



DEPARTMENT OF THE ARMY

TOOELE ARMY DEPOT
TOOELE, UTAH 84074-5000

Phil

REPLY TO
ATTENTION OF

October 08, 1998

Environmental Office

SUBJECT: Investigative Derived Waste (IDW) Management, Fort Wingate Depot Activity (FWDA), New Mexico

Mr. Benito J. Garcia
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo Street
Santa Fe, NM 87505

Dear Mr. Garcia:

The Department of Army (DA) appreciates your assistance in developing a viable plan for management of investigative derived wastes (IDW) at FWDA. Based on the phone conference held on Wednesday, July 29, 1998 with Mr. Phillip Solano, Mr. John Tymkowych, and yourself from the New Mexico Environment Department (NMED), the following paragraphs summarize the approach proposed by the DA for characterization of the IDW.

1. Existing IDW from previous investigation efforts. The referenced phone conference appears to have clarified a number of misconceptions regarding the existing IDW. There are currently 106 drums of IDW awaiting disposal. Two of these drums contain material from the decontamination pads. Both of these drums will be sampled to characterize the waste for disposal. The other 104 drums of IDW can be characterized by the exhaustive environmental samples collected from each boring as part of the environmental investigation program. In reviewing the data, it appears there are drums from only two boring locations, CMW10 and KMW11, which have the potential for exceeding the TCLP regulatory limit. Drums containing IDW from these borings, a total of 20 drums, will be sampled to determine whether the contents are hazardous in accordance with the *Policy Statement Waste Analysis and Disposal Plan for Investigation Derived Wastes Managed at FWDA* currently being reviewed by your office. Based upon those sample results, the drums will then be disposed of as specified in the referenced Policy Statement. Per your request, the full laboratory sample data set for all of the existing IDW is being forwarded to your office for review and will arrive under separate cover. The DA requests the data be reviewed and notification be provided regarding completeness of the characterization as soon as possible in order that the IDW may be disposed of.

2. IDW generated during the current field work season. Based on the phone conference, the following paragraphs describe changes to the IDW Policy Statement which will be implemented for IDW produced during the current field work. Please reference the approved Work Plans for the TNT Leaching Beds and the Open Burning/Open Detonation Area for details and drawings which will provide the necessary context.

a. IDW Containers

Either 55-gallon drums or Wrangler bags will be used to containerize borehole cuttings. Based upon initial borehole diameters drilled at FWDA, one 55-gallon drum will containerize cuttings generated during drilling of approximately 25 linear feet of borehole. Wrangler bags measure 3' X 3' X 3' and can contain the same amount of material as approximately 3 drums, or cuttings generated during the drilling of 75 linear feet of borehole.

Liquid IDW generated from each monitoring well will be placed in a separate container consisting of a 55-gallon drum or poly tank. Container size will be based upon the estimated volume of water to be generated for each particular well.

b. Environmental Samples Used to Initially Characterize IDW

Environmental samples will be used to initially characterize solid IDW consisting of drill cuttings and liquid IDW consisting of monitoring well drilling, development, and purge waters. No additional samples will initially be collected specifically for the purpose of characterizing IDW. Frequencies of collection and specific analytes are presented in Tables 1 and 2.

During the referenced phone conference a need was identified for additional environmental samples at boring locations where Areas of Concern (AOCs) or Solid Waste Management Units (SWMUs) other than the source AOCs for the groundwater contamination, i.e. the TNT Leaching Beds or the debris piles in the OB/OD unit, could potentially be contributing to soil or groundwater contamination.

Although there is currently no indication of a contributing component from other AOCs, this investigative philosophy is consistent with the objectives for this summer's field investigation and was one of the siting criteria for

the northernmost set of borings; to determine whether groundwater is serving as an integrating medium for AOCs in or near the Administration Area at FWDA. Accordingly, Tables 1 and 2 have identified the borings planned for this summer where there are other AOCs, in addition to the source AOC, which have the potential to contribute to contamination at the boring location. At these borings, additional samples and a more comprehensive analyte suite will be collected as summarized in Tables 1 and 2. For those borings where there are no AOCs other than the source AOC which can be causing the contamination, the soil sampling plan identified in the Work Plans will be executed.

Solid samples will be collected during soil boring installation as described in Section 4.2 of the FWDA Final Field Sampling Plan (9 June 1998). Continuous sampling is being performed to create a detailed lithologic log of each boring. Each 2.5 feet of core run will be brought to the surface to maximize sample recovery. Each core section will be screened with an organic vapor analyzer (OVA) to target soil samples from areas of elevated readings. In the absence of field observations of waste or elevated OVA readings, analytical samples will be collected from the 7.5 to 10 feet depth interval and the interval immediately above the first water table. Representative material from the entire 2.5 feet of core barrel will be placed in a decontaminated stainless steel bowl and mixed thoroughly to homogenize the material. The resulting grab sample is representative of the 2.5 feet subsurface interval where the core was collected. Appropriate sample containers are then filled with the homogenized material and any remaining core and homogenized core material are placed with the cuttings generated from the same subsurface interval.

For IDW characterization, soil analytical results will be applied to the container, which holds that specific borehole interval of cuttings. For borings which have been identified as potentially having additional AOCs contributing to contamination at that location, sufficient environmental soil samples will be collected from selected core intervals such that at least one sample per IDW container is collected.

Wet cuttings generated from within groundwater zones will be placed in separate containers from the dry cuttings derived from the same borehole.

One environmental sample will be collected from a selected 2.5 feet interval of wet core using the methods described above. The environmental sample collected will be used to characterize the wet cuttings IDW, similar to the procedure described for the dry cuttings.

Monitoring well ground water sample results will be used to initially characterize liquid IDW. Ground water analytical results will be applied to the container that holds the waters generated during drilling, development, and purging of an individual well.

c. Decontamination Pad IDW

Solids washed off drilling and sampling equipment accumulate in the bottom of the decontamination pads and must be periodically shoveled into containers. Wrangler bags will be used to containerize the solid IDW.

One sample will be collected from each of the containers as they are filled. A separate sample aliquot will be collected for each 6 inches of container and placed in a stainless steel bowl. When the container is full, the sample aliquots will be mixed thoroughly to homogenize the material and the appropriate sample bottles filled. The resulting composite sample is representative of the IDW within that container.

Liquid IDW generated during washing of drilling and sampling equipment accumulates in the decontamination pads and must be periodically pumped into containers. Decontamination water generated in the Open Burning/Open Detonation Areas will be pumped into one poly tank while decontamination water generated near the TNT Leaching Beds Area will be pumped into a separate poly tank. One sample will be collected from each of the containers once they are filled. The resulting grab sample is representative of the IDW within that container.

Again, based on the referenced phone conference, these are the proposed changes to the *Policy Statement Waste Analysis and Disposal Plan for Investigation Derived Wastes Managed at FWDA*. If you have any questions regarding IDW management at FWDA, please contact Mr. Larry Fisher, Tooele Army Depot, at phone number (435) 833-3504.

Sincerely,



Thomas A. Turner
Chief, Environmental
Management Office

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Table 2
Proposed IDW Sampling Plan
Open Burning/Open Detonation Area
Fort Wingate Depot Activity
Gallup, New Mexico

Boring/Well Identification	Estimated Depth (feet)	Additional AOC/SWMU Impact Potential?	Proposed IDW Sample Collection	Proposed IDW Sample Analytes															
				Total Explosives	Total TAL Metals	Dissolved TAL Metals	Total Suspended Solids	Total Dissolved Solids	Hardness	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	ICL VOCs	ICL SVOCs	ICL Pesticides/PCBs	TPH (GRO/DRO)	Nitrate/Nitrite
CMW21	90	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											
CMW22	90	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											
CMW23	150	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											
CMW24	190	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											
CMW25	280	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											

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				Total Explosives	Total TAL Metals	Dissolved TAL Metals	Total Suspended Solids	Total Dissolved Solids	Hardness	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	TCL VOCs	TCL SVOCs	TCL Pesticides/PCBs	TPH (GRO/DRO)	Nitrate/Nitrite
KMW12	60	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											
KMW13	60	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											
KMW14	350	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X		X											
Decontamination Pad			1 solid grab sample per container of solids	X	X	X		X											X
			1 water grab sample per container of water	X	X	X		X											

DRO: Diesel Range Organics
GRO: Gasoline Range Organics
PCBs: Polychlorinated Biphenyls
SVOCs: Semi-volatile Organic Compounds
TCL: Target Compound List
TPH: Total Petroleum Hydrocarbons

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				Total Explosives	Total TAL Metals	Dissolved TAL Metals	Total Suspended Solids	Total Dissolved Solids	Hardness	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	ICL VOCs	ICL SVOCs	ICL Pesticides/PCBs	IPH (GRO/DRO)	Nitrate/Nitrite	

VOCs: Volatile Organic Compounds

Table 1
Proposed IDW Sampling Plan
TNT Leaching Beds
Fort Wingate Depot Activity
Gallup, New Mexico

Boring/Well Identification	Estimated Depth (feet)	Additional AOC/SWMU Impact Potential?	Proposed IDW Sample Collection	Proposed IDW Sample Analytes															
				Total Explosives	Total TAL Metals	Dissolved TAL Metals	Total Suspended Solids	Total Dissolved Solids	Hardness	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	ICL VOCs	ICL SVOCs	ICL Pesticides/PCBs	TPH (GRO/DRO)	
TMW05	35	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X					
TMW06	50	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X					
TMW07	80	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X					
TMW08	60	Yes	2 soil grab samples above saturated zone with additional samples spaced so that collect one sample per container of cuttings	X	X											X	X	X	X
			1 soil grab sample within saturated zone	X	X											X	X	X	X
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 1
Proposed IDW Sampling Plan
TNT Leaching Beds
Fort Wingate Depot Activity
Gallup, New Mexico

Boring/Well Identification	Estimated Depth (feet)	Additional AOC/SWMU Impact Potential?	Proposed IDW Sample Collection	Proposed IDW Sample Analytes																
				Total Explosives	Total TAL Metals	Dissolved TAL Metals	Total Suspended Solids	Total Dissolved Solids	Hardness	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	ICL VOCs	ICL SVOCs	ICL Pesticides/PCBs	TPH (GRO/DRO)		
TMW09	90	Yes	2 soil grab samples above saturated zone with additional samples spaced so that collect one sample per container of cuttings	X	X											X	X	X	X	
			1 soil grab sample within saturated zone	X	X												X	X	X	X
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMW10	60	Yes	2 soil grab samples above saturated zone with additional samples spaced so that collect one sample per container of cuttings	X	X											X	X	X	X	
			1 soil grab sample within saturated zone	X	X												X	X	X	X
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMW11	70	Yes	2 soil grab samples above saturated zone with additional samples spaced so that collect one sample per container of cuttings	X	X											X	X	X	X	
			1 soil grab sample within saturated zone	X	X												X	X	X	X
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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TMW12	100	Yes	2 soil grab samples above saturated zone with additional samples spaced so that collect one sample per container of cuttings	X	X										X	X	X	X	
			1 soil grab sample within saturated zone	X	X										X	X	X	X	
			1 ground water grab sample from completed well	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMW13	75	No	2 soil grab samples above saturated zone	X	X														
			1 soil grab sample within saturated zone	X	X														
			1 ground water grab sample from completed well	X	X	X							X	X					
Decontamination Pad			1 solid grab sample per container of solids	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
			1 water grab sample per container of water	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

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				Total Explosives	Total TAL Metals	Dissolved TAL Metals	Total Suspended Solids	Total Dissolved Solids	Hardness	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	TCL VOCs	TCL SVOCs
VOCs: Volatile Organic Compounds																

**POLICY STATEMENT
WASTE ANALYSIS AND DISPOSAL PLAN
FOR INVESTIGATION DERIVED WASTES
MANAGED AT FWDA**

1. Scope

Wastes covered by this policy statement include wastes generated from the investigation and remediation of sites contaminated by past operations at Fort Wingate Depot Activity (FWDA). Analysis of waste performed using this policy are to determine the proper hazardous waste characterization and insure the waste is disposed of consistent with Solid and Hazardous Waste Regulations. Prior to disposal, the wastes will be collected, transferred and stored in accordance with all applicable regulations.

2. Responsibilities

As the contracting agency, the CORPS of Engineers will insure that the procedures and actions identified in this policy statement are incorporated into the applicable work plan. The contractor(s) are tasked with the collection, storage, transportation and disposal of solid and hazardous waste generated from the site investigation and remediation work in accordance with all applicable regulations. This includes the proper containerization and labeling of wastes; safe movement of waste containers; characterization of the waste; temporary storage of the waste; and the preparation of the hazardous waste manifests and the notifications required under the Land Disposal Restrictions (LDR). While the CORPS holds and administers the contract for the collection and disposal of hazardous waste generated by the site investigation and remediation work, Tooele Army Depot (TEAD) has the ultimate responsibility as the property owner.

2. Collection and Temporary Storage of Investigation Derived Wastes

Investigation or remediation derived waste, that are known or suspected to be hazardous waste, will be placed in containers labeled with the words "Hazardous Waste". Additional information will be annotated on the label to indicate the source of the waste placed in the drum. Upon filling of the drum, the start accumulation date will be annotated on the label and the container will be transferred to a 90 day holding area within 3 days. The contractor will establish and operate the 90 day holding area in accordance with 40 CFR 262.34(a); Subpart I of 40 CFR 265; and 40 CFR 265.16, 265.111 and 265.114. All plans (Training, Inspection and Contingency) and procedures required to operate the 90 day holding area in accordance with the regulations will be incorporated into the applicable work plan. Unless the waste has been previously characterized, all containers placed in the 90 day holding area

will be sampled within 10 days of arrival. The sample will be analyzed, as discussed in the paragraphs below, and characterized for proper disposal within 30 days of being sampled. The waste will then be disposed of accordingly within 30 days of completing the characterization. In no case should a drum of waste remain in the holding area in excess of 90 days, unless an extension has been granted by the State of New Mexico.

3. Sampling Method

Wastes are either managed in open top, or closed top drums, gondolas, or bulk tanker for transport to a Treatment, Storage and Disposal Facility.

The sampling method selected for a given waste stream is based on the physical properties the waste exhibits. Liquids will be sampled with a coliwasa or glass tube; dry powder, sludges, and moist granules will be sampled with a trier; and packed powder will be sampled with an auger. Since using an auger on packed powders can be difficult, an alternative method of sampling would be to take samples as the container is being filled. To insure the sample is representative of the waste in the container, samples would be taken every six inches of container height and composited. Each sample will be taken using a sampling tool that will insure the most representative sample.

4. Selection of Test Parameters

The type of analysis of each waste will depend upon the operations previously conducted at the site and information gained from previous investigative or remedial work performed. The parameters of analysis that normally will be considered include the metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver and the explosives 2,4-dinitrotoluene, hexachlorobenzene, and nitrobenzene. Parameters may be added or eliminated when previously gathered information for a site or the physical state of the waste generated would so justify. A totals analysis will be performed for each parameter to initially screen the waste. The resultant concentration of the totals analysis will be divided by 20 to approximate Toxicity Characteristic Leaching Procedure (TCLP) concentrations. The resultant concentration will be compared to the statutory limit for each parameter and, if within 75% of the limit, a TCLP analysis will be performed for each parameter in question.

5. Parameter Test Methods

Table 1 contains the EPA waste codes and the applicable SW-846 analytical method(s). In addition, the EPA waste numbers have been grouped into analyte groups.

6. Transportation and Disposal of Hazardous Waste Off-site

Prior to transporting or offering a container of hazardous waste for transport off site, the contractor must label each container in accordance with Department of Transportation regulations on hazardous materials under 49 CFR Part 172. In addition, each container of 110 gallons or less must be labeled with the following words and displayed in accordance with 49 CFR 172.304:

HAZARDOUS WASTE – Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address _____.

Manifest Document Number _____.

Any hazardous wastes shipped off-site will include a manifest prepared by the contractor in accordance with 40 CFR 262.20. Acquisition, copies and use of the manifest will be in accordance with 40 CFR 262.21 thru 23. A representative from TEAD will sign the manifest as the generator.

An LDR will be completed by the contractor in accordance with 40 CFR 268.7 and provided with each shipment of hazardous waste that is being sent off-site for storage, treatment, and/or disposal. This notification is to make the receiving facility aware of any land disposal restrictions, and/or treatment methods that may be required before the hazardous waste can be placed into the ground. This notification must be included with each shipment of hazardous waste transported off-site and is in addition to, and in association with, the hazardous waste manifest. As with the manifest, a TEAD representative will sign as the generator on the LDR.

7. Disposal of Non-hazardous Waste

Wastes that are not hazardous and are below background plus two standard deviations will be returned to the location where they were generated and spread out evenly across the ground. If the waste is greater than background plus two standard deviations, then the waste will be transported off-site to an approved landfill.