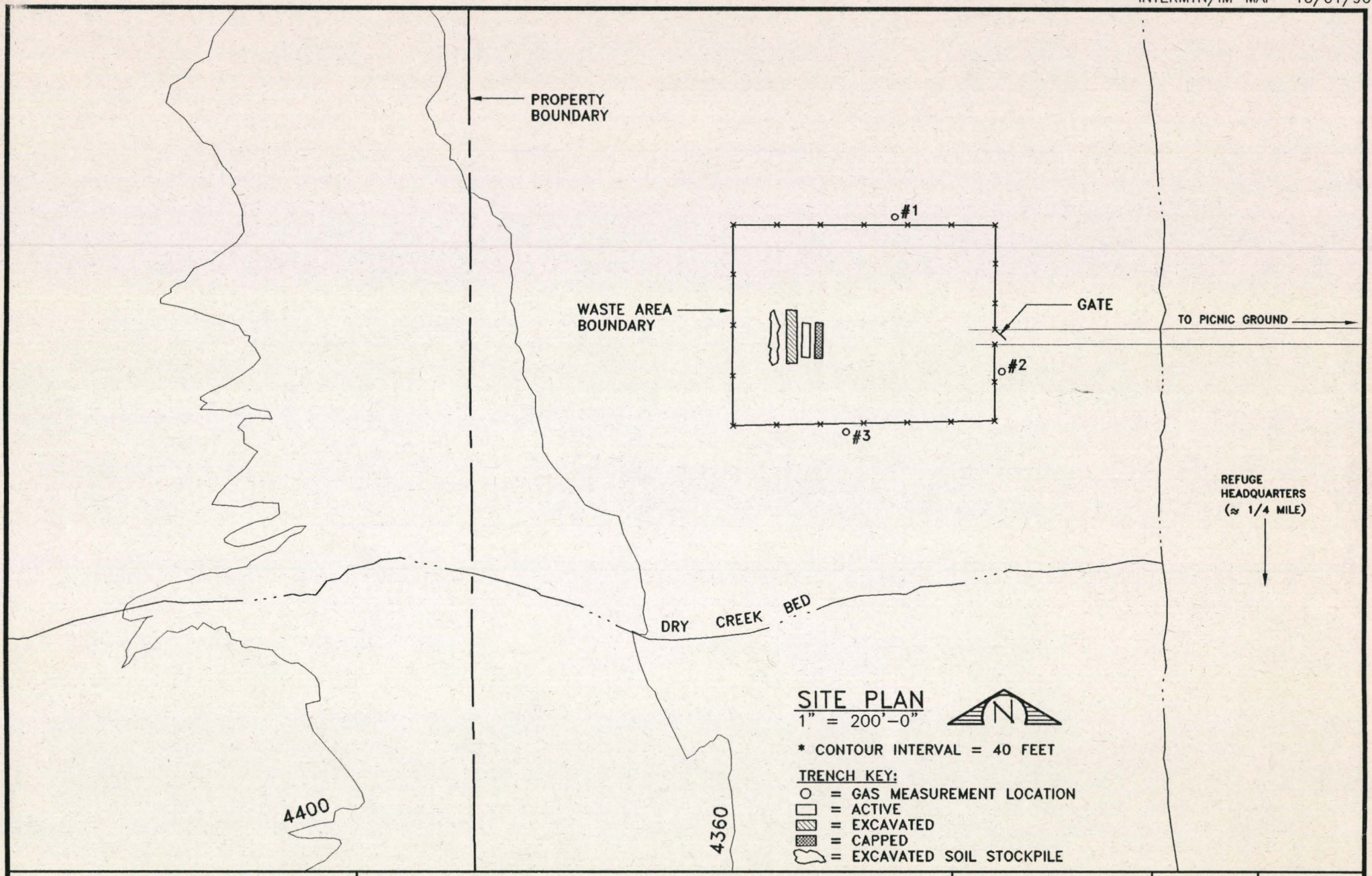
Attachment #1

Landfill Location



INTERMOUNTAIN TECHNICAL SOLUTIONS INC.

TOPOGRAPHIC MAP – SOLID WASTE DISPOSAL AREA
US FISH & WILDLIFE
FISH SPRINGS REFUGE, CLASS II LANDFILL

Date: 10/23/97 | Check. By:

Drawn By: DLR

FIGURE 1

INTERMOUNTAIN TECHNICAL SOLUTIONS, INC.
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1746 Cole Blvd., Bldg. 21 – Suite 300
Golden, Colorado 80401
(303) 279-2010 Fax. (303) 279-2544

Attachment #2

Plan of Operation

PLAN OF OPERATION; R315-302-3 (1) (e)

INTENDED SCHEDULE OF CONSTRUCTION: R315-302-2 (2)(a)

The manner of construction employed by the refuge management since 1960 involves the utilization of a bulldozer with a wide blade traversing the desired "cut" area to an approximate width of ~ 15 feet and a sloping length of ~ 36 -38 feet. The resultant "trench" is excavated to a total depth from the surrounding ground surface contour of 4 feet. The first trench, opened in 1960, has been totally filled with the site-generated solid waste and has an earthen cover of materials obtained from the immediate area. The second trench, which is in operation at present and commenced accepting waste in the early to mid-1980's, has approximately two (2) feet of "freeboard" capacity remaining. In anticipation of Trench #2 's capacity being met in the near future, Trench #3 has been excavated to the west of #2 and does not contain any waste. This third trench was excavated in 1995 and is slightly longer (total length about 60 feet) than trenches #1 and #2. The total perimeter dimensions of the three (3) trenches in existence has been measured to be approximately 70 feet x 60 feet. Excavated soil has been stockpiled adjacent to the trenches to provide cover soil and final cover material.

DESCRIPTION OF ON-SITE WASTE HANDLING PROCEDURES AND WASTE VOLUME RECORDS: R315-302-2 (2) (b) and R315-302-3 (1) (f)

The routine procedure for the collection, transportation and disposal of the solid wastes generated from the refuge operation is described as follows: Once per week of operation, a FWS designated employee collects the solid waste stored in various containers located primarily in the headquarters compound, and places the garbage/trash in service vehicle (typically, this will be a pickup truck). The FWS employee, who has been properly trained in landfill restrictions, inspects the collected wastes for undesirable or unacceptable items and removes the items as appropriate (for other management options), transports the "load" to the Class II landfill trench area, and completes the **"Waste Load Acceptance Form", (included as Attachment A)**. The form requests the "transporter" to record an estimated volume of the waste load, in the uncompacted state, and give an observed physical description of the load contents. The "operator" then completes the balance of the form, and proceeds to unload the contents within the trench. The operator then either compacts the load further within the trench, or if compaction is not necessary, retrieves the nearby stockpiled soil and places an approximately 4" lift of cover on the recent trench addition.

INSPECTIONS AND MONITORING; RECORDS OF OBSERVED/ TESTING RESULTS:
R315-302-2 (2) (c) and R315-310-3 (1) (g)

As discussed above during the Waste Load Acceptance process, each load is visually inspected for unacceptable items or waste types. This initial review is the most effective manner of restricting and regulating the receipt of waste into the trenches. In addition, the FWS management incorporates a quarterly inspection of the trench(es), and the related appurtenances such as the landfill disposal area security fencing, gate(s), lock(s), boundary markers, run-on/run-off control structures, roadways and soil cover material. This inspection will be performed by personnel trained and qualified to evaluate the condition/status of the inspected items compared to the Class II Permit conditions and requirements and record those observed conditions on the **"Class II Landfill Weekly & Quarterly Inspection Log", (Typical form included as Attachment B)**. The "Log" contains a section devoted to items or actions to be taken to correct an observed apparent or likely deficiency, in addition to the suggested timing of actions or repairs. The log also includes information such as date and time of the inspection, printed name and handwritten signature of the inspector, as well as a listing of items to be observed/or measured, when monitoring. Monitoring for organic vapors/gases generated from the placement of solid organic waste into an anaerobic environment will be conducted on a quarterly basis. An organic vapor analyzer (OVA), or a similar organic gas monitoring instrument, will be utilized to monitor the air directly at the perimeter of the "active" unit(s). This measurement will be acquired during a period of calm winds to be most effective and representative of the cell's gas generation (typically, methane gas). The results of the gas

monitoring of the Class II Units will be recorded on the **"Quarterly Gas Monitoring Log" (Attachment C)**, as well as any measures that are taken to decrease levels of gas release (i.e. the addition of a larger quantity of soil materials for waste cover).

CONTINGENCY PLAN FOR FIRE/EXPLOSION OR LANDFILL UNIT RELEASE:
(R315-302-2 (2)(d) and R315-302-2 (2)(f).

Fire prevention and control is the primary consideration in the trench(es) while the unit(s) are in operation, in an effort to minimize the risk of Aerial brush fires that could potentially impact the refuge and refuge headquarters operation. The disposal of organic waste materials within the trench provides the "fuel" for ignition, if the waste was not provided with a soil cover. The practice of immediately covering the recently placed waste load with the excavated soil (from the nearby excavated soil stockpile) substantially reduces this risk of exposing the organic fuel to an ignition source. However, if a fire does occur within the solid waste disposal area, the refuge personnel are equipped to address incipient-stage fires through the use of portable fire extinguishers and the available heavy earthmoving equipment. Hand shovels and other implements are also available in controlling/eliminating the hazard. Available water is located approximately 3,000 to 4,000 feet east of the waste management area. Should the need arise, the refuge headquarters is equipped with a 250 gallon capacity "slip-in" pump and hose fire-fighting system. This equipment is designed specifically for brush fire-fighting and is located in the back of a dedicated pickup truck during the "fire season" (March-November). The 250 gallon capacity tank can be quickly refilled 3,000 to 4,000 feet to the east at any of the natural pools. A full-time telephone system, capable of alerting other response authorities at Dugway Proving Grounds and other locations such as Wendover, Utah/Nevada, Tooele, Stockton, and Rush Valley may also be employed. The Bureau of Land

Management (BLM), is capable of responding to a fire in the refuge area with an array of four-wheel drive fire-fighting vehicles and aircraft, if necessary.

Explosions due to the disposal of waste materials capable of detonation, are not a concern since all waste loads are inspected for unacceptable articles/waste streams at the point of pickup and at the working "face" of the active trench. Explosive gases (generated from the decay of organic wastes) are not likely to accumulate in concentrations sufficient to create an explosive atmosphere. The small quantities of landfilled waste are covered with soil upon placement. The methane off gassing will be monitored by the refuge with the Quarterly Gas Monitoring Program.

The Emergency Plan contains the FWS staff procedures implemented in the event of a fire or explosion emanating from the **"Emergency Plan" (Attachment D).**

The relatively small magnitude of the active waste disposal trench operation, in conjunction with the extremely low precipitation rate (an average of less than 9 inches/year) and high evapo-transpiration rate (over 46 inches/year), as well as the absorption of any liquids within the waste/soil mixture, are the factors that comprise the negligible risk in any failure of a "run-off" collection system at the perimeter of an active trench. Since the rainfall is so low in the region , any rain that does fall into the trench, evaporates very quickly. The available open trench area is quite small and does not lend itself to measurable "exposure". At the same time, any snowfall within the trench is

either melted quickly and absorbed within the soil/waste matrix or sublimes in the dry atmosphere. Coupled with the excavated soils located upgradient of the trenches relative to the direction of any possible precipitation sheet flow, the run-off of any precipitation that has come into direct contact with the trench contents, is extremely remote. Additionally, the possibility of undesirable contaminants leaching into the native soil and groundwater are minimal due to the net negative precipitation rate of approximately 40 inches per year.

PROCEDURES FOR EXCLUDING UNACCEPTABLE WASTE FROM ON-SITE DISPOSAL: R315-302-2 (2) (h).

The refuge staff is trained to recognize waste materials that are unacceptable for solid waste disposal in the landfill. This training consists of classroom and/or "hands-on" field experience with a trained operator. The waste "streams" that are generated by the operation of the refuge are finite and routine. The waste recycling program at the refuge accounts for a selected portion of the overall waste generated, and these items/types are diverted from the on-site waste disposal process. Waste vehicle oils and automotive batteries are typical of the wastes that are sent off-site to authorized recyclers. The inspection of each load at the collection point greatly enhances the effectiveness of the waste recycling effort. Household wastes generated from the day-to-day operation of the refuge are minute in quantity and handled in a manner consistent with Federal and State regulations. Asbestos and mercury-containing items are not handled at the refuge. Waste liquids, containerized in above-household quantities and size, are also prohibited from trench disposal.

PROCEDURES FOR CONTROLLING DISEASE VECTORS: R315-302-2 (2) (i)) & DUST CONTROL: (R315-303-5 (2) (a)

The solid waste disposal practice of applying a soil cover to the off-loaded waste in a timely manner (typically the same day) is the most efficient method of eliminating/controlling any possible disease vectors (i.e. rats, mice, birds, insects, etc.) from admittance into the active trench. Should it be necessary to dispose of dead animals within the trench, the carcass will be covered with six (6) inches of soil to prevent odors and the propagation/harborage of rodents and insects (as required in Utah R 315-315-6). Currently, the refuge collects the solid waste from collection points at the refuge headquarters and other containers placed in locations convenient to the general public on a weekly basis and promptly places the solid waste loads within the trench. Per the "Daily Cover" requirement outlined in Utah R315-303-5 (4), the permittee will place a 6 inch minimum soil cover on the load when the trench has received a single load, or in the case of multiple loads, at the end of the operating day. This method has shown to be effective in the reduction of the possibility of blowing litter, fires, odor, or vectors. The refuge will continue to minimize the area of disturbed soils within the solid waste management area in order to maintain as much vegetation as possible, minimizing the generation of dust from loose soils. Traffic within the landfill unit is not expected to be frequent (~ 1-2 vehicles per week). Resultant road dust is expected to be negligible.

ALTERNATIVE WASTE HANDLING (BACK-UP) PLAN: R 315-302-2 (2) (j)

Due to the extremely limited scope of the Class II landfill operation and the very small solid waste volumes historically received and expected in the future, the permittee does not anticipate insufficient capacity or interruption of landfill operations. Sufficient "backup" equipment is located on-site in the event of any equipment breakdown. The infrequent rate of waste delivery to the trench from the refuge operations gives the refuge ample opportunity to manage the generated waste on-site in the Class II landfill.

GENERAL TRAINING AND SAFETY PLAN: R 315-302-(2) (m)

The Solid Waste Management Area operator (and alternate(s)) are trained in the requirements of the Utah Solid Waste Facility Regulations for the operation of a Class II Solid Waste Landfill and the identification of acceptable and unacceptable waste materials to be disposed on-site. These operators are made aware of the responsibilities outlined in the solid waste permit (when issued as "final") and also the requirements enumerated in Utah R 315-303-2, (for facility operations prior to the issuance of a final permit). Specifically, the solid waste operator will accept no hazardous wastes or wastes containing PCB's; meet the standards for landfill maintenance and operation R 315-303-5; provide adequate fire protection; maintain records for the number of waste vehicle(s) and the volume/weight of load(s) disposed; document the receipt of any "special waste" R 315-301-2 (70) ; and, by March 1st of each year, prepare and submit an annual report for the previous year's activities.

Training in the completion of the applicable operation forms is provided to personnel at the refuge who have been designated as responsible for the operation/maintenance of the waste management unit. All training will be conducted and recorded using the applicable form **"Training Documentation Form for Fish Springs " (Attachment E),** or alternate forms approved for use by the refuge manager. Training records will be kept at the refuge headquarters or other location(s) off-site, as approved by the Executive Secretary.

RECYCLING PROGRAM; R 315-303-5 (6)

Fish Springs National Wildlife Refuge currently recycles materials providing there exists a recycling outlet for the specific type of waste material. The refuge collects and recycles the following items/types of wastes:

- Paper items including: computer paper, newsprint, magazines and corrugated material
- Aluminum articles (cans, etc.)
- Clear glass containers
- Plastics bearing the labeling of #1, #2, and # 6
- Steel items
- Automobile batteries (for exchange at Dealer/Vendors)
- Used vehicle oil (transferred to a local permitted waste oil burner)

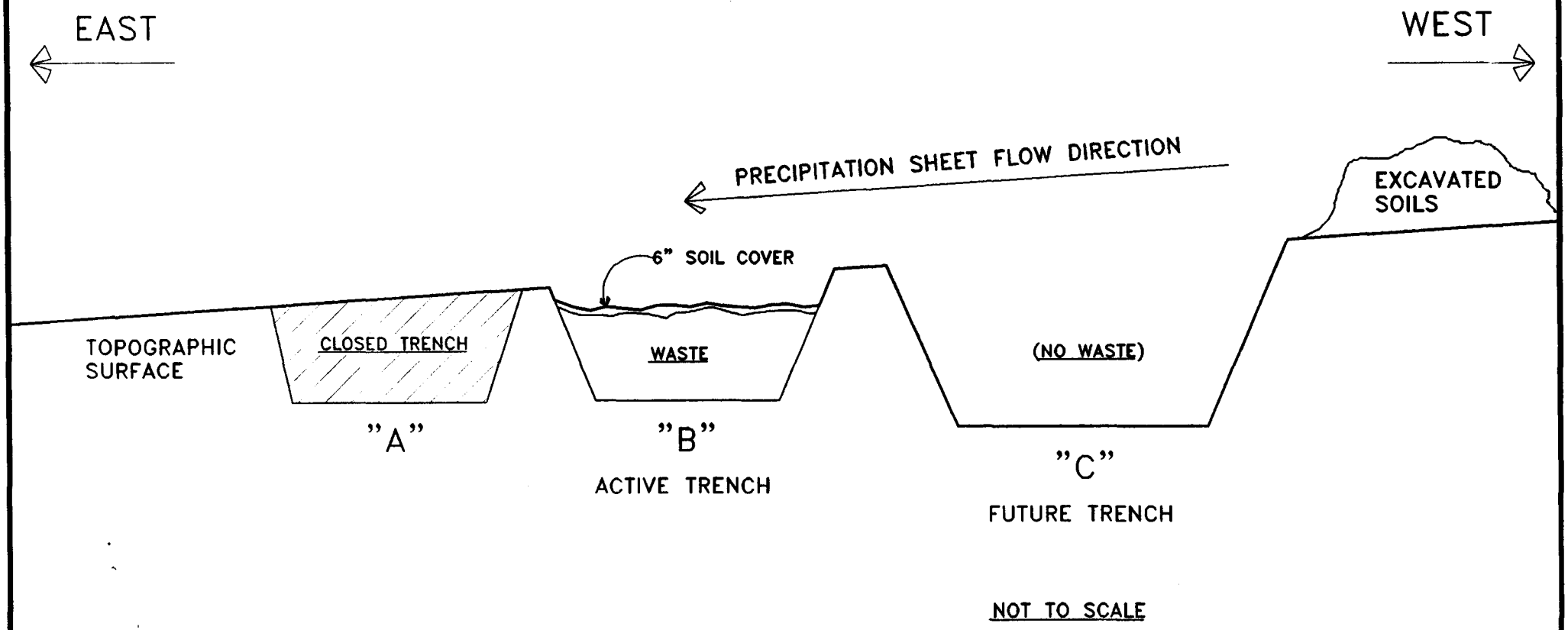
The refuge intends to maintain the current recycling effort in order to minimize the quantity of waste destined for on-site burial within the Class II landfill trench(es). Available markets could dictate the fate of some of these selected materials.

SECURITY PROVISIONS FOR THE SOLID WASTE MANAGEMENT AREA;
R315-302-2(2)(N) & R 315-303-4 (6)

The refuge is extremely remote from Public use; however, visitors do appear at the refuge headquarters area from time to time, usually in the summer months. The western and southern boundaries of the refuge are fenced to protect the refuge from the intrusion of sheep, grazing in the vicinity. This fencing is constructed with "hog-wire" woven material on the bottom half topped by 2 strands of barbed wire. This existing fencing also isolates the refuge headquarters from most traffic. The Solid Waste Management Area is located nearly ½ mile into an area that is closed to all public access, and will be further isolated from any possible foot traffic by the construction of a barbed-wire fence, with a "stretch-gate" equipped with lock to allow only FWS vehicular access. The boundary of the area will also be adequately marked with "Warning" signs to alert any pedestrian(s) of the restricted status of the waste management area beyond the signs/markers. A sign will also be erected which identifies the name of the facility, the "hours" of typical operation, any unacceptable waste materials, and an emergency telephone number in case a situation arises at the management area. All access to the Waste Management Unit is controlled by the locked vehicle "stretch" gate.

Attachment #3

Trench Design



INTERMOUNTAIN TECHNICAL SOLUTIONS INC.

TRENCH – CROSS SECTION VIEW
US FISH & WILDLIFE
FISH SPRINGS REFUGE, CLASS II LANDFILL

Date: 09/30/96 | Check. By:

Drawn By: DLR

FIGURE 3

INTERMOUNTAIN TECHNICAL SOLUTIONS, INC.
P.O. Box 74068, Arvada, Colorado 80006-0608
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Golden, Colorado 80401
(303) 279-2010 Fax. (303) 279-2544

DESIGN AND LOCATION OF RUN-ON & RUN-OFF CONTROL SYSTEMS: (R 315-310-4(2)(c)

The overall design of the run-on control system for the active trench within the solid waste management area will consist of a portion or all of the soils excavated from the construction of the trench itself and placed in an "upgradient" (higher) elevation than the trench . With the lack of any considerable amount of precipitation in the area (less than 9"/per year), coupled with the extremely high evapotranspiration rate (over 46 to 48 inches/year), the existence of any "sheet flow" of precipitation emanating from the small elevation gain West ("above") the open trench is remote. However, the stockpiled soils will be placed to the west side of each active trench in a manner that would direct any possible "run-on" from entering the trench. This diversion will ensure that the active (open) trench is protected from additional quantities of water coming in direct contact with waste placed inside the trench. Run-off is not calculated or expected to be generated at any time; therefore no run-off or leachate collection, treatment and disposal system is contemplated.

LANDFILL GAS MONITORING AND CONTROL PLAN: R 315-310-4 (2) (c) (vii)

On a Quarterly basis, the refuge will conduct a gas monitoring event at designated locations at the perimeter of the waste management area (facility property boundary). This procedure will consist of an operator, or designated and qualified alternate, obtaining measurements of trench-generated methane and/ or other potentially-explosive gases. As outlined in Utah R 315-303-4 (5) and R 315-303-4 (5), the permittee will obtain these measurements to demonstrate that the concentration(s) of any of these types of gases are not generated in excess of the lower explosivity limit at the property boundary or beyond. The locations will be utilized at each quarterly event for consistency of measurements.

The refuge requests that the collection and handling of any landfill gases not be required if the demonstration can be made that little or no landfill gases are produced or that if produced, that they will not support combustion.

The measurement of these gases will taken through the use of an appropriate and properly-calibrated instrument , capable of the reading the concentration(s) of the target gases required by the standard in R 315-303-3(2) (a), and the results recorded on the "Quarterly Gas Monitoring Event Log" (Attachment C).

If the concentration of these gases are ever detected in concentrations exceeding the standard, the permittee will take immediate action and necessary steps to ensure protection of human health, and within 60 days of detection, implement a remediation plan

for the methane gas and notify the executive secretary of plan implementation.

Attachment #4

Inspection Forms

ATTACHMENT A

WASTE LOAD ACCEPTANCE FORM

WASTE LOAD ACCEPTANCE FORM

FISH SPRINGS WILDLIFE REFUGE; CLASS II WASTE AREA

DATE OF COLLECTION: ____________

OPERATOR NAME:____________________ **SIGNATURE:**____________________

(PLEASE DESCRIBE LOCATION)

PICKUP POINT:________________________________
OBSERVED CONTENTS: OK? / UNACCEPTABLE?
IF UNACCEPTABLE, REASON:________________________________

ACTION TAKEN:________________________________

PICKUP POINT:________________________________
OBSERVED CONTENTS: OK? / UNACCEPTABLE?
IF UNACCEPTABLE, REASON:________________________________

ACTION TAKEN:________________________________

PICKUP POINT:________________________________
OBSERVED CONTENTS: OK? / UNACCEPTABLE?
IF UNACCEPTABLE, REASON:________________________________

ACTION TAKEN:________________________________

PICKUP POINT:________________________________
OBSERVED CONTENTS: OK? / UNACCEPTABLE?
IF UNACCEPTABLE, REASON:________________________________

ACTION TAKEN:________________________________

PICKUP POINT:________________________________
OBSERVED CONTENTS: OK? / UNACCEPTABLE?
IF UNACCEPTABLE, REASON:________________________________

ACTION TAKEN:________________________________
SUMMARY OF LOAD ACTIVITY (ALL LOAD CONTRIBUTIONS):
LOAD APPROVED FOR ON-SITE DISPOSAL (INITIAL):________________

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

INSPECTION LOG TYPE: EACH WASTE LOAD

DATE OF INSPECTION: _____ TIME: _____ AM/PM

LOAD INSPECTION CHECKLIST

WASTE LOAD NUMBER:	LOAD INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE, STATE REASONS AND CORRECTIVE ACTION TAKEN:
		ACCEPT	UNACCEPT	
	Evidence of unacceptable waste materials? (i.e.) auto batteries, asbestos, used oil (liquids-only), etc. at pickup point. Containers of liquids observed at pickup point? Recyclable material in pickup batch? Other evidence of materials not considered "household" waste? (solvents, tires, etc.)			

OPERATOR'S NAME

OPERATOR'S SIGNATURE

ATTACHMENT B

CLASS II LANDFILL
WEEKLY AND QUARTERLY INSPECTION LOG

INSPECTIONS

Inspection Forms are used to document the occurrence of an inspection, whether it was performed weekly, Quarterly, or on another specified frequency. An Inspection form must document the date, time of the inspection, name of the inspector (and the inspector's signature), the status of each inspected item, the inspector's notation of any item observed as " unacceptable", and the nature of any repair or response action taken as a result of the inspection.

All Inspection Forms (and any associated documents) will be incorporated into the Refuge's operating record files. These documents will be maintained at the facility for a minimum of three (3) years, or as formally-approved by the Executive Secretary of the Division of Solid and Hazardous Waste (State of Utah).

INSPECTION DOCUMENTATION PROCEDURES:
(WEEKLY OR QUARTERLY)

1. Fill in the date of inspection.

2. Print and sign your name.

3. Fill in the time of the inspection.

4. Inspect the item(s) as indicated on the applicable frequency form, observing the item(s) as stated in the "Inspection Element" column.

5. If the inspection item is acceptable, a check-mark or "X" in the "Accept" column is entered.

6. If the inspection item is unacceptable per the inspection element observed, a check-mark or "X" is placed in the "Unaccept" column, and the observation is described in the adjacent column.

7. The "Response Timing " block on the Form bottom requests the inspector to evaluate the timing of corrective action (repair or response action) to be taken to remedy the observed unacceptable entry.

8. An Inspection Form may be utilized by the inspector to document when and how the previously-documented unacceptable entry was corrected. This may take place any time after the original Inspection Form recorded a "deficiency".

9. All Inspection Forms are placed and stored in the Refuge's operating record files.

INSPECTION AREAS AND SCHEDULES:

I. SOLID WASTE MANAGEMENT AREA PERIMETER:

FENCE	WEEKLY	INSPECT FOR BREAKS OR DAMAGE. CHECK FOR SEVERE EROSION UNDER LINE
GATE & LOCK	WEEKLY	CLOSED AND LOCKED, WHEN AREA NOT IN USE
WARNING SIGNS	QUARTERLY	PRESENT AND LEGIBLE
AREA IDENTIFIER SIGN	QUARTERLY	PRESENT, LEGIBLE AND SEVERE DAMAGE

II. SOLID WASTE TRENCHES

RUN-ON DIVERSION BERMS	QUARTERLY	INTACT AND ABLE TO PERFORM AS DESIGNED POSITIONED FOR ACTIVE TRENCH PROTECTION
AVAILABLE SOIL COVER	QUARTERLY	PRESENT IN THE DISPOSAL AREA
WASTE COVER	WEEKLY	LOCATED ON WASTE IN ACTIVE TRENCH
ACCEPTABLE WASTE IN TRENCH	WEEKLY	(REFER TO LOAD LOG)
STANDING LIQUIDS	WEEKLY	UNUSUAL QUANTITIES IN TRENCH (UNEXPECTED)

LITTER(WIND-DISPERSED)	WEEKLY	EVIDENCE OF WINDBLOWN WASTE (OUTSIDE OF TRENCH)
TRENCH CONTENTS	WEEKLY	BURROWING OF TRENCH CONTENTS BY RODENTS OR VECTORS

III. FIRE-FIGHTING/ EMERGENCY EQUIPMENT:

FIRE EXTINGUISHERS (PORTABLE)	QUARTERLY	PRESENT AT ASSIGNED LOCATIONS
		CHARGED ?
250 GALLON SLIP-IN TANK / PUMP / HOSE	QUARTERLY	ON-SITE AND IN WORKING CONDITION
EARTHMOVING EQUIPMENT	QUARTERLY	AVAILABLE & OPERATIONAL
HAND TOOLS (SHOVELS,ETC.)	QUARTERLY	AVAILABLE
TELEPHONE SERVICE TO OUTSIDE ENTITIES	QUARTERLY	PRESENT ON-SITE & IN WORKING ORDER

IV. TRENCH GAS GENERATION / MEASUREMENT:

INSTRUMENT	QUARTERLY	AVAILABLE/ OPERABLE
		CALIBRATE
BACKGROUND AREA	QUARTERLY	CHOSEN "UPWIND" OF TRENCH AREA
MEASUREMENT AREAS (THREE PERIMETER SITES)	QUARTERLY	IDENTIFIED ON AREA MAP

		"SITE" IS CONSISTENT WITH PREVIOUS LOCATION WIND IS GENERALLY CALM
DOCUMENTATION	QUARTERLY	READINGS RECORDED ON FORMS

V. POST-CLOSURE TRENCHES:

CLOSURE CAPS (COMPONENTS)	QUARTERLY	EVIDENCE OF DISTURBED CAP COMPONENTS : HUMAN ACTIVITY : EROSION : BURROWING ANIMALS
	QUARTERLY	SLOPE MAINTAINED FOR SHEDDING RAINWATER

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

TYPE: Quarterly

INSPECTION REPORT

DATE OF INSPECTION: _____ TIME: _____ AM/PM PAGE _1_ OF _1__

EQUIPMENT/PROCESS UNIT NAME: Fire Fighting/Emergency Equipment

INSPECTION CHECKLIST

EQUIPMENT/STRUCTURE ITEM	INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE STATE REASON(S):
		ACCEPT	UNACCEPT	
Fire extinguishers (portable)	Present at assigned locations?			
	Adequate charge on units?			
250 gallon "slip-in" tank/pump/ hose	Located on-site?			
	All components in working condition?			
Earth moving equipment	Available on-site?			
	Operational?			
Hand tools	Available on-site?			
Telephone service to off-site entities	Present, undamaged and tested to work			

RESPONSE TIMING: ( ) URGENT (WITHIN 24 HRS)
( ) ROUTINE (WITHIN WEEK)

INSPECTOR'S NAME

INSPECTOR'S SIGNATURE

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

TYPE: Weekly

INSPECTION REPORT

DATE OF INSPECTION: _____ TIME: _____ AM/PM PAGE _1_ OF _1__

EQUIPMENT/PROCESS UNIT NAME: Solid Waste Disposal Trench (Active)

INSPECTION CHECKLIST

EQUIPMENT/STRUCTURE ITEM	INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE STATE REASON(S):
		ACCEPT	UNACCEPT	
Trench waste contents	"Acceptable" waste observed (during off-load) or any material visible in trench			
Trench interior	Burrowing of contents by rodents or other vectors evident?			
Waste cover	Adequate quantity on disposed waste loans?			
Standing liquids	Observed unusual quantities within trench (unexpected)?			
Litter (wind-dispersed)	Evidence of wind blown waste outside of trench? (i.e. ground covered, or fence strewn with litter)			

RESPONSE
TIMING: ( ) URGENT (WITHIN 24 HRS)
( ) ROUTINE (WITHIN WEEK)

INSPECTOR'S NAME

INSPECTOR'S SIGNATURE

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

TYPE: Quarterly

INSPECTION REPORT

DATE OF INSPECTION: _____ TIME: _____ AM/PM PAGE _1_ OF _1__

EQUIPMENT/PROCESS UNIT NAME: Solid Waste Trench (Active)

INSPECTION CHECKLIST

EQUIPMENT/STRUCTURE ITEM	INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE STATE REASON(S):
		ACCEPT	UNACCEPT	
Run-on diversion berms	Intact and able to perform as designed?			
	Positioned for "active" trench protection?			
Stockpiled soil for cover	Visible and quantity sufficient for routine covering of waste load(s)			

RESPONSE TIMING: ( ) URGENT (WITHIN 24 HRS)
( ) ROUTINE (WITHIN WEEK)

INSPECTOR'S NAME

INSPECTOR'S SIGNATURE

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

TYPE: Quarterly

INSPECTION REPORT

DATE OF INSPECTION: _____ TIME: _____ AM/PM PAGE _1_ OF _1__

EQUIPMENT/PROCESS UNIT NAME: Solid Waste Trench (Active)

INSPECTION CHECKLIST

EQUIPMENT/STRUCTURE ITEM	INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE STATE REASON(S):
		ACCEPT	UNACCEPT	
Warning signs	Present and legible at all prescribed locations?			
"Area" identifier sign	Name of solid waste area listed			
	Name of operator and telephone number posted			
	Sign is present, legible and no indication of severe damage			

RESPONSE
TIMING: ( ) URGENT (WITHIN 24 HRS)
( ) ROUTINE (WITHIN WEEK)

INSPECTOR'S NAME

INSPECTOR'S SIGNATURE

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

TYPE: Weekly

INSPECTION REPORT

DATE OF INSPECTION: _____ TIME: _____ AM/PM PAGE _1_ OF _1__

EQUIPMENT/PROCESS UNIT NAME: Solid Waste Management Area/Perimeter

INSPECTION CHECKLIST

EQUIPMENT/STRUCTURE ITEM	INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE STATE REASON(S):
		ACCEPT	UNACCEPT	
Fence	Inspect for breaks or damage			
	Check for severe erosion under fence line			
Gate and lock	Observe if closed and locked when area not in use.			

RESPONSE
TIMING: ( ) URGENT (WITHIN 24 HRS)
( ) ROUTINE (WITHIN WEEK)

INSPECTOR'S NAME

INSPECTOR'S SIGNATURE

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

TYPE:

INSPECTION REPORT

DATE OF INSPECTION: _____ TIME: _____ AM/PM PAGE ___ OF ___

EQUIPMENT/PROCESS UNIT NAME:

INSPECTION CHECKLIST

EQUIPMENT/STRUCTURE ITEM	INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE STATE REASON(S):
		ACCEPT	UNACCEPT	

RESPONSE
TIMING: ( ) URGENT (WITHIN 24 HRS)
( ) ROUTINE (WITHIN WEEK)

INSPECTOR'S NAME

INSPECTOR'S SIGNATURE

ATTACHMENT C

QUARTERLY GAS MEASUREMENT LOG

QUARTERLY GAS MEASUREMENT LOG
FISH SPRINGS NATIONAL WILDLIFE REFUGE

DATE: _____ QUARTER:_____ SAMPLER: _____

INSTRUMENT USED: _____ MODEL #: _____ SERIAL #:_____

CALIBRATION DATE: _____ GASES MEASURED (TYPE): _____

FIELD CONDITIONS : TEMPERATURE:_____ TIME OF DAY: _____ AM./ PM.

LOW ATMOSPHERIC CONDITION (OVERCAST, SUNNY, PART-CLOUDY):_____

WIND (SLIGHT, GUSTY, CONSTANT): _____ EST. SPEED : _____

LOCATION " A" MEASUREMENT: _____

LOCATION "B " MEASUREMENT : _____

LOCATION " C" MEASUREMENT : _____

BACKGROUND MEASUREMENT : _____

DESCRIBE BACKGROUND LOCATION: _____

(NOTE: THIS WILL BE VARIABLE DEPENDING UPON WIND DIRECTION & SPEED)

OTHER UNUSUAL SITE EVENTS OR OBSERVATIONS OF MEASUREMENT CRITERIA:

_____

_____

SIGNATURE OF SAMPLER: _____

NAME OF SAMPLER : _____

FISH SPRINGS NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
CLASS II SOLID WASTE LANDFILL

TYPE: Quarterly

INSPECTION REPORT

DATE OF INSPECTION: _____ TIME: _____ AM/PM PAGE _1_ OF _1__

EQUIPMENT/PROCESS UNIT NAME: Trench Gas Generation/Measurement

INSPECTION CHECKLIST

EQUIPMENT/STRUCTURE ITEM	INSPECTION ELEMENT	STATUS		IF UNACCEPTABLE STATE REASON(S):
		ACCEPT	UNACCEPT	
Instrument for gas measurement	Available for quarterly readings?			
	Calibrated prior to "event"?			
Background area	Area chosen for event is "upwind" from trench area			
Measurement areas 3 (three)	All three areas same as stations identified on topo map?			
	Wind velocity considered "calm"?			
Documentation	Forms available and used?			

RESPONSE
TIMING: ( ) URGENT (WITHIN 24 HRS)
( ) ROUTINE (WITHIN WEEK)

INSPECTOR'S NAME

INSPECTOR'S SIGNATURE

Attachment #5

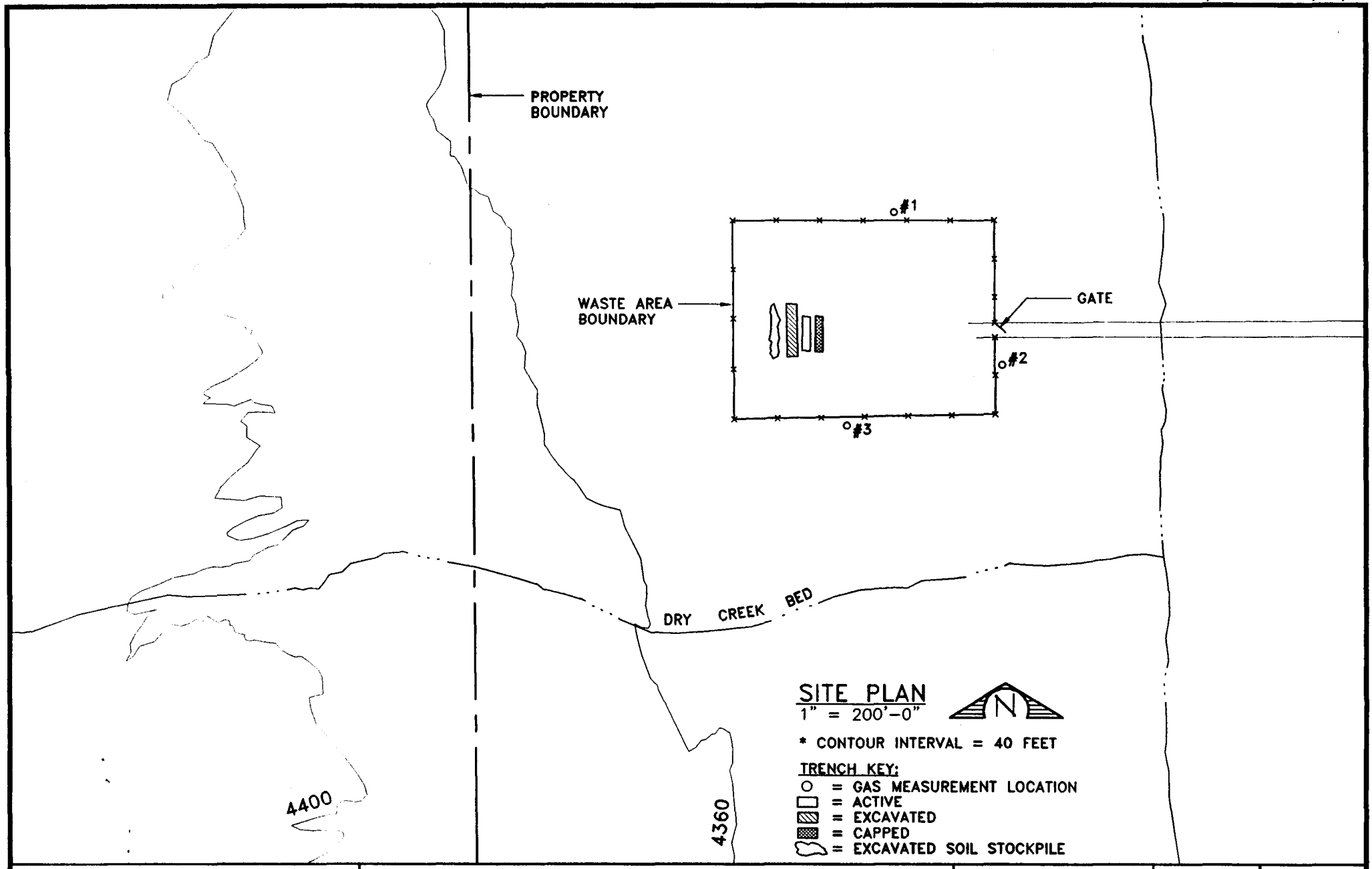
Closure Plan

CLOSURE PLAN: R 315-310-3 (1) (h), R 315-310-4 (2) (d) (I) , R 315-310- 4 (2) (c) (ii.) & R 315-310-4 (2) (d) (ii)

The closure components of each Class II solid waste disposal trench consist of the final application of solid waste and a compaction effort to ensure a firm base prior to the deployment of the required eighteen inches (18) of graded, compacted soil (or equivalent), with a permeability rate of 1 x 10 -5 cm/sec. , or less. The purpose of the final cap is to provide infiltration protection to the cell contents from liquid (precipitation) entry. Should significant quantities of these liquids come into contact with the waste materials disposed within the trench for any length of time, it is assumed that the generated "leachate" would contain dissolved residuals that could eventually impact the local groundwater aquifer. Therefore, a protective, final, closure cap of low permeability earthen material is desired to reduce the risk of this occurrence. The final cap surface will not be less than 2% in slope in order to promote any liquid drainage away from the center of the trench and out toward non-disposal areas. Final side slopes be constructed at less than the maximum slope value of 33%. The final cap component material will be a six (6) inch layer of soil material (or equivalent, suitable material), that is capable of sustaining vegetative growth. The cap will be seeded with selected plant varieties or forbes to minimize erosion. (Other suitable erosion layers may be requested for executive secretary approval, by the permittee at a later date). The closure cap cross-section is included as **Figure 4**.

FIGURE 1

TOPOGRAPHIC MAP: SOLID WASTE DISPOSAL AREA



INTERMOUNTAIN TECHNICAL SOLUTIONS INC.

TOPOGRAPHIC MAP – SOLID WASTE DISPOSAL AREA
US FISH & WILDLIFE
FISH SPRINGS REFUGE, CLASS II LANDFILL

Date: 09/30/96 | Check. By: | FIGURE 1

Drawn By: DLR

INTERMOUNTAIN TECHNICAL SOLUTIONS, INC.
P.O. Box 74068, Arvada, Colorado 80006-0608
1746 Cole Blvd., Bldg. 21 – Suite 300
Golden, Colorado 80401
(303) 279-2010 Fax. (303) 279-2544

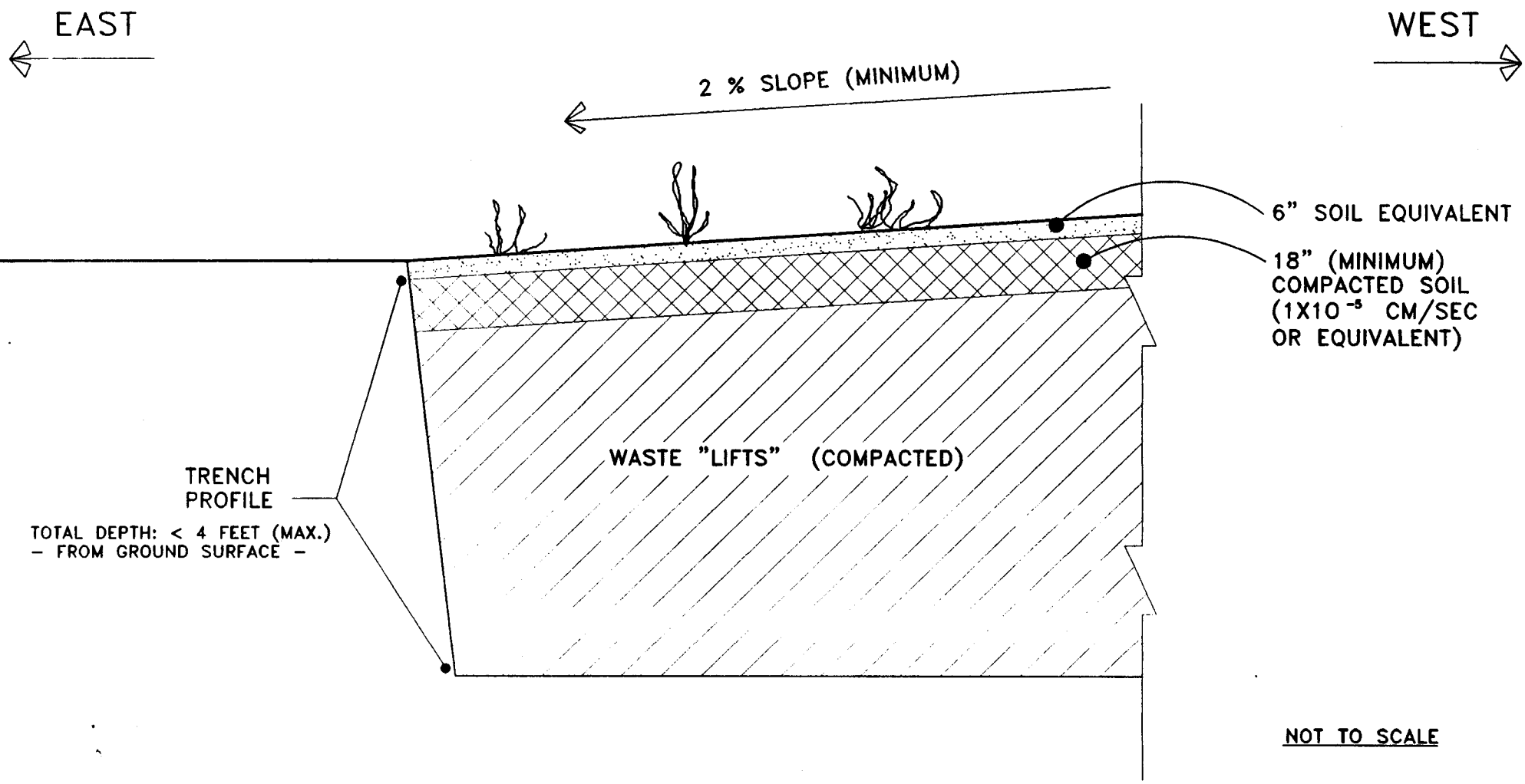
FIGURE 2

UNITED STATES GEOLOGICAL SURVEY

7.5 MINUTE MAP

FIGURE 4

TRENCH CLOSURE CAP DETAILS



INTERMOUNTAIN TECHNICAL SOLUTIONS INC.

TRENCH – CLOSURE CAP DETAIL (CROSS SECTION)
US FISH & WILDLIFE
FISH SPRINGS REFUGE, CLASS II LANDFILL

Date: 09/30/96 | Check. By:
Drawn By: DLR

FIGURE 4

INTERMOUNTAIN TECHNICAL SOLUTIONS, INC.
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1746 Cole Blvd., Bldg. 21 – Suite 300
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The final closure cap component description listed above, satisfies the Closure Performance Standard Requirement outlined in R 315-302-3(3) in ensuring that the closed unit requires little to no post-closure maintenance and it poses a minimum threat to human health and the environment.

The permittee will notify the executive secretary of the intent to close a particular unit (trench), at least sixty (60) days prior to the application of the first component of the final closure cap. The final capacity of the disposal area is estimated to be approximately 5,250 cubic yards. This number represents the presently constructed (closed, active and excavated) trenches at about 2,720 cubic yards, and projected adequate capacity well into the next Century.

POST-CLOSURE PLAN: R 315- 310-3 (1) (h) & R 315-310-4 (2) (e) (i.,ii,iii, & iv)

The post-closure plan for the closed solid waste disposal trenches (and the area , if and when the refuge is ever abandoned or closed in it's present-day use), is to provide oversight to the closed units on a given frequency (inspections) in order to ensure that the trench units and their respective caps have not been disturbed or the cap integrity compromised. The most likely scenario envisioned for the Fish Springs Wildlife Refuge is that the present-day management operation would continue well into the 21st Century with the staff size at the refuge about the same, and ultimately producing the same amount or less solid waste through recycling efforts. Given this assumption, the present and future trenches at this Class II Solid Waste Disposal facility will meet the needs of the staff and any occasional visitors, and Fish Springs Refuge staff will continue to be on-site and capable of monitoring the integrity of the present and future closed trenches. With on-site personnel, the incidence of any deleterious events/actions will be immediately observed or possibly prevented. For example, if burrowing rodents had targeted the closure cap on any one of the trenches, the operator, during his/her weekly load delivery events would notice the evidence of this new activity and would be able to take corrective action(s) to mitigate further damage, and repair the "breach".

Post-closure, can be viewed from two different scenarios. The first scenario involves sequential and orderly closure of each trench unit and subsequent inspection and corrective action taken, as necessary, for the closed unit. The second scenario involves the sudden, or immediate closure of all trench(es) because of a total manpower

abandonment of the refuge itself. In this case, the refuge (or the responsible federal entity assigned), will assume the post-closure duties for all of the trenches at the Class II Solid Waste Management Area. The first scenario is the most likely to occur.

Essentially, the post-closure care of the individual trenches involves the inspection, upkeep, and repair, as needed, of the closed trench units. As the closed trenches age, it is not expected that erosion, human disturbance, or the attraction of any burrowing rodents, would threaten the individual unit's cap integrity, and observance of the cap's condition would be the singlemost action item involved. The Record of Title to the property is not expected to change. The federal government will assume this responsibility. The land use or zoning restrictions are also expected to remain consistent with the present-day designations as the desert area has little chance of any significant development. The current facility contact individual representing the Department of the Interior, U. S. Fish and Wildlife Service is:

Mr. Jay Banta, Refuge Manager
Department of the Interior
U. S. Fish and Wildlife Service
Fish Springs NWR
P. O. Box 568
Dugway, Utah 84022
Telephone: (801) 831-5353.

FINANCIAL ASSURANCE: R 315-310-3 (1) (j)

The requirements of financial assurance are not applicable since this refuge is a federally owned installation and is exempt from this specific regulation.