, 1971.
PaisanoB358	U9W1	4/24/63	Shaft	Low	57.00	263181.549	208428.832	
Palanquin	U20K	4/14/65	Crater	4.3 kt	85.65	280743.505	165091.138	
Palisade-1	U4AT	5/15/89	Shaft	<20 kt	335.30	261701.721	200909.228	
Palisade-2	U4AT	5/15/89	Shaft	<20 kt	390.00	261701.721	200909.228	misc-4821 surface only
Palisade-3 Simultaneous, same hole	U4AT	5/15/89	Shaft	<20 kt	404.00	261701.721	200909.228	
Panamint	U2GB	5/21/86	Shaft	<20 kt	480.00	263667.749	206273.813	
Panir	U19YS	8/31/78	Shaft	20 to 150 kt	681.00	280285.003	179832.207	
Par Isotope production and explosive development	U2P	10/9/64	Shaft	38 kt	405.69	266578.473	204780.158	
Parnassia	U2BC	11/30/71	Shaft	<20 kt	330.71	267592.090	205374.261	
Passaic	U9L	4/6/62	Shaft	Low	233.48	262860.552	207734.347	
Pepato	U20AD	6/11/79	Shaft	20 to 150 kt	681.00	281788.225	171145.530	
Pera	U10BD	9/8/79	Shaft	<20 kt	200.00	267005.389	208224.482	UCRL-89408, surface and free field (UE10bd), UCRL-ID-128633 (8/97), memo from Stubbs to Hudson (1/10/83) UOPKL 83-6 free field velocity records
Pinedrops-Bayou Simultaneous, same hole	U10AS	1/10/74	Shaft	<20 kt	342.90	269120.592	207090.672	
Pinedrops-Sloat	U10AS	1/10/74	Shaft	<20 kt	213.36	269120.592	207090.672	
Pinedrops-Tawny	U10AS	1/10/74	Shaft	<20 kt	281.94	269120.592	207090.672	
Pipkin	U20B	10/8/69	Shaft	200 to 1000 kt	623.62	278132.065	172441.177	
Piton-A	U9IY30	5/28/70	Shaft	<20 kt	236.22	265786.102	208727.424	
Piton-B Simultaneous, separate holes	U9IX27	5/28/70	Shaft	<20 kt	228.60	265420.097	208606.025	
Piton-C	U9IAA25	5/28/70	Shaft	<20 kt	100.58	265176.600	208971.603	
Plaid II	U2R	2/3/66	Shaft	<20 kt	268.53	263804.976	205466.128	
Platte	U12K.01	4/14/62	Tunnel	1.85 kt	191.41	274380.000	197592.000	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Player	U9CC	8/27/64	Shaft		90.22	262827.478	208032.433	
Pleasant	U9AH	5/29/63	Shaft	Low	210.92	264015.048	207864.564	
Pod-A	U2CK	10/29/69	Shaft	16.7 kt (Total)	266.70	265313.928	200034.352	
Pod-B	U2CH	10/29/69	Shaft		248.72	265335.054	199027.145	
Pod-C	U2CI	10/29/69	Shaft		170.69	264879.118	199195.855	
Pod-D Simultaneous, separate holes only	U2CJ	10/29/69	Shaft		312.42	264771.121	199552.980	
Polka	U10AI	12/6/67	Shaft	<20 kt	190.50	267470.713	206910.191	
Polygonum	U2BY	10/2/73	Shaft	<20 kt	213.36	267406.004	205130.728	
Pongee	U2AH	7/22/65	Shaft	<20 kt	134.72	264414.373	205694.548	
Portmanteau	U2AX	8/30/74	Shaft	20 to 200 kt	655.29	266700.619	204216.317	surface only, Wheeler memo 6/25/80
Portola	U10BB	2/6/75	Shaft	<20 kt	198.10	269595.481	207020.458	
Portulaca	U2BV	6/28/73	Shaft	20 to 200 kt	466.34	266249.096	203995.029	
Potrero	U2EB	4/23/74	Shaft	<20 kt	210.31	267535.602	204825.930	
Purse	U20V	5/7/69	Shaft	20 to 200 kt	598.78	281026.272	167122.284	
Quargel	U2FB	11/18/78	Shaft	20 to 150 kt	542.00	263858.314	204185.898	
Queso	U10BF	8/11/82	Shaft	<20 kt	216.00	270861.123	207355.870	UCRL-ID-121259 (9/95) surface and free field (UE10bf)
Rack	U9AP	8/15/68	Shaft	<20 kt	199.64	263530.299	207355.818	
Rainier	U12B	9/19/57	Tunnel	1.7 kt	274.02	271446.843	193548.954	UCRL-5542-rev., Warner and Violet, 1959
Randsburg Simultaneous, separate drifts DoD Test	U12N.22	7/25/90	Tunnel	<20 kt	389.40	272671.000	192556.000	
Raritan	U9U	9/6/62	Shaft	Low	157.28	264262.366	207660.908	
Reblochon	U2EN	2/23/78	Shaft	20 to 150 kt	658.40	263515.282	205968.985	
REO	U10M	1/22/66			208.18	267250.241	208178.405	
Rex	U20H	2/24/66	Shaft	19 kt	671.17	279811.443	173049.370	
Rhyolite Simultaneous with Nightingale	U2EY	6/22/88	Shaft	<150 kt	207.30	268224.537	205191.771	misc-4642 surface only
RIO BLANCO	OCORBL	5/17/73		33 kt	1780.03	-99.900	-99.900	UCRL-51504 (Toman and others, 1973), FF-boreholes.
Riola	U2EQ	9/25/80	Shaft	1.07 kt	424.00	262647.731	205908.988	
Rivet I	U10AA	1/18/67	Shaft	<20 kt	151.79	268124.047	207474.718	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Rivet II	U10Z	1/26/67	Shaft	<20 kt	197.51	268087.318	207340.764	
Rivet III	U10Y	3/2/67	Shaft	<20 kt	273.71	268206.050	207282.949	
Rivoli	U2EG	5/20/76	Shaft	<20 kt	200.00	265014.282	205715.451	
ROANOKE	U9Q	10/12/62						5/23/67
Romano	U2EX	12/16/83	Shaft	20 to 150 kt	515.00	265371.728	205225.332	
Roquefort	U4AS	10/16/85	Shaft	20 to 150 kt	415.00	261960.823	200863.632	UCRL-ID-119552 (12/94) surface only
Rovena	U10S	8/10/66	Shaft	<20 kt	195.07	268516.913	207363.969	
Sacramento	U9V	6/30/62	Shaft	Low	149.05	262829.441	207432.018	
Salmon Nuclear test detection research experiment	OMSLAM	10/22/64	Shaft	5.3 kt	828.14	-99.900	-99.900	FF meas.-boreholes, Perret, 1968, VUF-3012
Salut	U20AK	6/12/85	Shaft	20 to 150 kt	608.00	277139.665	168157.165	UCRL-ID-121263 (5/95) surface only
Santee	U10F	10/27/62	Shaft	Low	318.52	266365.274	206868.308	
Sappho	U2DH2	3/23/72	Shaft	<20 kt	197.82	262326.294	204466.549	
Satsop	U2G	8/15/63	Shaft	Low	226.16	266883.249	204810.913	
Saturn	U12C.02	8/10/57	Tunnel	Zero	39.01	-99.900	-99.900	
Satz	U2DQ	7/7/78	Shaft	<20 kt	315.00	262189.378	204795.310	
Saxon Excavation	U2CC	7/28/66	Shaft	<20 kt	153.62	265343.884	199797.299	
Schellbourne	U2GF	5/13/88	Shaft	<150 kt	463.00	263594.616	205231.395	misc-4688 surface only
Schooner	U20U	12/8/68	Crater	30 kt	111.25	287734.634	161330.957	
Scotch	U19as	5/23/67		155 kt				Surface stations, HN-20-1028 (1969).
Scree-Acajou	U9IX24	10/13/70	Shaft	<20 kt	249.94	265060.657	208605.610	
Scree-Alhambra	U9IZ21	10/13/70	Shaft	<20 kt	192.02	264689.026	208849.393	
Scree-Chamois Simultaneous, separate holes	U9IZ24	10/13/70	Shaft		100.58	265054.040	208849.487	
Scroll Nuclear test detection experiment	U19N	4/23/68	Shaft	<20 kt	224.03	287135.661	178194.053	
Scuttle by aircraft only	U2BH	11/13/69	Shaft	1.7 kt	164.59	268053.693	204963.249	
Seafoam	U2EA	12/13/73	Shaft	<20 kt	198.12	267695.735	205123.224	
Seco	U8L	2/25/81	Shaft	<20 kt	200.00	269964.503	204114.813	UCRL-ID-127715 (6/97) surface only

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Sedan Crater 1280 ft. diameter, 320 ft. deep Excavation experiment Thermonuclear device	U10H	7/6/62	Crater	104 kt	193.55	269443.763	207569.166	surface meas., PNE-213F (Mickey, 1963).
Seersucker	U9BM	2/19/65	Shaft	<20 kt	144.17	262824.116	208892.449	
Serena	U20AN	7/25/85	Shaft	20 to 150 kt	597.00	282630.429	172666.903	
Serpa	U19AI	12/17/80	Shaft	20 to 150 kt	573.00	285720.064	183551.461	
Shoal	cent NV	10/26/63						surface stations, Perret, 1967, SC-RR-66-696; free field measurements in shaft and boreholes; Sandia report VUF-2001, final report
Shuffle	U10T	4/18/68	Shaft	20 to 200 kt	493.17	266730.733	208330.808	
Silene	U9CK	6/28/73	Shaft	<20 kt	198.12	262555.184	208011.158	
Simms Excavation	U10W	11/5/66	Shaft	<20 kt	198.73	268660.008	207412.334	
Small Boy	area 5	7/14/62		low				Barton memo, 4/4/63, 63-9716.3-588, surface meas.
Solanum	U9IW24.5	12/14/72	Shaft	<20 kt	201.17	265130.935	208544.647	
SPIDER	U2BP1	8/14/69			213.36	267573.059	205963.114	
SPIDER	U2BP2	8/14/69			227.69	267344.885	205948.511	
Spoon	U9BD	9/11/64	Shaft	<20 kt	179.83	262433.011	209382.669	
St. Lawrence	U2B	11/9/62	Shaft	Low	166.73	267964.014	205100.406	
Staccato	U10AH	1/19/68	Shaft	20 to 200 kt	443.48	267150.312	206829.851	
Stanley	U10Q	7/27/67	Shaft	20 to 200 kt	483.72	266304.183	207310.263	
Stanyan	U2AW	9/26/74	Shaft	20 to 200 kt	572.99	264505.899	205557.595	
Starwort	U2BS	4/26/73	Shaft	90 kt	563.88	263448.293	206441.892	
Sterling Nuclear test detection experiment	OMSS1A2	12/3/66	Shaft	380 tons	828.14	-99.900	-99.900	FF-boreholes, Perret, 1968, SC-RR-68-410
Stillwater	U9C	2/8/62	Shaft	3.07 kt	181.36	263917.878	206959.538	
Stilton	U20P	6/3/75	Shaft	20 to 200 kt	731.50	287366.405	165140.958	
Stoddard Excavation	U2CMS	9/17/68	Shaft	20 to 200 kt	467.87	263058.084	200316.171	NVO-21, hole meas?
Stones	U9AE	5/22/63	Shaft	Intermediate	393.19	262128.247	208178.719	
Stutz	U2CA	4/6/66	Shaft	<20 kt	226.16	265232.757	199113.208	
Suede	U9BK	3/20/65	Shaft	<20 kt	143.26	262621.183	209292.759	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Sulky Excavation test of explosive buried at greater depth in relation to yield Produced mound of broken rock	U18D	12/18/64	Shaft	92 tons	27.13	258848.587	181216.377	
Sutter	U2BW	12/21/76	Shaft	<20 kt	200.00	266647.306	205984.236	
Switch Excavation	U9BV	6/22/67	Shaft	<20 kt	302.06	263743.992	209093.236	
Tafi	U20AE	7/25/80	Shaft	20 to 150 kt	680.00	278081.487	169189.009	
Tamalpais	U12B.02	10/8/58	Tunnel	72 tons	100.58	271395.000	193789.000	
Tanya	U2DT	7/30/68	Shaft	20 to 200 kt	381.00	262738.174	204338.070	NVO-21, hole meas?
Tapestry	U2AN	5/12/66	Shaft	<20 kt	248.72	264688.517	205313.901	
Tarko	U2FD	2/28/80	Shaft	<20 kt	369.00	263820.171	203774.433	UCRL-ID-127858 (6/97) surface only
Taunton	U9AA	12/4/62	Shaft	Low	227.08	264012.180	207194.310	
Tee	U2AB	5/7/65	Shaft	7 kt	184.40	265365.464	205706.563	
Teleme	U9CL	2/6/75	Shaft	<20 kt	304.80	262479.176	209778.925	
Temescal	U4AB	11/2/74	Shaft	<20 kt	262.71	260116.825	203515.385	
Templar Excavation	U9BT	3/24/66	Shaft	<20 kt	149.96	262386.626	208862.923	
Tenabo	U20BB	10/12/90	Shaft	20 to 150 kt	600.00	277139.665	167699.866	UCRL-MI-106506 none
Terrine-White	U9BI1	12/18/69	Shaft	20 to 200 kt	457.20	263177.102	208553.465	
Terrine-Yellow Simultaneous, separate holes	U9BI2	12/18/69	Shaft	20 to 200 kt	417.58	263203.763	209101.265	
THROW	U2BG	4/10/68						
Throw Simultaneous, separate holes	U2BG	4/10/68	Shaft	<20 kt	228.60	267167.046	204307.974	
Ticking	U9BJ	8/21/65	Shaft	<20 kt	208.48	262311.502	209336.943	
Tierra	U19AC	12/15/84	Shaft	20 to 150 kt	640.00	280904.325	184434.944	
Tilci	U4AK	11/11/81	Shaft	20 to 150 kt	445.00	258257.603	205587.963	UCRL-89408,surface and free field (UE4ae), UCRL-ID-127717 (6/97), memo from Stubbs to Hudson (1/10/83) UOPKL 83-6 free field velocity records
Tinderbox	U9AZ	11/22/68	Shaft	<20 kt	441.96	265328.949	207873.918	NVO-21, hole meas?

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Tiny Tot DoD Test	U15E	6/17/65	Tunnel	<20 kt	110.95	274587.054	206507.573	
Tioga	U9F	10/18/62	Shaft	Low	59.44	264069.412	208061.151	
Tomme/Midnight Zephyr DoD Test	U12N.18	9/21/83	Tunnel	<20 kt	404.80	272993.709	193000.127	
Tornillo	U9AQ	10/11/63	Shaft	Low	149.66	262984.855	208635.770	
Toyah	U9AC	3/15/63	Shaft	Low	130.45	263765.066	207660.567	
Traveler	U2CD	5/4/66	Shaft	<20 kt	197.51	264963.237	199446.742	
Trumbull	U4AA	9/26/74	Shaft	<20 kt	262.71	260116.770	203240.879	
Tub-A	U10AJC	6/6/68	Shaft	<20 kt	188.98	268388.175	207833.566	
Tub-B	U10AJB	6/6/68	Shaft	<20 kt	188.98	268157.435	207750.523	
Tub-C	U10AJF	6/6/68	Shaft	<20 kt	188.98	268157.812	207995.610	
Tub-D	U10AJD	6/6/68	Shaft	<20 kt	273.10	268331.866	207627.892	
Tub-F Simultaneous, separate holes	U10AJA	6/6/68	Shaft	<20 kt	188.98	268332.271	207872.918	
Tun-A	U10AM1	12/10/69	Shaft	<20 kt	199.64	268392.320	204566.731	
Tun-B	U10AM2	12/10/69	Shaft	<20 kt	193.85	268590.343	204566.728	
Tun-C	U10AM3	12/10/69	Shaft	<20 kt	193.70	268391.790	204764.851	
Tun-D Simultaneous, separate holes	U10AM4	12/10/69	Shaft	<20 kt	256.34	268589.953	204765.394	
Turf	U10C	4/24/64	Shaft	20 to 200 kt	506.27	266395.852	206700.646	
Tweed	U9BN	5/21/65	Shaft	<20 kt	284.38	262966.665	209184.704	
Tybo	U20Y	5/14/75	Shaft	200 to 1000 kt	765.00	274138.180	169483.105	UOPBA 76-45 (3-1-76) surface only Wheeler and Preston
Tyg-A	U2DC4	12/12/68	Shaft	<20 kt	228.30	263189.176	204484.273	
Tyg-B	U2DC5	12/12/68	Shaft	<20 kt	251.16	262830.992	204575.092	
Tyg-C	U2DC3	12/12/68	Shaft	<20 kt	228.30	262883.421	204781.814	
Tyg-D	U2DC2	12/12/68	Shaft	<20 kt	206.96	263241.565	204690.684	
Tyg-E	U2DC1	12/12/68	Shaft	<20 kt	197.82	263088.472	204839.771	
Tyg-F Simultaneous, separate holes	U2DC6	12/12/68	Shaft	<20 kt	264.87	262972.633	204381.967	
Uranus	U12C.01	3/14/58	Tunnel	<1 ton	34.75	-99.900	-99.900	
Valise	U9BY	3/18/69	Shaft	<20 kt	91.44	265244.208	208000.234	
Vat	U9CF	10/10/68	Shaft	<20 kt	192.02	264596.943	207874.083	

Event	Hole	Event Date	Hole Type	Yield	Depth of Burial	Nevada State Plane Coordinates		Final Reports
Venus	U12D.01	2/22/58	Tunnel	<1 ton	30.48	-99.900	-99.900	
Vide	U8K	4/30/81	Shaft	<20 kt	323.00	269457.791	204072.503	UCRL-ID-125022 (3/96) surface only (FF???), memo from Stubbs 11/6/80, UOPKL 80-84
Vigil	U10AD	11/22/66	Shaft	<20 kt	91.44	268596.088	207314.643	
Ville	U4AM	6/12/85	Shaft	<20 kt	293.20	259579.803	204206.430	UCRL-ID-120666 (5/95) surface only
VILLE	U4am	6/12/85			293.20	259579.803	204206.430	
Vito	U10AB	7/14/67	Shaft	<20 kt	96.62	268139.223	207618.136	
Vulcan Heavy element production	U2BD	6/25/66	Shaft	25 kt	322.78	267020.348	205207.145	
Waller	U2BZ	10/2/73	Shaft	<20 kt	310.90	266868.113	205603.242	
Ward	U10X	2/8/67	Shaft	<20 kt	259.99	268390.391	207421.180	
Washer	U10R	8/10/67	Shaft	<20 kt	466.34	267188.239	207416.434	
Wexford	U2CR	8/30/84	Shaft	<20 kt	314.00	265725.175	200497.841	UCRL-ID-121265 (5/95) surface only
White	U9B	5/25/62	Shaft	Low	192.63	263653.113	207020.147	
Wichita	U9Y	7/27/62	Shaft	Low	150.27	264189.223	206617.682	
Wineskin	U12r	1/15/69	Shaft	20 to 200 kt	518.16	272918.750	191567.165	
WINESKIN	U12R	1/15/69			174.96	229667.189	216408.147	
WISHBONE	U5A	2/18/65						
Wool	U9BH	1/14/65	Shaft	<20 kt	216.10	263021.572	209443.526	
Worth	U10AG	10/25/67	Shaft	<20 kt	187.45	267148.200	207299.235	
Yannigan-Blue	U2AY3	2/26/70	Shaft	20 to 200 kt	363.63	262418.490	205801.003	
Yannigan-Red	U2AY1	2/26/70	Shaft	20 to 200 kt	391.97	262704.811	206186.219	
Yannigan-White Simultaneous, separate holes	U2AY2	2/26/70	Shaft	20 to 200 kt	394.72	262889.310	205740.341	
Yard	U10AF	9/7/67	Shaft	20 to 200 kt	521.21	266792.803	206929.457	
York	U9Z	8/24/62	Shaft	Low	226.47	262969.710	208136.053	
Yuba Operational	U12B.10	6/5/63	Tunnel	3.1 kt	242.62	271532.608	193014.529	
Zinnia	U2DK	5/17/72	Shaft	<20 kt	322.78	263155.544	203832.713	

Appendix 3A
Memorandum for Excel Spread Sheet

John Rambo

Appendix 3A

MEMORANDUM

TO: Distribution
FROM: John Rambo
DATE: February 18, 2005
SUBJECT: New Ground Motion and Containment Diagnostics Spreadsheet Rev. 2

INTRODUCTION

I have taken the spreadsheet [1,2] that gave the locations of all the documents in the Containment Diagnostics Library (room 1113 in T1406) and modified it to include free field ground motion and containment diagnostics documents that are available elsewhere in the T1406. The original spreadsheet will be preserved to find documents currently located in T1406. That spreadsheet mentions the existence ground motion data and also other containment diagnostics. The new spreadsheet is titled ["Ground Motion Data Appendix 3"]. Its function is to indicate existence of documents, digital data, or paper records we (LLNL Containment Program) have related to free field, free surface, and containment diagnostics. Each is associated with an event name. Additional information was added from other ground motion documents and the spreadsheet includes the mention of classified reports with unclassified titles with a symbol (U) appended to the title.

The lead for this project, Bill Foxall, was interested in where we could find free surface and free field data on any event. The project relates to Yucca Mountain worries about earthquake damage. The money ran out at the end of this last fiscal year. This memo serves to explain what was done so far, what was not done and what could be done in the future if the money is available. It also serves to save time for the person who picks up the project and needs to know what to do for improvements.

The spreadsheet, even in its current form, has value to others who seek out free field data for calculations and containment related issues. Prior to this project there have been a number of requests for event free field ground motion data. Up until now, it has been a somewhat laborious process of going through reports to find it or to find the appropriate reports in the first place.

WHAT WAS DONE

A column was added to the old spreadsheet that specifies the number of free surface gages and subsurface free field gages. Included in the subsurface gages are free field ground motion and stress gages with the organization that fielded the gage. Information from three reports[4,5,6] specified the existence of free field data and the report reference were added to the appropriate columns. One report by LLNL[4] took information from Perret and Bass (Sandia)[6] and added LLNL event data to it. This was used to account for the older data up to 1974. It included LANL, Sandia and DOD data. After

that date the information was taken from all LLNL's Containment Data Reports (CDR). The CDR data went from 7/1977 to the end of testing in1992. I went through all of the CDR's and extracted the existence of free field and free surface data. References 4, 5, and 6 also mention POR, (Project Officers Report), WT (Weapons Test), Sandia, Physics International (PI), SCUBED, UCID's, UCRL's, and other reporting agency reports. These report numbers were included but most likely are not in our possession. However, the reports library may have copies of a number of them. I also recall running across POR and WT reports in the archives during the declassification process. Many of them will be classified.

Free surface reports came from three sources, Ref 5, Round Robin reports and CDR's. Ref. 5 mentions all the peak free surface data known up to 1973. Some of the data may not have been recorded elsewhere. One source, Roger Preston then at Sandia collected hard-to-get data over the years. This reference does not give the specifics of where the gage was located on the surface. It was apparently close enough to the SGZ to be a representative measurement for peak surface velocity.

The new spreadsheet mentions the Pathfinder reports, which are free surface measurements, made at one underground test to the surface of another. Although these are free field they are usually at a considerable distance from the event being detonated. They are not in the free field column.

Round Robin measurements are from separate event reports and consisted of an array of 2 or more surface gages. One of the gages is close to the emplacement hole and represents a peak surface measurement. These reports give the time series traces and could be digitized. The tapes may reside at Sandia. It is possible that some of the data is in digital form and stored on the old photostore system. Much of the old memory system is still available in its reincarnated form on recent storage devices. Hopefully, all the LLNL related data have been transcribed to CD's.

The CDR's represent LLNL events spanning a time from 1977 to the end of testing in 1992. The CDR's include time series traces in each report but are conveniently available in digital form on CD's. I went through each report and entered the horizontal distance to the surface gages in the free field column. Usually, the closest gage was placed 50' from the center of the emplacement hole. I also entered RTP for gages in the ground at the Recording Trailer Park (RTP). However, it was not entered if the gage was in a trailer in the trailer park. The CDR reference in the free field column refers to the full named report located on the same row in the analysis column.

The number of subsurface gages were entered, the recording organization, the gage type (ground motion or stress) and the orientation to the WP. The orientation labeled offset-vertical for instrument and satellite holes and horizontal shot-level for events that had shot-level gages in separate holes or tunnel drifts. Some mention of vertical gages was used in ref. 4 but the difference between vertical and vertical offset was not defined. In many cases the orientation was not known and a (ONI) was added to indicate that the Orientation was Not Investigated, e.g. (ONI). The orientation will be shown in the original data reports. The information on subsurface gages came from references 4, 5, 6, and the CDR's. This data is all from LLNL events with instrumentation provided by EG&G. The CDR's mention when free field data was not

taken and I added this comment to the free field column. However, the comment really means that free field data was not the intention of the instrumentation. There were ground motion gages placed in plugs. LLNL found on the QUESO event[7] that the plug data gave good results of the free field. Figure 1 shows the comparison of plug to particle velocity to instrument hole gages at the same radial range from the WP. I included the number of plug ground motion gages in the free field column. Occasionally, special gages from the instrument hole were mentioned. These were free field but were intended for peak measurements.

WHAT HAS YET TO BE DONE

If a thorough spreadsheet of all available data of both ground motion and containment diagnostics, is the final goal, then a number additional items need to be searched and added.

1. Add the LANL free field data from their ground motion data base[8,9].
2. Make a though search through the event files in the T1406 vault for ground motion documentation not on the spreadsheet. LLNL free field data from 1974 to 1977 is not in the free field column in the spreadsheet
3. Add the missing free field, free surface, and LLNL containment diagnostics reports to the spreadsheet.
4. Add to the analysis column, calculation reports that were compared to the ground motion. Most of this information is in the event files. Some of the information is in the Containment Symposium documents.
5. Add more of the reference material that cover more than one event. Bass (1993), the CFRD Perret and Bass report, and Perret and Bass Revisited are examples, and I am sure there are others. These are located in the ground motion files in the vault (southwest wall, shelf 3 or 4 from bottom) and in the Containment Library (see the CL spreadsheet for "Ground Motion, Scaled Data" location in CL).
6. Add a column that shows the availability of actual digital data, the location of raw tapes, the location of paper records, and the possible fact that the data is no longer available. Some of this data could come from Jeff Wagoner's spreadsheet.
7. Add Jeff Wagoner's spreadsheet to this spreadsheet.
8. Fill in the date of event column and add a DOB column.
9. Go through DOD, DNA, and ARPA reports in search of any other missing ground motion information. The tunnel events after 1987 are likely candidates because reference 5 ends at this date.
10. Retrieve reports to find missing data or Not Investigated (NI) items on the spreadsheet. Specifically, items labeled ONI or NI.
11. Add subsurface gage radial locations relative to the WP and depth distance from the surface.
12. Add metric units.

SUMMARY

One could go on about corrections and data to add but in its current form the spreadsheet points to a reasonable large amount of free field and free surface data with

some indication of the organization that took and reported the data. I found the following summary information from the spreadsheet. Of the 381 events on the spreadsheet, 164 events have free surface data, 69 events have free field data, and 44 events have gages in plugs. We have digital CD information on 189 events. The three highest free surface velocity non-crater events are CANNIKIN, TYBO, and HALFBEAK.

Information retrieval projects such as this tend to follow what I call “the 80% rule”. It takes a certain amount of time (X) to provide 80% of the total value of the data set. It takes the same X amount of time to provide 80% of the 20% left to do and so on. The last parts of the complete data set become more and more difficult to find or verify. In this case X is about 2 weeks.

More details of the spreadsheet and an abbreviation table are provided in the appendix.

AKNOWLEGEMENT

I wish to acknowledge the LLNL D&NT Containment Program. It has taken a great deal of effort and money to organize and continually store the information that is available in this spreadsheet. The Containment Program requests that you also acknowledge contributions to your projects, reports, or proposals when using this data. I wish to thank Gayle Pawloski for supporting some of this effort. I also donated 8 hours of my personal time to write this report after the fiscal year ended.

This work was performed under the auspices of the U.S. Department of Energy by the University of California, Lawrence Livermore National Laboratory under Contract No. W-7405-Eng-48.

REFERENCES

1.“Initial Mapping of Containment Diagnostic Data and As-Built Information in Rm. 1113 of T1406”, J. Rambo, Internal LLNL Memo, 5/13/98. With spreadsheet enclosure “Room 1113 Sp Meas. Map”

2.”Re-mapping of Containment Diagnostic Data and As-built Information in Rm. 1113, the Containment Library, and Vault of T1406”, J. Rambo, Internal LLNL Memorandum, 10/4/99, with spreadsheet enclosure “Room 1113/CL Event Map 10/99 2”

3. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73.

4.CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, (V).

5. CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87.

6."Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories, 11/72.

7."QUESO Containment Data Report", T. Stubbs, and R. Heinle, UCRL-ID-121259, 5/95.

DETAILS [for Ground Motion Data Appendix 3 (John Rambo)]

Column A	Event Name
Column B	Hole Identification
Column C	Comments – includes event sponsor, pre BANEBERRY, gages below water table, gages in dolomite, carbonate, granite, non NTS locations.
Column D	Early LLNL processed data. Work performed by Preston and Wheeler on containment diagnostics. It consists of hard copy processed data and engineering reports. (LLNL Events prior to 1977).
Column E	Containment Diagnostics and ground motion – EG&G processed data as CD's and notebooks (LLNL Events after 1977).
Column F	Later data processing at LLNL by EG&G. Pre event information and analysis information related to T. Stubbs data processing effort.
Column G	Data plots on hard copy data rolls which include surface and subsurface ground motion.
Column H	Surface ground motion distance from SGZ.
Column I	Event data comparisons and analysis which include multiple events.
Column J	Summary and final reports which include ground motion analysis.
Column K	Gage locations for free surface and free field gages - number of gages at surface, the horizontal distance, fielding organization, and reference information.
	Number of subsurface free field gages, type of gages, fielding organization, and reference information. References refer mostly to report citations in columns I and J.

ABBREVIATIONS

PI	Physics International
SRI	Stanford Research International
WES	Waterway Experiment Station
NI	Not Investigated
DNA	Defense Nuclear Agency
DOD	Department of Defense
ONI	Orientation of gages subsurface – not investigated
RR	Round Robin Program reports.
CDR	Containment Data Report
RTP	Recording Trailer Park – The location for some free surface gages.
POR	Project Officers Report
WT	Weapons Test report
GM	Ground Motion

Appendix 3B
(Attached as excel spreadsheet)

John Rambo

This spreadsheet shows the existence of free field ground motion data and the inclusion of some containment diagnostics. The information is stored in the LLNL DNT Containment Program Libraries. To access data see Gayle Pawloski or John Rambo.

This data resides in the LLNL DNT Containment Program files. Program Leader Norman Burkhard (925-422-6483, burkhard1@llnl.gov) or Deputy Program Leader Gayle Pawloski (925-423-0437, gpawloski@llnl.gov).

Locations are given in parentheses for room 1113, the Containment Diagnostics Library (CDL), in the form of (Section, Zone, Shelf). (B,a,6) would be Section B, Zone a and Shelf 6.

PDS = Portable Data System

CL = Containment Library (Room 1110). For this listing items are located in bookshelves S and SE on shelves 3 and 4.

V = T1406 Vault, room 1103. For this listing Items are located in the event files.

Conf. = Confidential reports. These may also be CFRD

CD = Compact disk. There location will be in the T1406 Vault.

EVENT	HOLE	COMMENTS	DATA _____ Early LLNL processed data and reports	DATA _____ Later EG&G processed data and reports	DATA _____ Later data processed at LLNL by EG&G	DATA _____ Data Plots, Surface, Subsurface Ground Motion, Pressure/ Radiation LOS/Displ./ Misc. Similar Items are included in this column.	DATA _____ Ground Motion at Distance From SGZ. Geophone plots (yellow).	EVENT COMPARISONS	SUMMARY AND FINAL REPORTS _____ CONF=Classified CFRD CDR=Containment Data Report	GAGE LOCATIONS FOR FREE SURFACE AND FREE FIELD DATA _____ RR=Round Robin Surface gages RTP=Recording Trailer Park ONI=Orientaion to WP Not Investigated

This data resides in the LLNL DNT Containment Program files. Program Leader Norman Burkhard (925-422-6483, burkhard1@llnl.gov) or Deputy Program Leader Gayle Pawloski (925-423-0437, gpawloski@llnl.gov).

EVENT	HOLE	COMMENTS	DATA _____ Early LLNL processed data and reports	DATA _____ Later EG&G processed data and reports	DATA _____ Later data processed at LLNL by EG&G	DATA _____ Data Plots, Surface, Subsurface Ground Motion, Pressure/ Radiation LOS/Displ./ Misc. Similar Items are included in this column.	DATA _____ Ground Motion at Distance From SGZ. Geophone plots (yellow).	EVENT COMPARISONS	SUMMARY AND FINAL REPORTS _____ CONF=Classified CFRD CDR=Containment Data Report	GAGE LOCATIONS FOR FREE SURFACE AND FREE FIELD DATA _____ RR=Round Robin Surface gages RTP=Recording Trailer Park ONI=Orientaion to WP Not Investigated
AGILE	U2v	LLNL, Pre-BANEBERRY, 3 free field gages in tuff below the water table, 1 free field gage in carbonate	None	None	None	12 Ground Motion Playback Rolls in Box	Pathfinder I	Binder G, and CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87. Unclassified report "Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories, 11/72. CFRD report "Summary of Free Field Ground Motion Measurments(U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	CFRD report "Comparison of a Two-Layered Model Calculation of AGILE with Obsevations; Projection of the Model to CREW (U)",R. G. Preston and V. E. Wheeler, UOPKG 68-3, 2/9/68, . CFRD report "Corrections to LRL Memos, Ser UOPKG 68-3 and UOPKG 68-3 Addendum (U)", V.E. Wheeler/R. G. Preston, UOPKG 68-9, 3/21/68, . Sandia, unreported	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 1 shot level GM gage, 5 offset verticle GM gages, 10 verticle GM gages. (Ref. UOPBA 74-126)
AGOUTI	U3ad	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Hor. dist. (NI) (Ref. UOPBA 73-44)
AGRINI	U2ev	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	4 Pipe and Hose CLIPER Data Listings in Box	None	Binder X, Binder T (CLIPER/EXCOR), 3 Presentation Binders	"AGRINI: Containment Related Measurements and Conclusions" UCRL 53725 ; UCRL-ID-128934 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
AJAX	U9al	Large Line-of-Sight (LOS) Pipe, LLNL, LLNL, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	4 LOS Related Data Roles (Green)	None	None	None	

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AKAVI	U2es	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	4 Ground Motion Rolls (Blue)	None	None	Draft Report "Final Data Report: Surface Motion from the AKAVI Event" ; UCRL-ID-122069 (CDR)	Surface, Horiz. Dist. 50' 14 gage surface array, See report (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
AKBAR	U10ax	LLNL	4 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	CNSI report "Round Robin Program AKBAR Event (U)", W. R. Perret, Sandia UOPBA 72-156, 12/7/72 (V).	report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	CFRD report "Response of the Pinex Pipe and Stemming in AKBAR (U)", V. E. Wheeler/R. G. Preston, UOPBA 73-184, 10/24/73, . CRD report "Containment Diagnostics on the AKBAR Event, U10ax (U)", C. W. Olsen, UOPBA 73-71, 5/3/73,	Surface, Horiz., 50', 438', 438', 437'. (Ref. RR); Ground Motion can in the surface casing. Subsurface, stemming gages (Ref. UOPBA 74-126)
ALGODONES	U3jn	LANL	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
ALMENDRO	U19v	LANL	None	None	None	None	Earth Strain Cals.	None	None	
ALUMROOT	U9cj	LLNL	None	None	None	None	None	Binder F (CEP Related)	None	
ALVA	U2j	LLNL, Pre-BANEBERRY	None	None	None	None	1 Geophone Roll (Yellow)	None	None	
ANTLER	U12e.03	LLNL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)

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APODACA	U3gs	LANL	None	None	None	None	CNSI report "Round Robin Program APODACA Event (U)", W. R. Perret, Sandia UOPBA #004, 7/28/71 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 36', 400'
ARDVARK	U3am-S	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
ARMADA	U9cs	LLNL	None	CD of Compressed Raw & Processed Data , CD of ASCII Processed Data ; 1 Binder	1 Folder	1 Ground Motion Roll (Blue) , 1 Roll of Pres./ Radiation Traces (Red)	None	Binder Y, Binder T (CLIPER/EXCOR)	Draft Report "Preliminary Data Report: ARMADA Motion, Pressure, and Radiation" , UCRL-ID-125020 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)
ARMADILLO	U3ar	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
ARSENATE	U9ci	LLNL	6 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	CNSI report "Round Robin Program ARSENATE Event (U)", W. R. Perret, Sandia UOPBA 72-157, 12/7/72 (V).	Binders B, F, H. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	CFRD report "Coupling Efficiency and the Estimated Yield of ARSENATE from Free Field Ground Motions (U)", V. E. Wheeler/ R. G. Preston, UOPBA 73-12, 2/1/73	Surface (Ref. RR) Horiz.,50', 375, 375, 375', Subsurface in Satellite Hole, Range, 230', 246', 291', and 319'
ASCO	U10bc	LLNL	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
ASIAGO	U2ar	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals.	None	"Data Report for the Containment Diagnostics on ASIAGO, U2ar", UOPBA 77-38	

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ATARQUE	U3ht	LANL	None	None	None	None	CONF report "Round Robin Program ATATQUE Event (U)", W. R. Perret, Sandia UOPBA 72-90, 8/10/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 51', 487', 487', 486'
AVENS ALKERMES AVENS ANDORRE AVENS ASMALTE AVENS CREAM	U9I U-24 U9I T-28 U9I W-21 U9I X-29	LLNL, Pre-BANEBERRY	None	None	None	None	None	1 Presentation Binder	None	
AZUL	U2em	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	None	1 Wide Geophone Roll, & 1 Regular Roll (Yellow)	Binder U (Peak Accelleration of Trailers), 1 Presentation Binder	Draft Report "Motion of the Stemming and Emplacement Pipe from the AZUL Event" , UCRL-ID-127719 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
BACKBEACH	U19x	LANL	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
BACKSWING	U9aw	LLNL, Pre-BANEBERRY	None	None	None	None	1 Geophone Roll (Yellow)	None	None	
BALTIC	U9IS 25	May also be reffered to as NAMA BALTIC Event	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 50'

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BANEBERRY	U8d	BANEBERRY	5 Binders	CD of Compressed Raw & Processed Data	None	None	1 Wide Geophone Roll (Yellow)	Binders E, L, O, and CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Summary of Free Field Ground Motion Measurments(U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74.	"BANEBERRY Free Surface Motion:, Joseph R. Hearst, UCON 71-1, 5/17/71,	Surface, 16mm film playback of videotape from camera #1, located 2000' west and south of SGZ. Subsurface, stemming gages (Ref. UOPBA 74-126)
BANON	U2dz	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals. Pathfinder II	None	"Post-Operational Report for the Containment Diagnostics on BANON, U2dz", UOPBA 76-161	
BARNWELL	U20az	LLNL	1 Binder	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 LLNL Data Binder; 1 LANL Data Binder	2 Folders	None	None	Binder T (CLIPER/EXCOR), 2 Presentation Binders	MISC-5035 (CDR)	Surface, None: Dist. 50', 992', 1970' (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
BELLOW	U4ac	LLNL	None	None	1 Folder	None	None	None	None	
BELMONT	U20as	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	CLIPER Printout	None	Binder U (Peak Accelleration of Trailers), 2 Presentation Binders	"Containment Diagnostics Report for BELMONT, U20as" UOPKL 87-2	Surface, None: Dist. 50', RTP gage is 50' from trailer #985 (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
BENHAM	U20c	LLNL, Pre-BANEBERRY	None	None	None	None	2 Geophone Rolls (Yellow)	1 Presentation Binder	None	
BILLET	U7an	LANL	None	None	None	None	Earth Strain Cals.	None	None	

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BODIE	U20ap	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	2 Folders	2 CLIPER List 1 Grnd Motion Roll (Blue), 4 Pres./ Rad. (Volts) Printout Rolls (Red), 2 Pres./ Rad. (Conv. to Units) Printout Rolls (Red), 1 Pres./ Rad. and Accel. Traces on Roll (Red), 2 Rolls/Boxes of	1 Geophone Roll (Yellow)	Binder W, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 4 Presentation Binders	UCRL-ID-117558 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
BONARDA	U3gv	LANL	None	None	None	None	Pathfinder CD with interaction measurment made at RIOLA	None	None	
BORATE	U2ge	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	1 Pres./ Radiation Printout Role (Red)	None	Binder W, Binder U (Peak Accelleration of Trailers), 1 Presentation Binder	UCRL-ID-117557 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
BOXCAR	U20g	LLNL, Pre-BANEBERRY	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia, unreported	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 7 shot level GM gages (Ref. UOPBA 74-126).

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BRACKEN	U10aq	LLNL	5 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binders B, H, P, and CFRD report "Summary of Free Field Ground Motion Measurments(U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74.	the Containment Diagnostics on BRACKEN (U)", C. W. Olsen, UOPBA 71-155, 11/20/71, . CONF report "Surface-Motion Measurements in BRACKEN and LAGOON (U)", R. G. Preston and V. E. Wheeler, UOPBA 72-10, 2/23/72, .	Surface Horiz. Dist. 44', 985' (Ref. UOPBA 72-10); Subsurface 10 (ONI) GM gages (Ref. UOPBA 74-126)
BRANCO	U2ew	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	None	None	Binder T (CLIPER/EXCOR)	Draft Report "Special Measurements on the BRANCO Event: Preliminary Report"; UCRL-ID-125019 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
BRETON	U4ar	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data; 1 Binder	2 Folders	4 Ground Motion Rolls (Blue), 3 Rolls of Pres./ Radiation Traces (Red)	None	Binder X, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 3 Presentation Binders	Draft Report "Post-shot Measurements on BRETON, Hole U4ar" ; MISC-8685 (CDR)	Surface, Horiz. Dist. 50', 632', 1106', 1584', 3173', 4753', 7498', 10985' (Ref. CDR): Subsurface, No free field gages, 4 GM gages in Plugs (Ref. CDR)

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BRIE	U10cc	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data; 1 Binder	2 Folders	1 Pres./ Radiation Printout Roll (Volts) (Red)	None	2 Presentation Binders	UCRL-ID-120651 (CDR)	Surface, Horiz. Dist. 50', 12 gage surface array, See report for horiz. distances (Ref. CDR): Subsurface, Free field gages, 7 vertical offset GM gages, 6 vertical offset stress gages, No GM gages in Plugs (Ref. CDR)
BRISTOL	U4av	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data;1 Binder	2 Folders	None	None	None	UCRL-MI-111974 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 3 experimental stress gages, 8 optical part. velocity gages, 3 ASM Part. velocity gages (Peak only), No GM gages in
BULKHEAD	U7am	LANL	None	None	None	None	Earth Strain Cals. . Pathfinder CD of Compressed Raw & Processed Data (V)	None	None	

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BULLFROG	U4au	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	None	None	Binder W, Binder T (CLIPER/EXCOR), 1 Presentation Binder	MISC-4648 (CDR)	Surface, Horiz. Dist. 50', 830', 1655' (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
BULLION	U20bd	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	2 Folders	None	None	Binder T (CLIPER/EXCOR), 2 Presentation Binders	UCRL-MI-104746 (CDR)	Surface, No Horiz. Gages (Ref. CDR): Subsurface, No free field gages, no GM gages in Plugs, (Ref. CDR)
BURZET	U4ai	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	1 Wide Ground Motion Roll (Blue)	None	None	UCRL-ID-129058 (CDR)	Surface, Horiz. Dist. 35' (Ref. CDR): Subsurface, Free field gages, 10 vertical offset GM gages, 8 vertical offset stress gages, No GM gages in Plugs (Ref. CDR)
CABOC	U2cp	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ;1 Binder	1 Folder	1 Ground Motion Roll (Blue)	None	Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), Binder S (SMIDS Collapse Signals), 1 Presentation Binder	Draft Report "Strong Motion Measured on the CABOC Event" ; "Containment Analysis for CABOC Nuclear Event" UCRL 53275 (Conf.) ; Draft Report "Containment Analysis for CABOC Nuclear Event" ; UCRL-ID-125021 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 4 GM gages in Plugs (Ref. CDR)

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CABRA	U20aj	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	1 Wide Ground Motion Roll (Blue)	None	Binder T (CLIPER/EXCOR)	"Preliminary Data Report: Motion Measurements From CABRA" UOPKL 83-41 ; Memo "CABRA Ground Motion Photo Flight" ; UCRL-ID-125018 (CDR)	Surface, Horiz. Dist. 50', 400', 800', 1200', 1600' (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)
CABRILLO	U2dr	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals. Pathfinder II	None	None	
CALABASH	U2av	LLNL, Pre-BANEBERRY, 2 free field gages in tuff below the water table.	3 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Pathfinder II	Binders D, Q, and CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87. Unclassified report "Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories, 11/72. CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	CFRD report "Preliminary Report of the Response of the Stemming in the CALABASH Nuclear Test (U)", V. E. Wheeler, D. A. Dicke, and R. C. Preston, EG&G Albuquerque Division Document ASD 70-210, 6/26/70, . Sandia/LLNL, unreported	Surface 30', Subsurface, 5 GM gages (ONI) (Ref. UOPBA 74-126)
CAMBRIC	U5e	LLNL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
CAMEMBERT	U19q	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals. PDS Cals.	None	None	

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CAMPHOR	U12g.10	LLL/SNL/DOD	None	None	None	None	None	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia, unreported	Subsurface: 4 GM gages (ONI) (Ref. UOPBA 74-126); 7 GM gages,1 stress gage (ONI) (Ref. DNA-TR-88-14)
CAMPOS	U9cp	LLNL	None	CD of Compressed Raw & Processed Data	None	None	None	Binder T (CLIPER/EXCOR)	None	
CAN GREEN or CAN RED	U2dd 1 or U2dd 4	Unknown as to which event, perhaps both, affected the data, LLNL, Pre-BANEBERRY	None	None	None	None	1 Wide Geophone Roll (Yellow)	None	None	
CANNA	U9IYZ 26	LLNL	None	None	None	None	None	Binder F	None	
CANNIKIN	UA 1	Amchitka Island, Basalt, Most of 23 gages below the water table.	3 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia report SLA-73 0043. CFRD report "Ground Motion Yield Values for CANNIKIN (U)", J. W. HADLEY, C. J. Sisemore, M. Heusinkveld, UCID-16074, 6/15/72, .	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface,23 vertical GM gages. (Ref. UOPBA 74-126)

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CARNELIAN	U4af	LLNL	1 Binder	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder Labeled Wheeler, 1 Black Binder With Corrections,	1 Folder	None	None	None	Draft Report "CARNELIAN - Motion of the Plugs and Emplacement of the Pipe" ; UCRL-ID-131332 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
CARPETBAG	U2dg	LLNL, Pre-BANEBERRY, 1 free field gage in tuff below the water table	4 Binders and One Small Black Binder	CD of Compressed Raw & Processed Data	None	None	Pathfinder II ; 1 Wide Geophone Roll (Yellow)	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87. Unclassified report "Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories, 11/72.	Sandia/LLNL, unreported	Subsurface, 4 GM gages (ONI) (Ref. UOPBA 74-126)
CASHMERE	U2ad	LLNL, Pre-BANEBERRY	None	None	None	None	Earth Strain Cals.	None	None	
CATHAY	U9ch	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	Unclassified report "Round Robin Program CATHAY Event", W. R. Perret, Sandia No document #, 8/27/71, (V).	Binders B, H, P. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 56', 619', 619', 620'.

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CEBOLLA	U3jc	LANL	None	None	None	None	CONF report "Round Robin Program CEBOLLA Event (U)", W. R. Perret, Sandia UOPBA 72-102, 8/29/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface Horiz., 50', 480', 480', 480' (Ref. RR)
CEBRERO	U9cw	LLNL	1 Binder	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ;1 Binder	1 Folder	None	None	Binder X, Binder U (Peak Accelleration of Trailers), 5 Presentation Binders	UCRL-ID-121262 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
CHAENACTIS	U2dl	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface stemming gages.
CHANCELLOR	U19ad	LANL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ;	None	None	None	None	None	
CHANTILLY	U2di	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	CONF report "Round Robin Program CHANTILLY Event (U)", W. R. Perret, Sandia UOPBA #003, 10/27/71 (V).	Binder B. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	CFRD report "Containment Diagnostics on the CHANTILLY Event (U)", C. W. Olsen, UOPBA 71-142, 11/1/71,	Surface (Ref. RR) Horiz., 71', 542', 542'.
CHATEAUGAY	U20t	Pre-BANEBERRY, LANL	None	None	None	None	8 Geophone Rolls (Yellow)	None	None	

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CHEEDAM	U2et	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	1 Folder	None	None	Binder Y, Binder T (CLIPER/EXCOR)	Draft Report "CHEEDAM Motion, Pressure and Radiation: Preliminary Data Report"; UCRL-ID-125015 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
CHEVRE	U10ay	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	1 Ground Motion Roll (Blue)	None	None	None	
CHIBERTA	U2ek	LLNL	1 Binder	None	None	None	Earth Strain Cals.	None	None	
CHINCHILLA I	U3ag	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
CHINCHILLA II	U3as	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
CLARKSMOBILE	U2as	LLNL	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
CLEARWATER	U12q	LLNL, Pre-BANEBERRY	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	SRI report VUF-2101	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 5 vertical GM gages (Ref. UOPBA 74-126)
COFFER	U2de	LLNL, Pre-BANEBERRY	1 Binder	None	None	None	1 Wide Geophone Roll (Yellow)	None	None	
COLBY	U20aa	LLNL	None	None	None	None	Earth Strain Cals.	None	None	

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COLWICK	U20ac	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	None	
COMMODORE	U2am	LLNL, Pre-BANEBERRY, 3 free field gage gages below the water table, 1 free field gage in carbonate rock	2 Binders	None	None	None	Pathfinder I	Binders G, R. CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87. Unclassified report "Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories, 11/72. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia, unreported	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 1 shot level GM gage, 5 offset vertical GM gages, 7 vertical GM gages (Ref. UOPBA 74-126)
COMSTOCK	U20ay	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ;1 Binder	1 Folder	None	None	None	MISC-4687 (CDR)	Surface, Horiz. Dist. 50', 1050', 2100' (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)

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CONTACT	U20aw	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ;1 Binder	1 Folder	None	None	Binder V	MISC-4893 (CDR)	Surface, Horiz. Dist. 50', 892', 1785' (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
CORDUROY	U10k	LLNL, Pre-BANEBERRY	None	None	1 Folder	None	None	None	None	
CORNICE GREEN CORNICE YELLOW	U10ap 3 U10ap 1	LLNL, Pre-BANEBERRY	1 Binder	CD of Compressed Raw & Processed Data	None	None	1 Wide Geophone Roll (Yellow)	None	None	
CORNUCOPIA	U2ga S	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	2 Folders	2 Ground Motion Rolls (Blue) , 2 Pres./ Radiation Printout Rolls (Red)	1 Geophone Roll (Yellow)	Binder W, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 5 Presentation Binders	"CORNUCOPIA Cavity Pressure Measurement" UCRL 96354 , UCRL-ID-120665 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)
COSO	U4an	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data;1 Binder	2 Folders	None	None	2 Presentation Binders	UCRL-MI-107445 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
COTTAGE	U8j	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data	None	None	Pathfinder CD with interaction measurment made at VILLE.	4 Presentation Binders	None	
COULOMMIERS	U2ei	LLNL	CFRD report "Notes on COULOMMIERS Instrumentation Plan (U)", V. E. Wheeler/ R. G. Preston, UOPBA 76-154, 9/20/76.	CD of Compressed Raw & Processed Data	1 Folder	None	Pathfinder II or III	None	None	

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COVE	U3ki	LANL	None	None	None	None	Earth Strain Cals., PDS Cals.	None	None	
COWLES	U3hx	LANL	None	None	None	None	CONF report "Round Robin Program COWLES Event (U)", W. R. Perret, Sandia UOPBA 72-924,2/28/72 (V).	None	None	Surface,Horiz. 51',495', 510' and 485'
CREMINO	U8e	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 2 Binders on Ground Motion, 1 Binder on Collapse,	1 Folder	1 Wide Ground Motion Roll (Blue)	Earth Strain Cals.	1 Presentation Binder . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Horiz., 51', 495', 510', 495' (Ref. RR); Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, Free field gages, 9 vertical offset GM gages, 3 vertical offset Sandia soil stress gages, 3 GM gages in Plugs (Ref. CDR) See report.
CRESTLAKE	U2dw	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	9 Ground Motion Rolls in Box.	None	Binder B	CRD report "Response of the PINEX Pipe in CRESTLAKE (U)", V. E. Wheeler/R. G. Preston, UOPBA 75-26, 2/6/75, .	May have a surface GM gage.

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CREW	U2db	LLNL, Pre-BANEBERRY	11 Binders	CD of Compressed Raw & Processed Data	1 Folder , and CFRD report "Comparison of a Two-Layered Model Calculation of AGILE with Obsevations; Projection of the Model to CREW (U)",R. G. Preston and V. E. Wheeler, UOPKG 68-3, 2/9/68, . CFRD report "Corrections to LRL Memos, Ser UOPKG 68-3 and UOPKG 68-3 Addendum (U)", V. E. Wheeler/R. G. Preston, UOPKG 68-9,3/21/68, .	None	None	CFRD report "Summary of Free Field Ground Motion Measurments(U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	None	Subsurface 18 offset vertical GM gages (Ref. UOPBA 74-126)
CREWLINE	U7ap	LANL	None	None	None	None	Pathfinder CD of Compressed Raw & Processed Data (V)	None	None	
CROWDIE	U2fe	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ; 1 Binder	1 Folder	2 Ground Motion Rolls (Blue) , 1 Roll of Pres./ Radiation Traces (Red)	None	Binder Y, Binder T (CLIPER/EXCOR)	Draft Report "Preliminary Data Report: CROWDIE Motion, Pressure and Radiation" ; UCRL-ID-122262 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)
CRUET	U2cn	LLNL, Pre-BANEBERRY	None	None	None	None	3 Geophone Rolls (Yellow)	None	None	
CYATHUS	U8b	LLNL, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	

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CYPRESS	U12g.09	LLNL/SANDIA/DOD, Pre-BANEBERRY	None	None	1 Folder	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia, not reported	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 9 vertical GM gages (Ref. UOPBA 74-126), 7 GM gages (Ref. DNA-TR-88-14)
DAMAN I	U3be	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, .	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
DANABLU	U2eu	LLNL	None	None	1 Folder	None	None	None	None	
DARWIN	U20aq	AWRE/LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data	None	None	None	1 Presentation Binder	None	
DAUPHIN	U9cq	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data ; 2 Binders (1 white, 1 blue),	1 Folder	1 Ground Motion Roll (Blue)	None	Binder U (Peak Accelleration of Trailers)	"Motion Measured in the Medium Around the DAUPHINE Event" UOPKL-82-50 ; UCRL-ID-127714 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 4 GM gages in Plugs (Ref. CDR)
DECK	U3kd	LANL	None	None	None	None	Earth Strain Cals.	None	None	

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DELAMAR	U20at	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data	1 Folder	None	1 DELAMAR Ground Motion Listing at the HARDIN Site. Located in HARDIN Box	Binder T (CLIPER/EXCOR), 2 Presentation Binders	"DELAMAR-induced Ground Motion at the HARDIN Site" UCID-21151 Rev. 1 (Motion at HARDIN)	
DELPHINIUM	U2dp	LLNL	3 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binder B. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	CRD report "Containment Diagnostics for DELPHINIUM (U)", C. W. Olsen, UOPBA 72-125, 10/24/72, (C)	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
DERRINGER	U5i	LANL/Sandia/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
DIABLO HAWK	U12n.10a	LLNL/DOD	None	None	None	None	Earth Strain Cals.	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	None	GM gages, 4 Sandia stress gages,16 PI GM gages, 26 PI stress gages, 12 WES GM gages,11 WES stress gages (Ref. DNA-TR-88-14)
DIAGONAL LINE	U11g	LLNL/DOD	None	None	1 Folder	None	None	None	None	

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DIAMOND SCULLS	U12t.02	LLNL/DOD	None	None	1 Folder	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia report SLA-73-1010, PI report POR 6725, Sandia report SAND74-0654 (no wave forms), Sandia report SAND74-0252 (no wave forms).	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 5 GM gages (ONI) (Ref. UOPBA 74-126), 1 PI GM gage, 2 Sandia stress gages, 3 Sandia GM gages, (ONI) (Ref. DNA-TR-88-14)
DIANA MIST	U12n.06	LANL/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	SRI/PI POR-6389 or WT-6389	Subsurface, 5 GM gages (ONI) (Ref. UOPBA 74-126), 2 PI GM gages (Ref. DNA-TR-88-14)
DIANTHUS	U10at	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	CONF report "Round Robin Program DIANTHUS Event (U)", W. R. Perret, Sandia UOPBA 72-32, 3/17/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, .	None	Surface (Ref. RR) Horiz., 50', 499', 500'.

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DIDO QUEEN	U12e.14	LLNL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	SCUBED report POR 6785, Sandia unreported (Priv. Com. Bass)	Subsurface, 3 SCUBED stress gages, 3 SCUBED GM gages, 3 Sandia stress gages, 1 Sandia GM gage (Ref. DNA-TR-88-14)
DIESEL TRAIN	U12e.11	LANL/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia/DOD, unreported, Sandia report SAND 74-0252 (no wavveforms), PI report POR 6364	Subsurface, 8 shot level GM gages (Ref. UOPBA 74-126), 7 Sandia GM gages, 2 PI GM gages (Ref. DNA-TR-88-14)
DILUTED WATER	U5b	LLNL/DOD	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, .	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
DINING CAR	U12e.18	LLNL/DOD	None	None	None	None	PDS Cals.	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	SCUBED report POR SSS-R-75-2638	Subsurface, 1 SCUBED stress gage, 2 SCUBED GM gages, (Ref. DNA-TR-88-14) (ONI)

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DISCUS THROWER	U8a	LANL/DOD, Pre-BANEBERRY, 4 gages in carbonate, 1 gage in argillite, 1 gage at tuff-carbonate interface.	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia report POR 6400	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 13 vertical GM gages (Ref. UOPBA 74-126)
DISKO ELM	U12p.03	LLNL/DOD	1 Binder	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ; 1 Binder, 1 Blow Down Test Binder,	2 Folders	None	None	1 Presentation Binder	Cavity Pressure Measurements on DISCO ELM" UCRL-MI-107323 and UCRL-JC-107323 (Same Title) and POR 7341 (Same Title) (CDL)	
DOFINO	U10ba	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals.	None	None	
DOOR MIST	U12g.07	LANL/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
DORMOUSE	U3aq	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
DORMOUSE PRIME	U3az	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)

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DORSAL FIN	U12e.10	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	SRI report WT 6282	No useable free field data. (Ref. DNA-TR-88-14)
DUMONT	U2t	LLNL, Pre-BANEBERRY	1 Binder	None	None	None	None	None	None	
DURYEA	U20a	LLNL, Pre-BANEBERRY	1 Binder	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	CFRD report "Close-in Surface Motion - Event DURYEA (U)", H. V. Hoffman, SRI Project PHU-6368, UCRL-13305, 8/15/67, .	Surface hor. Range 50', 600' 900' 1800' 2500'.
EAGLE	U9av	LLNL, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
EDAM	U2dy	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	CFRD report "Response of the PINEX Pipe and Ground Surface in EDAM", V. E. Wheeler/R. G. Preston, UOPBA 76-36, 2/24/76, .	Surface hor. Range (NI) (Ref. UOPBA 76-36)
EGMONT	U20al	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binder T (CLIPER/EXCOR), 3 Presentation Binders	None	
EMBUDO	U3hd	LANL	None	None	None	None	Unclassified report "Round Robin Program ONAJA & OCATE Events", W. R. Perret, Sandia, No Reference #, 6/25/71 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, None	None	Surface (Ref. RR) Horiz., 25', 497'
EMMENTHAL	U19t	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	None	

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ERMINE	U3ab	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
ESCABOSA	U7ac	LANL	None	None	None	None	Earth Strain Cals.	None	None	
ESROM	U7ak	LLNL	None	None	None	None	Earth Strain Cals.	None	None	
ESTUARY	U19g	LANL	None	None	None	None	Earth Strain Cals.	None	None	
EVANS	U12b.04	LLNL	None	None	None	None	None	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia report ITR-1703 and SRI report WT 1702	Subsurface, 24 vertical GM gages (Ref. UOPBA 74-126), 10 SRI GM gages, 19 Sandia GM gages. (Ref. DNA-TR-88-14), (ONI)
FALLON	U2dv	LLNL	None	None	None	None	PDS Cals.	None	None	
FAULTLESS	U C	Central Nevada, LLNL, Pre-BANEBERRY, WP in saturated tuff. 9 free field gages below water table.	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia report, SC-TM 68-108	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 2 shot level GM gages, 11 vertical GM gages (Ref. UOPBA 74-126)
FARALLONES	U2fa	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Pathfinder CD of Compressed Raw & Processed Data (V)	None	None	

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FARM	U20ab	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	Earth Strain Cals.	None	"Ground Motion on FARM Event" UOPKL 79-64 ; UCRL-ID-128957 (CDR)	Surface, Horiz. Dist. 100', 1021' (Ref. CDR): Subsurface, No free field gages, no GM gages in Plugs (Ref. CDR)
FISHER	U3ah	LANL, Pre-BANEBERRY	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia report VUF-2000	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 6 GM gages. (Ref. UOPBA 74-126)
FLASK GREEN FLASK RED FLASK YELLOW	U2az 1 U2az 3 U2az 2	Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
FLAX BACKUP	U2dj	LLNL, simultaneous, same hole. Alluvium.	13 Binders	CD of Compressed Raw & Processed Data	1 Folders	None	Pathfinder II , and CNSI report "Round Robin Program FLAX Event (U)", W. R. Perret, Sandia UOPBA 73-11, 1/15/73 (V)	Binders B, L, O, and CFRD report "Summary of Free Field Ground Motion Measurments(U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74. CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	CFRD report "Stemming Motion and Probable Dud Plug Failure on FLAX (U)", V. E. Wheeler, UOPBA 73-27, 2/12/73. "Calculations of the FLAX Events with Comparisons to Particle Velocity Data Recorded at Low Stress" J. T. Rambo, Proceeding of the 7th Containment Symposium, Vol. 2, Boing Space Center, Kent, WA, 8/2-4/83.	Surface (Ref. RR) hor. Range 51', 1129' and 1130'; Subsurface, 13 offset vertical GM gages. Some free field GM gages used for both FLAX events. Some stemming gages (Ref. UOPBA 74-126)

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FLAX SOURCE	U2dj	LLNL, simultaneous, same hole. Tuff	14 Binders	CD of Compressed Raw & Processed Data	2 Folders	None	Pathfinder II , and CNSI report "Round Robin Program FLAX Event (U)", W. R. Perret, Sandia UOPBA 73-11, 1/15/73 (V)	Binders B, L, O, and CFRD report "Summary of Free Field Ground Motion Measurments(U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74. CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44,	CFRD report "Stemming Motion and Probable Dud Plug Failure on FLAX (U)", V. E. Wheeler, UOPBA 73-27, 2/12/73. "Calculations of the FLAX Events with Comparisons to Particle Velocity Data Recorded at Low Stress" J. T. Rambo, Proceeding of the 7th Containment Symposium, Vol. 2, Boing Space Center, Kent, WA, 8/2-4/83.	Surface (Ref. RR) hor. Range 51', 1129' and 1130'; Subsurface, 21 offset vertical GM gages. Some free field GM gages used for both FLAX events. Some stremming gages. (Ref. UOPBA 74-126)
FLOTOST	U2ao	LLNL	None	CD of Compressed Raw & Processed Data	None	None	None	Binder T (CLIPER/EXCOR)	None	
FONDUTTA	U19z S	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals.	Binder T (CLIPER/EXCOR)	None	
FONTINA	U20f	LLNL	None	None	None	None	Earth Strain Cals.	None	None	
FRISCO	U8m	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ; 1 Binder	1 Folder	1 Ground Motion Roll (Blue) , 1 Plug/Pipe Displacement Roll (Green)	None	Binder U (Peak Acceleration of Trailers), Binder T (CLIPER/EXCOR)	Draft Report "Motion Near the Top of the Emplacement: FRISCO Event" ; UCRL-ID-125016 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
GALENA	U9cv	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 2 Binders	1 Folder	None	None	2 Presentation Binders	UCRL-MI-111644 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)

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GALVESTON	U19af	LANL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	None	None	
GASBUGGY	ONM RIO	LLNL, Pre-BANEBERRY, Farmington NM, Gas Stimulation Test, WP in Shale, 2 free field gages in shale, 2 free field gages in sandstone	None	CD of Compressed Raw & Processed Data	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia report PNE 1002	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 5 offset vertical GM gages. (Ref. UOPBA 74-126)
GASCON	U4t	LANL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	None	None	None	None	None	
GAZOOK	U2do	LLNL	3 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Round Robin	Binder B	None	
GIBNE	U20ah	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	1 Wide Ground Motion Roll (Blue)	1 Geophone Roll (Yellow)	None	None	
GNOME	ONM EDY	LLNL/DOD, Pre-BANEBERRY, Carlsbad NM, WP in salt	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia report, PNE 108F. Sandia report, PNE 111F	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 21 shot level GM gages, 7 vertical GM gages (Ref. UOPBA 74-126)

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GOUDA	U2ef	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	13 Ground Motion Rolls (Blue) , 1 Data List of Channels 0-14	Earth Strain Cals.	2 Presentation Binders	None	
GREELEY	U20g	LLNL, Pre-BANEBERRY	1 Binder	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
GROVE	U2ds	LLNL	3 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binders B, H, 2 Presentation Binders	None	
GRUYERE	U9cg	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	None	
HALFBEAK	U19b	LANL, Pre-BANEBERRY, Very high surface motion.	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
HANDCAR	U10b	LLNL, Pre-BANEBERRY,WP in Pz Dolomite, 6 gages in carbonate, 4 gages in shale	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	2 reports "Ground Motion in a Multilayered Earth Part I: Nulear Explosion in Hard Rock" and Sandia report POR 2800	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 16 offset vertical GM gages. (Ref. UOPBA 74-126)
HANDLEY	U20m	LLNL, Pre-BANEBERRY	4 Binders	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data	1 Folder	1 Box with 2 Ground Motion or Geophone Rolls (Traces) + Other Traces	1 Box with 2 Possible Geophone Rolls (Traces)	1 Presentation Binder	Draft Report "HANDLEY Ground Motion Raw Data"	

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HARDHAT	U15a	LANL/DOD/Sandia, Pre-BANEBERRY, Granite site	None	None	None	None	None	Field Peak Radial Stresses from Underground Nuclear Explosiona in Five Explosion Media (U)", V. E. Wheeler/ R. G. Preston, UOPKG 66-80, 12,/7/66, . Free-Field Peak Particle Velocities and Stresses fron Underground Nuclear Explosions in a LONGSHOT - type Environment, R. G. Preston, UOPKG 67-18, 4/26/67. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	SRI report, VUF-2100, Swift and Eisler. Sandia report POR 1803.	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 15 shot level GM gages, 7 vertical GM gages (Ref. UOPBA 74-126)
HARDIN	U20av	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	6 Ground Motion Rolls in Box	DELAMAR Induced Ground Motion at the HARDIN SIte UCID-21151 Rev 1 (CL)	Binder U (Peak Accelleration of Trailers), 2 Presentation Binders	"DELAMAR Induced Ground Motion at the HARDIN Site" UCID-21151 Rev 1 ; "Ground Motion in a Layered Medium: The HARDIN Event" UCRL-ID-107812 (Conf.)	

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HAREBELL	U2br	LLNL	9 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Pathfinder II ; 1 Wide Geophone Roll (Yellow)	Binders A, B, H, L, O, and CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	EGG Report "Report of Surface-Motion Measurements in HAREBELL" ASD-72-255 ; "A Summary of the HAREBELL Containment Diagnostics", UOPBA 73-40 ; "Response of the LOS Pipe in the HAREBELL Underground Nuclear Test" UOPBA 72-19	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, stemming gages (Ref. UOPBA 74-126)
HARZER	U19aj	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	None	
HAVARTI	U10bg	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	1 Ground Motion Roll (Blue)	None	Binder U (Peak Accelleration of Trailers), 1 Presentation Binder	"Motion Measured on HAVARTI by Containment Instrumentation" UOPKL 81-76 ; UCRL-ID-127720 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
HAYMAKER	U3au-S	LANL, Pre-BANEBERRY	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 4 GM gages (Ref. UOPBA 74-126)

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HAZEBROOK	U10bh	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ; 1 Binder	2 Folders	2 Pres./ Radiation Printout Rolls (Red)	None	Binder W, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 6 Presentation Binders	UCRL-ID-119551 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
HERMOSA	U7bs	LANL	None	CD of Compressed Raw & Processed Data	None	None	Pathfinder CD with interaction measurment made at MARIBO, VILLE, and COTTAGE.	None	None	
HOGNOSE	U3ai	LANL, Pre-BANEBERRY	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); subsurface 8 GM gages (ONI) (Ref. UOPBA 74-126)
HORNITOS	U20bc	LLNL	1 Binder	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	None	None	Binder T (CLIPER/EXCOR)	UCRL-MI-103510 (CDR)	Surface, Horiz. Dist. 50', 925', 1850' (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
HOYA	U20be	LLNL	None	CD of ASCII Processed Data; 1 Binder	2 Folders	None	None	None	"HOYA U20be - Special Measurements Instrumentation Performance Summary", SM-1101, S. Pratuch ; UCRL-MI-110331 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)

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HUDSON MOON	U12e.12	LLNL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	PI report WT-6461	Subsurface, 3 PI GM gages (Ref. DNA-TR-88-14)
HULSEA	U2bx	LLNL	None	None	None	None	None	Binder M	None	
HUPMOBILE	U2y	LLNL, Pre-BANEBERRY	6 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	CFRD report "Corrections to LRL Memos, Ser UOPKG 68-3 and UOPKG 68-3 Addendum (U)", V.E. Wheeler/R. G. Preston, UOPKG 68-9, 3/21/68, . Also see LLNL/EG&G report 50662	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 2 shot-level GM gages, 10 vertical GM gages (Ref. UOPBA 74-126)
HURON LANDING	U12n.15	LLNL/LANL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia, not reported (Bass priv. Comm.)	Subsurface, 6 Sandia stress gages, 5 Sandia GM gages, (Ref. DNA-TR-88-14)
HUSKY ACE	U12n.07	LANL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	SCUBED report, POR 6809	Subsurface, 2 SCUBED stress gages, (Ref. DNA-TR-88-14)
HUSKY PUP	U12t.03	LLNL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	PI report, POR-6935 or WT-6935	Subsurface, 4 PI stress gages, 2 PI GM gages, (Ref. DNA-TR-88-14)

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HUTCH	U2df	LLNL, Pre-BANEBERRY, 1 free field gage in tuff below water table	8 Binders	CD of Compressed Raw & Processed Data; 1 Small Binder of Reprocessed Data	1 Folder	None	"Soil Strain Near a Nuclear Detonation" (UCRL 72391) ; Pathfinder II	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	"Soil Strain Near a Nuclear Detonation" BSSA Vol. 60, No.6, pp1999-2014, 12/1970. Sandia/LLNL, unreported	Subsurface, 4 offset vertical GM gages (Ref. UOPBA 74-126)
HYBLA FAIR	U12n.09	LLNL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	SCUBED report, POR 6844, Sandia report SAND78-0654	Subsurface, 2 SCUBED stress gages, 4 Sandia stress gages. (Ref. DNA-TR-88-14)
HYBLA GOLD	U12e.20	LANL/DOD	None	None	None	None	Earth Strain Cals. (Yellow)	None	None	
ICEBERG	U4g	LANL	None	None	None	None	Earth Strain Cals.	None	None	
ILDRIM	U2au	LLNL, Pre-BANEBERRY	1 Binder	CD of Compressed Raw & Processed Data	None	None	None	None	None	
INGOT	U2gg	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	None	None	Binder V	MISC-8404 (CDR)	Surface, Horiz. Dist. 50', 910', 800', RTP (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
INLET	U19f	LANL	None	None	None	None	Earth Strain Cals.	None	None	
ISLAY	U2er	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	4 Ground Motion Rolls (Blue)	None	Binder U (Peak Accelleration of Trailers)	"Motion Measured on the Emplacement Pipe and Stemming Plugs, ISLAY Event" UOPKL 82-72 , UCRL-ID-127718 (CDR)	Surface, Horiz. Dist. 50', RTP (1083') (Ref. CDR): Subsurface, No free field gages, 4 GM gages in Plugs (Ref. CDR)

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JARLSBERG	U10ca	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 2 Binders	2 Folders	None	None	1 Presentation Binder	UCRL-ID-119561 (CDR)	Surface, Horiz. Dist. 33.1', 968', 363', 207', 593', 555' (Ref. CDR): Subsurface, Free field gages, 7 vertical offset GM gages, 6 vertical offset stress gages, 2 GM gages in Plugs (Ref. CDR)
JEFFERSON	U20ai	LLNL	1 Binder	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	2 Rolls of Pres. and Radiation in Box	None	Binder W, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 3 Presentation Binders	UCRL-ID-119478 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 4 GM gages in Plugs (Ref. CDR)
JORUM	U20e	LLNL, Pre-BANEBERRY	1 Binder	CD of Compressed Raw & Processed Data	None	None	14 Geophone Rolls (Yellow)	Binder Q, 1 Presentation Binder	None	
KANKAKEE	U10p	LLNL, Pre-BANEBERRY	None	None	None	None	1 Geophone Roll (Yellow)	None	None	
KAPPELI	U20am	LLNL	None	None	None	None	None	Binder T (CLIPER/EXCOR), 1 Presentation Binder	None	
KARA	U2dh 3	LLNL	None	None	None	None	CONF report "Round Robin Program KARA Event (U)", W. R. Perret, Sandia UOPBA 72-61, 5/26/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 45', 425', 425', 425'

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KARAB	U4ah	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	Earth Strain Cals.	Analysis of Near Field Ground Motion from Nuclear Detonations in High Porosity Media, R. T. Terhune, M. Heusinkveld, Proceedings of the Second Symposium of Underground Nuclear Explosions, Albuquerque NM, 8/2-4/83, Vol2	"Free-Field Ground Motion from the Underground Nuclear Explosion KARAB" UCID-18608 (Conf. FRD) ; "Post Operational Report for the Containment Diagnostics on KARAB, U4ah" (Conf.) ; UCRL-ID-131648 (CDR)	Subsurface, free field, see report
KASH	U20af	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	Earth Strain Cals.	None	None	
KASHAN	U10av	LLNL	6 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Round Robin, PDS Cals.	Binders B, H, L: CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	None	Subsurface: stemming GM (Ref. UOPBA 74-126)
KASSERI	U20z	LLNL	None	None	None	None	Earth Strain Cals. PDS Cals.	None	None	
KAWICH	U2cu	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	1 Ground Motion Roll (Blue) NOTE: Label says KAWICH. Should verify that it is not KAWICH-A.	None	Binder V, Binder T (CLIPER/EXCOR), 1 Presentation Binder	MISC. 4803 (CDR)	Surface, Horiz: Dist. 50', 632' (Ref. CDR): Subsurface, No free field gages, 5 GM gages in Plugs (Ref. CDR)
KAWICH-A	U8n	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	Binder W	UCRL-ID-120477 (CDR)	Surface, Horiz: Dist. RTP only, no other usable data (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)

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KEARSARGE	U19ax	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	Binder W, Binder T (CLIPER/EXCOR)	MISC 4718 (CDR)	Surface, Horiz. Dist. RTP only (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
KEELSON	U7ai	LANL	None	None	None	None	Earth Strain Cals.	None	None	
KERNVILLE	U20ar	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data ; 1 Binder	1 Folder	None	None	Binder U (Peak Accelleration of Trailers)	UCRL-ID-119479 (CDR)	Surface, Horiz. Dist. 50', RTP (886') (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
KESTI	U9cn	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	Binder T (CLIPER/EXCOR)	Draft Report "Strong Motion From the KESTI Event" ; UCRL-ID-125017 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 4 GM gages in Plugs (Ref. CDR)

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KNOX	U2at	LLNL, Pre-BANEBERRY, 2 free field gages in tuff below the water table, 1 gage in carbonate	2 Binders	CD of Compressed Raw & Processed Data	None	None	Pathfinder I	"Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87. Unclassified report "Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories, 11/72.	Sandia, unreported	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 5 GM gages (ONI) (Ref. UOPBA 74-126)
KRYDDOST	U2co	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ; 1 Binder	CFRD report "Instrumentation of UE2co for the KRYDDOST Event", V. E. Wheeler/T. F. Stubbs, UOPKL 82-10, 1/25/82, . 2 Folders	1 Ground Motion Roll (Blue)	None	Binder T (CLIPER/EXCOR), 1 Presentation Binder	Draft Report "KRYDDOST: Ground Motion Data Report"; "Containment Analysis for KRYDDOST Nuclear Event" UCRL 53331 (Conf.) ; UCRL-ID-121261 (CDR)	Surface, Horiz. Dist. 50', (540', 540', 540' different azmuths) (Ref. CDR): Subsurface, Free field gages, 5 vertical offset GM gages, 3 GM gages in Plugs (Ref. CDR)
KYACK 2 KYACK A	U2bq 2 U2bq 1	LLNL, Pre-BANEBERRY	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binder D	None	

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LABAN	U2ff	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Ground Motion Binder, 1 Pressure and Radiation Binder,	1 Folder	2 Ground Motion Rolls (Blue) , 2 Rolls of Pres./ Radiation Traces (Red), 1 Pres./ Radiation Printout (Volts) Roll (Red)	None	Binder Y, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), Binder S (SMIDS Collapse Signals), 1 Presentation Binder	Draft Report "Special Measurements on the LABAN Event, U2ff: Data Report" ; UCRL-ID-121264 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)
LABIS	U10an	LLNL, Pre-BANEBERRY	None	None	None	None	1 Wide Geophone Roll (Yellow)	None	None	
LABQUARK	U19an	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ; 1 Binder	1 Folder	1 Ground Motion Roll (Blue), 1Pres/ Radiation Printout Roll (Red) , 1Roll of Pres/ Radiation Traces (Red)	None	Binder W, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 3 Presentation Binders	UCRL-ID-121260 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
LAGOON	U10ar	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	CONF report "Round Robin Program LAGOON Event (U)", W. R. Perret, Sandia UOPBA #002, 11/5/71 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	CONF report "Surface-Motion Measurements in BRACKEN and LAGOON (U)", R. G. Preston and V. E. Wheeler, UOPBA 72-10, 2/23/72, .	Surface,Horiz.,26' 436' 436' 500' (Ref. RR) ;Surface, 50', and 565' (Ref. UOPBA 72-10).
LAGUNA	U3fd	LANL	None	None	None	None	Unclassified report "Round Robin Program LAGUNA Event", W. R. Perret, Sandia, No Reference, 7/1/71 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 25', 746'

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LAMPHER	U2x	LLNL, Pre-BANEBERRY, 2 gages in tuff below water table, 2 gages in carbonate rock	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia, unreported	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 8 offset vertical GM gages, 4 vertical GM gages (Ref. UOPBA 74-126)
LANPHER	U2x	LLNL, Pre-BANEBERRY, Some free field gage data from below the water table.	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Pathfinder I ; 1 Geophone Roll (Yellow)	Binders G, R, and CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87. Unclassified report "Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories,	CFRD report "Preliminary Report: Response of the Pipe in the LANPHER Event (U)", V. E. Wheeler and R. G. Preston, UCID-15292, 1/15/68, .	Near surface GM gages.
LATIRE	U4d	LANL	None	None	None	None	Earth Strain Cals.	None	None	
LIPTAUER	U2eh	LLNL	None	None	None	None	Pathfinder CD of Compressed Raw & Processed Data (V)	None	None	

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LOCKNEY	U19aq	LANL	None	1 Binder	None	None	"LOCKNEY (U19aq) Interaction with KERNVILLE (U20ar) Ground Motion and Structural Response Measurements" UCID 21409 (Motion at KERNVILLE) (CL, CN,3,Ground Motion-Events CONF report	None	None	
LONGCHAMPS	U2dm	LLNL	None	None	None	None	"Round Robin Program LONGCHAMPS Event (U)", W. R. Perret, Sandia UOPBA 72-49, 5/5/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 50', 505, 505', 505'

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LONGSHOT	UA EH5	LANL/DOD, Pre-BANEBERRY, Amchita Island, WP in Andesite, Most of 13 gages below water table	None	None	None	None	None	CFRD report "Scaled Free-Field Peak Radial Stresses from Underground Nuclear Explosiona in Five Explosion Media (U)", V. E. Wheeler/ R. G. Preston, UOPKG 66-80, 12,/7/66, . Day, VUP-2701. Free-Field Peak Particle Velocities and Stresses fron Underground Nuclear Explosions in a LONGSHOT - type Environment, R. G. Preston, UOPKG 67-18, 4/26/67. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	WES report, VUF-2701, Day and Murrell. UOPKG 67-17, Preston, 4/24/67.	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 13 vertical GM gages. (Ref. UOPBA 74-126)
MADISON	U12g.01	LLNL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	SRI report WT-1865, , CFRD report "Tunnel Dynamics- MADISON Event (U)",W. M. Wells, SRI report Project 29.4 Data Report, 8/5/63	Subsurface, 2 GM gages (ONI) (Ref. UOPBA 74-126), 4 SRI GM (ONI) gages (Ref. DNA-TR-88-14)

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MANTECA	U4al	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 2 Binders	1 Folder	None	None	Binder Y, Binder T (CLIPER/EXCOR)	Containment Measurements from MANTECA" UOPKL 83-19 ; "Motion in the Stemming Plugs on MANTECA" UOPKL 83-13 ;"MANTECA Containment Diagnostics" UOPKL 82-74 ; UCRL-ID-125014 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
MANZANAS	U3gr	LANL, Pre-BANEBERRY. No entries for ground motion.	None	None	None	None	None	None	None	
MARIBO	U2cs	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	1 Ground Motion Roll (Blue) , 1 Roll of Pres./ Radiation Traces (Red)	None	Binder X, Binder U (Peak Accelleration of Trailers), 5 Presentation Binders	UCRL-ID-121266 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)
MARSILLY	U2el	LLNL	1 Binder	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals. . Pathfinder CD of Compressed Raw & Processed Data (V)	None	"Post-Operational Report for the Containment Diagnostics on MARSILLY, U2el", UOPBA 77-99	
MERIDA	U2dn	LLNL	3 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	CONF report "Round Robin Program MERIDA Event (U)", W. R. Perret, Sandia UOPBA 72-76, 6/27/72 (V).	report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Draft Report "Response of the Pinex Pipe in MERIDA"	Surface (Ref. RR) Horiz., 50', 385, 385', 384'. Subsurface stemming gages (Ref. UOPBA 74-126)

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MERLIN	U3ct	LANL, Pre-BANEBERRY	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	"Free-Field and Surface Motion fron a Nuclear Explosion in Alluvium: MERLIN Event" ; "Ground Motion Analyses: OSSY (A High Explosive Experiment) and MERLIN (A Nuclear Event)" Also see Sandia report SC-RR-69-334.	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface 8 shot level GM gages; 10 verticle GM gages (Ref. UOPBA 74-126)
METROPOLIS	U2gh	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	None	None	Binder T (CLIPER/EXCOR), Binder S (SMIDS Collapse Signals)	UCRL-MI-104930 (CDR)	Surface, Horiz. Dist. RTP (Approx. 770') (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
MIDDLE NOTE	U12n.21	LLNL/DOD	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	None	None	
MIDIMIST	U12n.02	LLNL/DOD, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
MIDAS MYTH	U12t.04	LANL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia , unreported (Bass pri. Comm.)	Subsurface, 6 Sandia stress gages, 3 Sandia GM gages (Ref. DNA-TR-88-14)
MILKSHAKE	U5k	LLNL/DOD, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
MIERA	U7ad	LANL	None	1 Binder	None	None	None	None	None	

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MIGHTY EPIC	U12n.10	LLNL/DOD	None	None	None	None	Earth Strain Cals.	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	PI report POR 6954, WES report DNA-6952F, Boing report using Sandia data POR 6992, Sandia unreported (Bass Pri. Comm.)	Subsurface, 13 PI GM gages, 13 WES GM gages, 2 WES stress gages, 3 Sandia stress gages, 1 high-speed photography GM recordings (Engineering Decision Analysis Co.) (Ref. Ref. DNA-TR-88-14)
MIGHTY OAK	U12t.08	LLNL/DOD	None	None	None	None	None	1 Presentation Binder .	"MIGHTY OAK Containment Review" UCRL-100960	
MILROW	UA 2	Pre-BANEBERRY, LANL, Most of 12 gages below water table.	1 Binder	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Sandia report, SC-RR 71 0668	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 12 vertical GM gages (Ref. UOPBA 74-126)
MINERS IRON	U12n.11	LANL/DOD	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	Sandia unreported (Bass Pri. Comm.)	Subsurface, 1 Sandia stress gage, 1 Sandia GM gage (Ref. DNA-TR-88-14).

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MING VASE	U16a.04	Pre-BANEBERRY, LANL/DOD	None	None	1 Folder	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	None	Subsurface, no free field gages (Ref.DNA-TR-88-14)
MINIATA	U2bu	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	None	
MINK	U3ae	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
MINT LEAF	U12t.01	LLNL/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	PI report POR 6427 or WT 6427	Subsurface, 6 PI GM gages (Ref. DNA-TR-88-14)
MISSION GHOST	U12t.09	LANL/DOD	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	None	"Cavity Pressure Measurements and Gas Sampling for MISSION GHOST" UCID-21295	
MISTY NORTH	U12w.05	LANL/DOD	None	None	None	None	CONF report "Round Robin Program MISTY NORTH Event (U)", W. R. Perret, Sandia UOPBA 72-56, 5/23/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	PI -eport POR-6658 or WT 6658	Surface (Ref. RR) Horiz., 0', 616', 626', 618'; Subsurface, 1 PI stress gage, 1 PI GM gage (Suspect?), (ref. DNA-TR-88-14).

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MISTY RAIN	U12n.17	DOD/LLNL	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
MOLBO	U20ag	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	None	UCRL-ID-127716 (CDR)	Surface, Horiz. Dist. 50', 1042', 1449', 2900' (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
MONERO	U3jq	LANL	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
MONTELLO	U20bf	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	None	None	Surface, Horiz. Dist. 50', RTP (1086') (Ref. CDR): Subsurface, No free field gages, No GM gages in Plugs (Ref. CDR)
MONTEREY	U20ai	LLNL	None	None	1 Folder	None	None	Binder T (CLIPER/EXCOR)	None	
MUDPACK	U10N	LLNL, Pre-BANEBERRY, 6 gages incarbonate, 4 gages in shale	None	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	"Ground Motion in a Multilayered Earth, Part II: Explosion in Desert Alluvium, Project 1.1/1.2, MUDPACK Event" Note: See HANDCAR Event as a Cross Reference. Also see Sandia report POR-2900	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurfsce 16 off-set vertical GM gages (Ref. UOPBA 74-126)
MUENSTER	U19e	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	11 Data Listings	Earth Strain Cals., PDS Cals.	None	None	

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NAMA AMARLYLIS NAMA MEPHISTO	U9IXY-31 U9I Z-27	LLNL	None	None	None	None	CONF report "Round Robin Program NAMA and BALTIC Events (U)", W. R. Perret, Sandia UOPBA #001, 9/1/71 (V).	None	None	Surface (Ref. RR)Horiz., 400', 50', 50'
NAMA (BALTIC)	U9I S 25	May also be referred to as BALTIC Event	None	None	None	None	CONF report "Round Robin Program NAMA and BALTIC Events (U)", W. R. Perret, Sandia UOPBA #001, 9/1/71 (V).	None	None	
NEWPOINT	U11c	LLNL/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
NIZA	U2cr	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data	1 Folder	6 Ground Motion Rolls in 3 Boxes ; 2 Pres. and Radiation Rolls in 1 Box	None	Binder T (CLIPER/EXCOR)	"Motion Response of the Emplacement Pipe and Stemming Plugs on the Event NIZA" UOPKL 81-75 ; UCRL-ID-127721 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
NOGGIN	U9bx	LLNL, Pre-BANEBERRY	4 Binders	CD of Compressed Raw & Processed Data	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	LLL/EG&G report UCID-15488	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); 9 GM (ONI) gages (Ref. UOPBA 74-126)

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NORBO	U8c	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Early Time Motion Binder, 1 Collapse, Stress Binder,	1 Folder	1 Ground Motion Roll (Blue)	Earth Strain Cals.	Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR). "Analysis of Near Field Ground Motion from Nuclear Detonations in High Porosity Media, R. T. Terhune, M. Heusinkveld, Proceedings of the Second Symposium of Underground Nuclear Explosions, Albuquerque	UCRL-ID-123238 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, Free field gages, 10 vertical offset GM gages, 3 vertical offset stress gages, 2 GM gages in Plugs (Ref. CDR)
NORMANNA	U10cb	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	2 Ground Motion Rolls (Blue)	None	None	None	Surface, Horiz. Dist. 177' (Ref. CDR): Subsurface, Free field gages, 7 vertical offset GM gages, 7 vertical offset stress gages, No GM gages in Plugs (Ref. CDR)
OAKLAND	U2bi	LLNL, Pre-BANEBERRY	None	None	None	None	None	None	CONF Report "Motion of Emplacement Pipe and Casing on OAKLAND Containment Technical Note No. 27 (U), UOPBA 72-10, 2/23/72, (U)", C. W. Olsen, TEC NOTE 27, 4/27/67 .	
OARLOCK	U3km	LANL	None	None	None	None	Earth Strain Cals., PDS Cals.	None	None	

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OCATE	U3jp	LANL, 40ms after ONAJA	None	None	None	None	CONF report "Round Robin Program ONAJA & OCATE Events (U)", W. R. Perret, Sandia UOPBA 72-50, 5/3/72 (V).	None	None	Surface (Ref. RR) Horiz., 50', 344', 343', 344'
ONAJA	U3js	LANL	None	None	None	None	CONF report "Round Robin Program ONAJA & OCATE Events (U)", W. R. Perret, Sandia UOPBA 72-50, 5/3/72 (V).	None	None	Surface (Ref. RR) Horiz., 50',450', 661', 458', 457'
ORKNEY	U10be	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	None	None	Binder X, Binder T (CLIPER/EXCOR), 3 Presentation Binders	UCRL-ID-120650 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
OSCURO	U7z	LANL	None	1 Binder	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
PACKARD	U2u	LLNL, Pre-BANEBERRY	11 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	"Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	"Response of the Pipe and Ground in the PACKARD Nuclear Effects Test" . Also see LLNL/EG&G report UCRL-51112	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 2 shot level GM gages, 14 verticle GM gages (Ref. UOPBA 74-126)

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PACKRAT	U3aw	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
PALISADE	U4at	LLNL	2 Binders	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	None	None	Binder V, Binder T (CLIPER/EXCOR), 1 Presentation Binder	MISC-4821 (CDR)	Surface, Horiz. Dist. 50', 700', 1400', RTP (Ref. CDR): Subsurface, No free field gages, 5 GM gages in Plugs (Ref. CDR)
PANAMINT	U2gb	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	1 Pres./ Radiation Printout Roll (Red)	None	Binder W, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 4 Presentation Binders	UCRL-ID-120480 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
PANCHUELA	U3mg	LANL	None	None	None	None	None	3 Presentation Binders	None	
PANIR	U19y S	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals.	Binder T (CLIPER/EXCOR)	None	
PARNASSIA	U2bc		2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	CONF report "Round Robin Program PARNASSIA Event (U)", W. R. Perret, Sandia No Document #, 12/9/71 (V).	Binders H, L, O, CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	None	Surface (Ref. RR) Horiz., 51' 530', 530', 540'; Subsurface, stemming gages (Ref. UOPBA 74-126)

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PEPATO	U20ad	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	1 CLIPER Printout (Blue)	None	None	None	
PERA	U10bd	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	2 Ground Motion Rolls (Blue)	None	Binder S (SMIDS Collapse Signals). "Analysis of Near Field Ground Motion from Nuclear Detonations in High Porosity Media, R. T. Terhune, M. Heusinkveld, Proceedings of the Second Symposium of Underground Nuclear Explosions, Albuquerque NM, 8/2-4/83, Vol2	Draft Report "Final Report: Free-Field and Collapse Ground Motion from the Underground Nuclear Event , PERA" ; UCRL-ID-128633 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, Free field gages,12 vertical offset gages, 8 vertical offset stress gages, 2 GM gages in Plugs (Ref. CDR)
PILEDRIVER	U15a .01	LANL/DOD, Pre-BANEBERRY, Granite Site	None	None	None	Misc. Roll of Drawings showing gage locations and other construction related items. (Green)	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	SRI report POR 4000, Sandia report POR 4001	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 16 shot level GM gages, 11 vertical GM gages (Ref. UOPBA 74-126)
PINEDROPS	U10as	LLNL	None	None	None	None	None	Binder M	None	
PIN STRIPE	U11b	LLNL/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
PIPKIN	U20b	LLNL, Pre-BANEBERRY	None	None	None	None	1 Wide Geophone Roll (Yellow)	Binder A	None	
PLATYPUS	U3ad	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)

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PLATTE	U12k.01	LLNL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Gage data not reported by Sandia.	Subsurface 2 GM (ONI) gages (Ref. UOPBA 74-126)
POD-A	U2ck	LLNL, Pre-BANEBERRY	3 Binders, No Hole Ref.	CD of Compressed Raw & Processed Data	See POD Folder. Emplacement and Stemming DWGs Only.	None	None	Binder N	None	
POD-B	U2ch	LLNL, Pre-BANEBERRY	3 Binders, No Hole Ref.	CD of Compressed Raw & Processed Data	See POD Folder. Emplacement and Stemming DWGs Only.	None	None	Binder N	None	
POD-C	U2ci	LLNL, Pre-BANEBERRY	3 Binders, No Hole Ref.	CD of Compressed Raw & Processed Data	See POD Folder. Emplacement and Stemming DWGs Only.	None	None	Binder N	None	
POD-D	U2cj	LLNL, Pre-BANEBERRY	3 Binders, No Hole Ref.	CD of Compressed Raw & Processed Data	See POD Folder. Emplacement and Stemming DWGs Only.	None	None	Binder N	None	
POLYGONUM	U2by	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Earth Strain Cals., PDS Cals.	Binders B, H, M	None	
POOL	U19p	LANL	None	None	None	None	Earth Strain Cals.	None	None	
PORTMANTEAU	U2ax	LLNL	None	CD of Compressed Raw & Processed Data; 1 Engineering Binder,	1 Folder	None	Earth Strain Cals. ; Pathfinder II . Pathfinder CD of Compressed Raw & Processed Data (V)	None	"PORTMANTEAU and the CARPETBAG Fault"	
PORTOLA	U10bb	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binder B	None	

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PORTULACA	U2bv	LLNL	None	None	None	None	Earth Strain Cals. ; Pathfinder II ; PDS Cals.	None	None	
POTRERO	U2eb	LLNL	2 Binders	None	1 Folder	None	None	Binders B, H, K	None	
PURSE	U20v	LLNL, Pre-BANEBERRY	None	None	None	None	3 Geophone Rolls (Yellow)	None	None	
QUARGEL	U2fb	LLNL	None	CD of Compressed Raw & Processed Data	None	1 CLIPER Printout (Blue)	Earth Strain Cals.	None	None	
QUESO	U10bf	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	2 Ground Motion Rolls (Blue)	None	Binder T (CLIPER/EXCOR), Binder S (SMIDS Collapse Signals)	Draft Report "Strong Motion from the Event QUESO" ; UCRL-ID-121259 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, Free field gages, 3 vertical offset GM gages, 2 vertical offset stress gages, 4 GM gages in Plugs (Ref. CDR)
RACOON	U3aj-S	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)

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RAINIER	U12b	LLNL, Pre-BANEBERRY	None	None	None	None	None	Field Peak Radial Stresses from Underground Nuclear Explosiona in Five Explosion Media (U)", V. E. Wheeler/ R. G. Preston, UOPKG 66-80, 12,/7/66, . Free-Field Peak Particle Velocities and Stresses fron Underground Nuclear Explosions in a LONGSHOT - type Environment, R. G. Preston, UOPKG 67-18, 4/26/67. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87. Unclassified report "Free-Field Ground Motion Induced by Underground Explosions", W. R. Perret, and R. C. Bass, SAND74-0252, Sandia Laboratories, 11/72. Perret, POR-1803. Also see Sandia Reports WT-1529 and WT-1528.	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 8 shot level gages, 9 verticle gages (Ref. UOPBA 74-126), 4 Sandia GM gages (Ref. DNA-TR-88-14)
REBLOCHON	U2en	LLNL	None	CD of Compressed Raw & Processed Data	None	None	None	Binder T (CLIPER/EXCOR)	None	
RED HOT	U12g	LANL/DOD, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
REDMUD	U7ab	LANL	None	None	None	None	Earth Strain Cals.	None	None	

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REX	U20h	LLNL, Pre-BANEBERRY	None	None	None	None	1 Wide Geophone Roll (Yellow)	None	None	
RHYOLITE	U2ey	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	None	1 Geophone Roll (Yellow)	Binder W, 2 Presentation Binders	MISC 4642 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 5 GM gages in Plugs (Ref. CDR)
RINGTAIL	U3ak	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
RIO BLANCO	OCO RBL	LLNL	1 Binder	CD of Compressed Raw & Processed Data	None	None	None	None	"The RIO BLANCO Experiment: Subsurface and Surface Effects and Measurements"	
RIOLA	U2eq	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	None	1 Presentation Binder	"RIOLA Release Repost" UCRL-53437	
RIVOLI	U2eg	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	1 Ground Motion Roll (Blue)	Earth Strain Cals.	3 Presentation Binders	None	
ROMANO	U2ex	LLNL	None	None	1 Folder	None	None	None	None	
ROQUEFORT	U4as	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	2 Pres./ Radiation Printout Rolls (Red)	None	Binder X, Binder U (Peak Accelleration of Trailers), 10 Presentation Binders	UCRL-ID-119552 (CDR)	Surface, Horiz. Dist. 50', 689',1378', 2067', RTP (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)
RUDDER	U7aj S	LANL	None	None	None	None	Earth Strain Cals.	None	None	

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SALMON	OMS LAM	LLNL/DOD, Pre-BANEBERRY, Hattiesburg MI, WP in salt	1 Binder	None	None	None	None	Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	"Free-Field Particle Motion from a Nuclear Explosion in Salt, Part I & Part II" ; "Free Field Motion Near a Nuclear Explosion in Salt: Project SALMON" . Also see Sandia report VUF 3012 and SRI report VUF 3013.	dist. (NI) (Ref. UOPBA 73-44); Subsurface, 4 shot level GM gages, 15 offset vertical GM gages, 13 vertical GM gages (Ref. UOPBA 74-126)
SALUT	U20ak	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	4 Ground Motion Rolls (Blue) , 2 Rolls of Pres./ Radiation Traces (Red)	None	Binder X, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), Binder S (SMIDS Collapse Signals), 5 Presentation Binders	UCRL-ID-121263 (CDR)	Surface, Horiz. Dist. 50', 1002', 2004', 3000' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
SANDREEF	U7aq	LANL	None	None	None	None	Earth Strain Cals.	None	None	
SAPPHO	U2dh 2	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	"Round Robin Program SAPPHO Event (U)", W. R. Perret, Sandia UOPBA 72-43, 4/14/72 (V).	Binders B, H, J. CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 50', 324', 325', 325'
SATZ	U2do	LLNL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals.	Binder T (CLIPER/EXCOR), 1 Presentation Binder	None	
SCANTLING	U4h	LANL	None	None	None	None	Earth Strain Cals. . Pathfinder CD of Compressed Raw & Processed Data (V)	None	None	

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SCHELLBOURNE	U2gf	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	Binder W, 1 Presentation Binder	MISC 4688 (CDR)	Surface, Horiz. Dist. 50', 900', 1800' (Ref. CDR): Subsurface, No free field gages, 1 GM gage in Plug (Ref. CDR)
SCHOONER	U20u	LLNL, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
SCOTCH	U19a S	LANL Pre-BANEBERRY	1 Binder	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
SCROLL	U19n	LLNL, Pre-BANEBERRY	None	None	None	None	CFRD report "Ground Motion Measurements at the LRL SCROLL Site from the LASL STINGER Event (U)", R. T. Stearns/J. T. Rambo, Nevada: LRL Memo, 4/22/68, (V)	None	None	
SEAFOAM	U2ea	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binders B, H	None	
SEAMOUNT	U3kp	LANL	None	None	None	None	Earth Strain Cals.	None	None	

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SECO	U8l	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	2 Ground Motion Rolls (Blue)	None	None	Draft Report "Motion of the Emplacement Hole and on the Ground Surface, SECO Event" ; "Motion Measured on the SECO EVENT" UOPKL 82-84 (Conf. FRD) ; UCRL-ID-127715 (CDR)	Surface, Horiz. Dist. 50', 14 other surface gages, see report for horiz. Locations. (Ref. CDR): Subsurface, No free field gages, 4 GM gages in Plugs (Ref. CDR)
SEDAN	U10h	Cratering Experiment, LLNL, Pre-BANEBERRY	None	None	None	None	None	None	"Project SEDAN: Seismic Effects from a High Yield Nuclear Cratering Experiment in Desert Alluvium"	
SERENA	U20an	LLNL	None	None	1 Folder	None	None	Binder T (CLIPER/EXCOR), 3 Presentation Binders	None	
SERPA	U19ai	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	Earth Strain Cals.	None	None	
SHOAL	ONV	LANL/DOD, Pre-BANEBERRY, Granite Site, Fallon NV	None	None	None	None	None	CFRD report "Scaled Free-Field Peak Radial Stresses from Underground Nuclear Explosiona in Five Explosion Media (U)", V. E. Wheeler/ R. G. Preston, UOPKG 66-80, 12,/7/66, . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	2 reports "Surface Response Spectra Project SHOAL" . & Sandia report, VUF-2001, Weart	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface, 7 shot level GM gages, 5 verticle GM gages (Ref. UOPBA 74-126)

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SILENE	U9ck	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binders B, H	None	
SOLANUM	U9I W-24.5	LLNL	None	None	None	None	None	Binder F	None	
SPIDER-A or SPIDER-B	U2bp 1 or U2bp 2	Unknown as to which event, perhaps both, affected the data. LLNL, Pre-BANEBERRY	None	None	None	None	1 Wide Geophone Roll (Yellow)	None	None	
STANYAN	U2aw	LLNL	3 Binders	CD of Compressed Raw & Processed Data; 1 Binder	1 Folder	2 sets of Data Listings Channels 0-12	Earth Strain Cals. ; Pathfinder II	Binders B, M	CFRD report Response of the Stemming and Ground in the STANYAN Underground Nuclear Explosion (U)", V. E. Wheeler/R. G. Preston, UCRL-52010, 2/3/76, .	Subsurface, free field gages in Ue2aw (9.05m separation), 110m , 219 m, 280m, 326m, 354m, 369m, 393m, 418m, and 436m. U2aw GM Stations in plugs 224.3 m, and 367m (Ref. UCRL-52010)
STARWORT	U2bs	LLNL	4 Binders	CD of Compressed Raw & Processed Data	1 Folder , CFRD report "A Model of the Ground Shock Closure of the STARWORT Line of Sight (U), G. L. Nutt, UOPBA 73-63 .	None	Earth Strain Cals. ; Pathfinder II ; 1 Wide Geophone Roll (Yellow)	Binders B, H, L, O, and CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74,	CFRD report "Preliminary Report on the STARWORT Pipe Diagnostics (U)", C. W. Olsen, UOPBA 73-81, 5/11/73. . CFRD report "Preliminary Results of the Stemming Motion Measurements on STARWORT (U)", V. E. Wheeler/R. G. Preston, UOPBA 73-69 .	Subsurface, stemming gages (Ref. UOPBA 74-126)
STERLING	OMS S1A2	LLNL/DOD, Pre-BANEBERRY	1 Binder	None	None	None	None	None	"Free Field Groumd Motion Study Project STERLING"	

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STILTON	U20p	LLNL	None	None	None	None	Earth Strain Cals.	None	None	
STINGER	U19l	LANL, Pre-BANEBERRY	None	None	None	None	CFRD report "Ground Motion Measurements at the LRL SCROLL Site from the LASL STINGER Event (U)", R. T. Stearns/J. T. Rambo, Nevada: LRL Memo, 4/22/68, (V)	None	None	
STOAT	U3ap	LANL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44)
STODDARD	U2cm S	LLNL, Pre-BANEBERRY	None	None	None	None	2 Geophone Rolls (in boxes) (Yellow)	1 Presentation Binder	None	
SUTTER	U2bw	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	1 Presentation Binder	None	
TAFI	U20ae	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	None	
TANYA	U2dt	LLNL, Pre-BANEBERRY	None	None	None	None	3 Geophone Rolls (Yellow)	None	None	
TAJIQUE	U7aa	LANL	None	None	None	None	CONF report "Round Robin Program TAJIQUE Event (U)", W. R. Perret, Sandia UOPBA 72-80, 7/17/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 50', 550', 550', 551'

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TAMALPAIS	U12b.02	LLNL, Pre-BANEBERRY	None	None	None	None	None	CFRD report "Ground Shock Predictions for Underground Nuclear Explosions in Rainier Mesa (U)", L. F. Ingram, J. L. Drake, DNA-TR-88-14, 10/23/87, .	DASA and AEC report ITR-1711 (ITR might stand for Interagency Technical Report)	Subsurface, 2 ERDL GM gages (Ref.DNA-TR-88-14)
TAPESTRY	U2an	Large Line-of-Sight (LOS) Pipe, LLNL, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	4 LOS Related Data Rolls (Green)	None	None	None	
TARKO	U2fd	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder (White) Data Reduction, 1 Binder (Yellow) Analysis and Data Reduction	1 Folder	2 Ground Motion Rolls (Blue) ; 1 Pres./ Radiation Trace on Roll (Red) ; 1 CLIPER Printout Roll (Blue) ;1 set of Data Listings Channels 0-12	None	Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR)	Draft Report "Ground Motion from TARKO Event" and in Yellow Binder Located in (E,b,2),; UCRL-ID-127858 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
TEE	U2ab	LLNL, Pre-BANEBERRY	None	None	None	None	1 Geophone Roll (Yellow)	None	None	
TELEME	U9cl	LLNL	1 Binder	CD of Compressed Raw & Processed Data	1 Folder	None	Earth Strain Cals.; PDS Cals.	Binder B	CNSI report "Differential Motion of the Pipe Across the Decoupler in TELEMY (U)", V. E. Wheeler/R. G. Preston, UOPBA 75-107, 6/6/75, . CRD report "Postoperational Report for the Containment Diagnostics in TELEME, U9cl (U)", C. W. Olsen, UOPBA 75-98, 5/20/75, .	Surface, Possily in Trailer Park.

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TEMESCAL	U4ab	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Earth Strain Cals.	None	CRD report "Post-Operational Report for the Containment Diagnostics on TEMESCAL, U4ab (U)", C. W. Olsen, UOPBA 74-184, 11/27/74, .	
TENABO	U20bb	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	None	None	None	UCRL-MI-106506 (CDR)	Surface, Horiz. Dist.(No data) (Ref. CDR): Subsurface, No free field standard GM gages, Close-in instrument hole peak values of partical velocity from 2 Kratz gages and 3 ASM gages, 6 Dynasyn stress gages, No GM gages in Plugs
TERRINE WHITE or TERRINE YELLOW	U9bi 1 or U9bi 2	Unknown as to which event, perhaps both, affected the data. LLNL, Pre-BANEBERRY	None	None	None	None	None	None	None	
TIERRA	U19ac	LLNL	None	CD of Compressed Raw & Processed Data	1 Folder	None	None	4 Presentation Binders	None	

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TILCI	U4ak	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	None	None	"Analysis of Near Field Ground Motion from Nuclear Detonations in High Porosity Media, R. T. Terhune, M. Heusinkveld, Proceedings of the Second Symposium of Underground Nuclear Explosions, Albuquerque NM, 8/2-4/83, Vol2	Draft Report "Data Report, TILCI Event: Motion in the Free Field" ; UCRL 53318 (S), UCRL-ID-127717 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, Free field gages, 10 vertical offset GM gages, 11 vertical offset stress gages, No GM gages in Plugs (Ref. CDR)
TOMME/MIDNIGHT ZEPHER	U12n.18	DOD/LLNL	None	None	1 Folder	None	None	None	None	
TOPGALLANT	U4e	LANL	None	CD of Compressed Raw & Processed Data	None	None	Earth Strain Cals. ; Pathfinder II	None	None	
TRUMBULL	U4aa	LLNL	2 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Earth Strain Cals.	Binder B	the PINEX Pipe and Stemming in Trumbull (U)", V. E. Wheeler/R. G. Preston, UOPBA 75-58, 9/22/75. CFRD report "Post-Operational Report for the Containment Diagnostics on TRUMBULL, U4aa (U)", C. W. Olsen, UOPBA 74-178, 11/14/75.	Surface, Hor. Dist. 61' (Ref. UOPBA 75-58)
TUB	U10aj	LLNL, Pre-BANEBERRY	4 Binders	CD of Compressed Raw & Processed Data	CONF report "Proposal for Individual Cavity Collapse Observation from Simultaneous Detonation of the TUB Event, U10aj (U)", R. T. Stearns, Nevada: LRL Memo, 4/3/68, .	None	None	None	None	

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TUN	U10am	LLNL, Pre-BANEBERRY	4 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	None	Binders N	CFRD report "Preliminary Results of the Pipe Diagnostics on the TUN Vacuum PINEX - U10am-#1 (U)" C. W. Olsen, UOPBA 70-72, 1/16/70, . CFRD report "TUN Vacuum PINEX-Post Shot Containment Analysis (U)", J. M. Thomsen, UOPBA 70-13, 1/14/70 . CFRD report "TUN Containment Performance (U)", P. A. House, CG 69-55, 12/29/69	Free field motion reported above slip-joint and HE machine (see UOPBA 70-13.).
TYBO	U20y	LLNL	3 Binders	CD of Compressed Raw & Processed Data	1 Folder	None	Earth Strain Cals. ; PDS Cals.	None	Preliminary TYBO Ground Motion Rumors UOPBA 75-99 (Conf.) ; "Surface and Near Surface Motion in TYBO -A Data Report" UOPBA 76-45 . CFRD volumn "Calculations of High Surface Velocity Due to Focusing in the TYBO Event (U)", J. T. Rambo and J. B. Bryan, Proceeding of the Second Containment Symposium, Kirkland AFB, Albuquerque, NM, 8/2-	Surface array (ref. UOPBA 76-45)

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TYG A through E	U2dc 1 through 5	instrumented across various TYG events fired at nearly the same time. Unknown as to which events, perhaps part or all, affected the data. LLNL, Pre-BANEBERRY	None	None	None	1 Misc. Data Roll on TYG locations (possibly geophone). (Green)	11 Geophone Rolls. NOTE: Rolls need to be properly associated to the proper TYG hole. (Yellow)	None	CFRD report "A Surface Motion Experiment on the TYG Event (U)", B. C. Hudson and J. B. Bryan, UOPBA-53, 4/22/69	Surface flares instrumented across various TYG events fired at nearly the same time. (Ref. UOPBA-53 or try UOPBA 69-53)
VAUGHN	U3hr	LANL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data	None	None	None	None	None	
VERMEJO	U4r	LANL	None	None	1 Folder	None	None	None	None	
VIDE	U8k	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	1 Folder	1 set of Data Listings Channels 0-19 , 1 CLIPER Printout (Blue)	Pathfinder CD with interaction measurment made at VIDE from an unknown event source.	Binder T (CLIPER/EXCOR)	Draft Report "Motion Measured on the VIDE Event" ; UOPKL 82-85 (S); UCRL-ID-125022 (CDR)	Dist. 50', 14 other surface gages, see report for horiz. Distance. (Ref. CDR): Subsurface, No free field gages, 3 GM gages in Plugs (Ref. CDR)
VILLE	U4am	LLNL	None	CD of Compressed Raw & Processed Data; CD of ASCII Processed Data; 1 Binder	2 Folders	1 Pres./ Radiation Printout Roll (Red)	None	Binder X, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 6 Presentation Binders	UCRL-ID-120666 (CDR)	Surface, Horiz. Dist. 50' (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs, stress gages in plugs (Ref. CDR)

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VULCAN	U2bd	LLNL, Pre-BANEBERRY	1 Binder	CD of Compressed Raw & Processed Data	None	None	None	1 Presentation Binder . CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, . CFRD report "Scaled Free-Field Peak Radial Stresses from Underground Nuclear Explosiona in Five Explosion Media (U)", V. E. Wheeler/ R. G. Preston, UOPKG 66-80, 12,/7/66,	LLNL/Nortronics report, Randolph, Preston, and Wheeler, UCID-15051.	Surface, Hor. dist. (NI) (Ref. UOPBA 73-44); Subsurface 10 GM gages (Ref. UOPBA 74-126)
WALLER	U2bz	LLNL	1 Binder	CD of Compressed Raw & Processed Data	None	None	None	Binders B, H, K, M	CFRD report "Post-operational Report of the Containment Diagnostics on WALLER, U2bz (U)", C. W. Olsen, UOPBA 74-25, 2/25/73. . CFRD report "Response of the PINEX Pipe in WALLER (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-136, 9/5/74	Free Field Surface GM gage in trailer park 312 m horizontal range.
WASHER	U10r	LLNL, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	None	None	None	None	None	
WEXFORD	U2cr	LLNL	None	CD of Compressed Raw & Processed Data ; CD of ASCII Processed Data ; 1 Binder	2 Folders	5 Rolls of Ground Motion; 2 Rolls of Pressure and Radiation (all items in one Box	None	Binder X, Binder U (Peak Accelleration of Trailers), Binder T (CLIPER/EXCOR), 2 Presentation Binders	Draft Report "Containment Measurements Taken on the WEXFORD Event, Final Report" ; UCRL-ID-121265 (CDR)	Surface, Horiz. Dist. 50', RTP (Ref. CDR): Subsurface, No free field gages, 2 GM gages in Plugs (Ref. CDR)

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VAUGHN	U3lr	LANL	None	None	None	None	Pathfinder CD with interaction measurment made at COTTAGE	None	None	
VILLITA	U3ld	LANL	None	None	None	None	Pathfinder CD with interaction measurment made at COTTAGE	None	None	
YANNIGAN BLUE	U2ay 3	LLNL, Pre-BANEBERRY	None	CD of Compressed Raw & Processed Data	1 Folder	None	None	None	None	
YERBA	U1c	LANL	None	None	None	None	CONF report "Round Robin Program YERBA Event (U)", W. R. Perret, Sandia UOPBA 72-23, 2/7/72 (V).	CFRD report "Peak Surface Velocity from Nuclear Explosions (U)", V. E. Wheeler, UOPBA 73-44, 3/16/73,	None	Surface (Ref. RR) Horiz., 51', 540', 541', 541'
ZINNIA	U2dk	LLNL	3 Binders	CD of Compressed Raw & Processed Data; 1 Binder	1 Folder	None	1 Wide Geophone Roll (Yellow)	CFRD report "Trapped Stress Waves in Underground Nuclear Explosions (U)", V. E. Wheeler, R. G. Preston, C. E. Frerking, UCRL-52012, . CFRD report "Summary of Free Field Ground Motion Measurements (U)", V. E. Wheeler/ R. G. Preston, UOPBA 74-126, 8/21/74, .	Draft Report "Response of the Pipe in ZINNIA"	Subsurface stemming gages (Ref. UOPBA 74-126)