Equipment to be Furnished and Owned by Contractor

At a minimum, the contractor will provide the following equipment for use in operating the SMaRT Station.

Equipment	Proposed	New/Used	Manufacturer	Model #
Transfer Operations				
Rigs	7	New	Peterbilt	567
Trailers	7	New	Peerless	
Rigs	1	Used	Peterbilt	
Trailers	1	Used	Peerless	
Roll-off Trucks	2	Used	Peterbilt	
4--6 cubic yard bins	2	New	Stockton Tri	
Tipping Floor Operations				
Loader	2	New	Caterpillar	950
Material Handler with Boom/Grapple	1	Used	Caterpillar	320
Forklift	1	New	Caterpillar	8K
4--6 cubic yard bins	15	New	Stockton Tri	
MSW Processing				
40 cubic yard roll-off bins	12	New	Consolidated Fabricators	
Forklifts	2	New	Caterpillar	6K
Skid-Steer Loader	1	Used	Caterpillar	246
Self-dumping Hoppers	12	New	Stockton Tri	
8 cy Roll-off bin	1	New	Consolidated Fabricators	
Exhibit H-2				
Buyback/Dropoff Center				
4 cubic yard bins	20	New	Stockton Tri	
Yard/Woodwaste Operations				
4 cubic yard bins	4	New	Stockton Tri	
Loader	1	New	Caterpillar	924
Forklift	1	New	Caterpillar	8K
Source Separated Recyclables Processing				
4 cubic yard bins	5	New	Stockton Tri	
Forklift	1	New	Caterpillar	6K
Loader	1	New	Caterpillar	908
Self-dumping Hoppers	6	New	Stockton Tri	
SMaRT Station Grounds				
Street Sweeper	1	New	Elgin	Crosswind
Walk-Behind Vacuum Sweeper	1	Used		
Maintenance				
Boom Lift	1	Used	JLG	
Scissor Lift	1	New	JLG	
Scalehouse				
Portable Generator	1	New	Honda	

This form will become Exhibit H-2 to the final agreement.

New Equipment to be Furnished, Installed and Operated by Contractor and Owned by City

At a minimum, the contractor will provide the following new equipment for use in operating the SMaRT Station.

Title to all Optional equipment shall transfer to the City, at no additional cost, upon expiration or termination of this Agreement.

Equipment	Quantity	Manufacturer	Model #
Transfer Operations			
Tipping Floor Operations			
MSW Processing			
48" x 51' trough pan slider Conveyor	1	Krause Manufacturing	
(installed between pre-sort and C-601)			
Buyback/Dropoff Center			
OCC Buyback Scale System	1	Rice Lake	
Reuse Trailer	1	Not specified	
Yard/Woodwaste Operations			
Horizontal Wood Hog and infeed hood	1	Jeffrey Rader	47WBH
Source Separated Recyclables Processing			
SMaRT Station Grounds			
Maintenance			
Scalehouse			

This form will become Exhibit H-2 to the final agreement.

Proposal Form 8A
Staffing
No change in fines, Minimum Recovery Level: 15.0%

	Number of Employees			Hourly Wage Rate	Annual Salary
	Minimum	Proposed Staffing			
actor will provide the following new equipment for use in oper		# of Employees (Contractor)	# of Employees (Subcontractor)	(All Hourly Employees)	(All Salaried Employees)
Office					-
General Manager	1	1			131,717.00
Safety & Compliance Manager	1	0.5			29,227.38
Accountant	1		0.5		50,000.00
HR/Administration Coordinator	1	1			29,227.38
Accounting Clerk	1	2		28.65	119,184.00
Office Clerk/Receptionist	1	1		27.28	56,742.40
Materials Marketing Coordinator	1	1		32	66,560.00
Other (Utility)		1			58,442.00
MSW Processing					-
Manager	1	1			74,263.00
Supervisor	1	1			45,297.00
Forklift Operator	2	2		31.39	130,582.40
Baler Operator	1	1		31.39	65,291.20
Lead Sorters	2	2		30.52	126,963.20
Sorters	48	36		26.24	1,964,851.20
Other (Cleaning Crew/part time sorters)		8		26.49	440,793.60
Transfer Operations &Yard/Woodwaste Operations					
Manager	1	1			69,608.00
Tipping Floor Supervisor	1	1			45,297.00
Woodwaste Room Lead Operator (Loader)	1	1		35.85	74,568.00
Loader Operators (includes grapple operator)	2	3		35.85	223,704.00
Forklift Operators	2	1		31.39	65,291.20
Campactor Operator	1	1		31.39	65,291.20
Wood Grinder Operator	1	1		31.39	65,291.20
Traffic Control Spotters (Tipping Floor)	2	2		26.24	109,158.40
Traffic Control Spotters (Woodroom)	1	1		26.24	54,579.20
Transfer Drivers (MSW)	8	8		53.52	890,572.80
Transfer Drivers (Wood and Yard Trimmings)					-
Floor Sorters (Tipping Floor)	10	8		26.24	436,633.60
Floor Sorters (Woodroom)	1	0		26.24	-
Other (Roll Off/Wood Room Spotter)		1		31.39	65,291.20
Scale Operations					-
Scale Master	1	1		39.35	81,848.00
Assistant Scale Operators	2	2		39.35	163,696.00
Buy Back Attendant	1	1		29.36	61,068.80
Other					-
Maintenance					-
Manager	1	1			77,067.00
Electrician	1	1		46.15	95,992.00
Lead Mechanic	1	1		49.37	102,689.60
Mechanic	2	2		49.15	204,464.00
Assistant Mechanics	3	3		37.86	236,246.40
Other (Rolling Stock)		2		36.12	150,259.20
Source Seperated Recyclables Processing					-
Lead Sorter(s)	1	1		30.52	63,481.60
Sorters	9	9		26.24	491,212.80
Loader/Baler Operator	1	2		31.39	130,582.40
Other (Curbside Supervisor))		1			45,853.00
Other Category (Baler/Forklift Operator)		1		46.15	95,992.00
TOTAL	116	115.5	0.5	1050.71	7,554,880.35

Proposal Form 8B
Staffing
City MRF Fines Approach, Minimum Recovery Level: 17.5%

	Number of Employees			Hourly Wage Rate	Annual Salary
	Minimum	Proposed Staffing			
		# of Employees	# of Employees		
tor will provide the following new equipment for use in op		(Contractor)	(Subcontractor)	(All Hourly Employees)	(All Salaried Employees)
Office					-
General Manager	1	1			131,717.00
Safety & Compliance Manager	1	0.5			29,227.38
Accountant	1		0.5		50,000.00
HR/Administration Coordinator	1	1			29,227.38
Accounting Clerk	1	2		28.65	119,184.00
Office Clerk/Receptionist	1	1		27.28	56,742.40
Materials Marketing Coordinator	1	1		32	66,560.00
Other (Utility)		1			58,442.00
MSW Processing					-
Manager	1	1			74,263.00
Supervisor	1	1			45,297.00
Forklift Operator	2	2		31.39	130,582.40
Baler Operator	1	1		31.39	65,291.20
Lead Sorters	2	2		30.52	126,963.20
Sorters	48	38		26.24	2,074,009.60
Other (Cleaning Crew/part time sorters)		8		26.49	440,793.60
Transfer Operations &Yard/Woodwaste Operations					
Manager	1	1			69,608.00
Tipping Floor Supervisor	1	1			45,297.00
Woodwaste Room Lead Operator (Loader)	1	1		35.85	74,568.00
Loader Operators (includes grapple operator)	2	3		35.85	223,704.00
Forklift Operators	2	1		31.39	65,291.20
Campactor Operator	1	1		31.39	65,291.20
Wood Grinder Operator	1	1		31.39	65,291.20
Traffic Control Spotters (Tipping Floor)	2	2		26.24	109,158.40
Traffic Control Spotters (Woodroom)	1	1		26.24	54,579.20
Transfer Drivers (MSW)	8	7		53.52	779,251.20
Transfer Drivers (Wood and Yard Trimmings)					-
Floor Sorters (Tipping Floor)	10	8		26.24	436,633.60
Floor Sorters (Woodroom)	1	0		26.24	-
Other (Roll Off)		2		31.39	130,582.40
Scale Operations					-
Scale Master	1	1		39.35	81,848.00
Assistant Scale Operators	2	2		39.35	163,696.00
Buy Back Attendant	1	1		29.36	61,068.80
Other					-
Maintenance					-
Manager	1	1			77,067.00
Electrician	1	1		46.15	95,992.00
Lead Mechanic	1	1		49.37	102,689.60
Mechanic	2	2		49.15	204,464.00
Assistant Mechanics	3	3		37.86	236,246.40
Other (Rolling Stock)		2		36.12	150,259.20
Source Seperated Recyclables Processing					-
Lead Sorter(s)	1	1		30.52	63,481.60
Sorters	9	9		26.24	491,212.80
Loader/Baler Operator	1	2		31.39	130,582.40
Other (Curbside Supervisor))		1			45,853.00
Other Category (Baler/Forklift Operator)		1		46.15	95,992.00
TOTAL	**116**	**117.5**	**0.5**	**1050.71**	7,618,008.35

Proposal Form 8C
Staffing
MSW Transfer Only

	Number of Employees			Hourly Wage Rate	Annual Salary
	Minimum	Proposed Staffing			
		# of Employees	# of Employees		
or will provide the following new equipment for use in o		(Contractor)	(Subcontractor)	(All Hourly Employees)	(All Salaried Employees)
Office					-
General Manager		1			131,717.00
Safety & Compliance Manager		0.5			29,227.38
Accountant			0.5		50,000.00
HR/Administration Coordinator		1			29,227.38
Accounting Clerk		2		28.65	119,184.00
Office Clerk/Receptionist		1		27.28	56,742.40
Materials Marketing Coordinator		1		32	66,560.00
Other (Utility)		1			58,442.00
MSW Processing					-
Manager		1			74,263.00
Supervisor		0			45,297.00
Forklift Operator		0		31.39	-
Baler Operator		0		31.39	-
Lead Sorters		0		30.52	-
Sorters		0		26.24	-
Other				26.49	-
Transfer Operations &Yard/Woodwaste Operations					
Manager		1			69,608.00
Tipping Floor Supervisor		1			45,297.00
Woodwaste Room Lead Operator (Loader)		1		35.85	74,568.00
Loader Operators (includes grapple operator)		2		35.85	149,136.00
Forklift Operators		1		31.39	65,291.20
Campactor Operator		1		31.39	65,291.20
Wood Grinder Operator		1		31.39	65,291.20
Traffic Control Spotters (Tipping Floor)		2		26.24	109,158.40
Traffic Control Spotters (Woodroom)		1		26.24	54,579.20
Transfer Drivers (MSW)		9		53.52	1,001,894.40
Transfer Drivers (Wood and Yard Trimmings)					-
Floor Sorters (Tipping Floor)		13		26.24	709,529.60
Floor Sorters (Woodroom)		0		26.24	-
Other (Roll Off)		1		31.39	65,291.20
Scale Operations					-
Scale Master		1		39.35	81,848.00
Assistant Scale Operators		2		39.35	163,696.00
Buy Back Attendant		1		29.36	61,068.80
Other					-
Maintenance					-
Manager		1			77,067.00
Electrician		1		46.15	95,992.00
Lead Mechanic		1		49.37	102,689.60
Mechanic		2		49.15	204,464.00
Assistant Mechanics		1		37.86	78,748.80
Other (Rolling Stock)		2		36.12	150,259.20
Source Seperated Recyclables Processing					-
Lead Sorter(s)		1		30.52	63,481.60
Sorters		9		26.24	491,212.80
Loader/Baler Operator		2		31.39	130,582.40
Other (Curbside Supervisor))		1			45,853.00
Other Category (Baler/Forklift Operator)		1		46.15	95,992.00
TOTAL		**68.5**	**0.5**	**1050.71**	4,978,550.75

SMaRT Station Wages

Combined "Floor" Wages and Benefits by Classification

Exhibit I-2

Classification	Total Hourly Rate Value Base*	Plus CPI Percent Change Apr-04 Apr-07	Total Hourly SMaRT Wages Floor 01/01/08 Base	Total Hourly SMaRT Wages Floor 01/01/08	Plus CPI Percent Change Apr-07 Apr-14	Total Hourly SMaRT Wages Floor 01/01/15
Driver	$31.55	8.85%	$34.34	$34.34	16.52%	$40.01
Operator 1	$21.54	8.85%	$23.45	$23.45	16.52%	$27.32
Operator 2 - Loader	$24.17	8.85%	$26.31	$26.31	16.52%	$30.65
Scale Operator	$25.46	8.85%	$27.71	$27.71	16.52%	$32.29
Buyback Operator	$19.69	8.85%	$21.43	$21.43	16.52%	$24.97
Mechanic - Fleet	$35.43	8.85%	$38.56	$38.56	16.52%	$44.93
Mechanic	$30.19	8.85%	$32.86	$32.86	16.52%	$38.29
Mechanic Plant	$27.86	8.85%	$30.32	$30.32	16.52%	$35.33
Mechanic Plant - Electric	$23.46	8.85%	$25.54	$25.54	16.52%	$29.75
Mechanic Plant - Assistant	$24.12	8.85%	$26.25	$26.25	16.52%	$30.59
Mechanic Plant - Helper	$21.98	8.85%	$23.92	$23.92	16.52%	$27.88
Sorter	N/A	N/A	$18.52	$18.52	16.52%	$21.58

To be increased by CPI as described in Agreement Section 3.10.E.2

Base - CPI April 2004 =	198.3	Base - Except Sorter classification
CPI April 2006 =	208.9	
CPI April 2007 =	215.842	Base SorterClassification
CPI April 2014=	251.495	
CPI Increase April 2007--April 2014	16.52%	Percent Change

EXHIBIT J
OPERATING STANDARDS AND PROCEDURES

1. **Signs.** The City will post easily-readable signs at the entrance to the Station detailing the regulations which must be followed by vehicles entering the station, indicating the hours of operation, the types of waste and Recyclable Materials accepted, the rates charged, and a local telephone number to call for information or in case of emergency. Contractor shall maintain and repair these and other on-site signs. Contractor shall not post any signs without the prior written consent of the City. Contractor shall install and maintain signage at the Station giving members of the public appropriate information about the location and operation of the Buyback/Drop-off Center, and may install other signage as needed, providing the text of the signage is approved by City prior to its being installed.

2. **Traffic Control.** Contractor shall be responsible for the safe control and direction of traffic once it enters the Station Site. Contractor shall make optimal use of queuing lanes and unloading spaces and shall operate and park vehicles so as not to impede on-site traffic.

3. **Floor Operation and Transfer Loading.** The depth and breadth of Municipal Solid Waste on the Station floor shall not reach a point where unloading by users is hampered. Municipal Solid Waste shall be loaded into transfer trailers so the gross weight of the transfer tractor and trailer does not exceed weight limitations for streets or highways established by the public agency or agencies having jurisdiction therefore. At least once during each 24 hour period, the Station floor will be completely cleared of all solid waste. Contractor may accomplish this in phases, in a written plan approved by City.

4. **Control of Litter and Blowing Debris.** Contractor shall collect litter daily (1) all areas within the Station Site and (2) areas outside the perimeter fence adjacent to the Station. Contractor shall sweep daily (1) all areas within the Station Site, and (2) Carl Road east of Borregas Avenue. In addition, Contractor shall police at least three times weekly the street frontages abutting the Site (i.e., Borregas Avenue from Carl Road to Moffett Park Drive; Mathilda Avenue from Highway 237 to Caribbean Drive and Caribbean Drive from the north end of Mathilda Avenue to Highway 237), collecting all litter along these streets. Contractor shall also collect debris in these areas at the request of City or members of the public. Materials so collected shall be disposed of at the Station.

5. **Vector Control.** Contractor shall conduct the operation of the Station in such a manner as to ensure that conditions are unfavorable for production of rodents, insects and other vectors. In the event that vector activity becomes apparent to the Local Enforcement Agency or the City, supplemental vector control measures shall be initiated by Contractor, as directed by the Local Enforcement Agency and/or the City. All vector control measures initiated by Contractor shall comply with the City's Integrated Pest Management Policy.

6. **Odor, Dust and Noise Control.** Contractor shall control odor and dust at the Station by use of installed dust control systems and odor control programs, as described in the FEIR. Contractor shall operate its equipment within limits of applicable noise regulations.

7. **Fire Control.** Contractor shall provide all necessary and appropriate fire control equipment. Prior to commencing operations at the Station, Contractor shall submit a fire control/handling plan for the Station and obtain approval from the City.

8. **Weighing.** Contractor shall weigh and record all inbound loads of Municipal Solid Waste, Yard Trimmings and Source Separated Recyclable Materials delivered by the City, the other Participating Agencies, their respective Designated Haulers and by any other municipalities or their Designated Haulers. Contractor shall calculate the weight of Publicly Hauled Waste by determining the volume of vehicles delivering such waste and applying the conversion factors in Exhibit M, except that Publicly Hauled Waste customers delivering 12 cubic yards or more in a single transaction must be weighed. Contractor shall also weigh and record each outbound load (including MSW bound for Disposal Site, Recyclable Materials bound for market, e-waste, etc...) as it leaves the Station. All scales and weighing equipment shall be kept in good and accurate condition operating at the standards of accuracy and reliability specified in Title 4 California Code of Regulations Division 9. Contractor shall request that the California Department of Food and Agriculture, Division of Measurement Standards, inspect all scales and weighing equipment at least once per year. In addition, Contractor shall check the accuracy of scales using appropriate methods (for example by weighing the same load on two scales) when requested by the City, but not more than once per week.

   If a scale or weighing equipment is found to be measuring inaccurately and the errors are outside the tolerances allowed in Title 4 California Code of Regulations, Division 9, Contractor will promptly repair or recalibrate it so that it does operate accurately.

   Vehicles delivering Recyclable Materials collected through curbside and other programs shall be weighed so that the weight of each separated compartment of materials (e.g., commingled containers, mixed paper newspaper, etc.) is separately measured and recorded. This will be accomplished by multiple weighings, after the vehicle has unloaded each separate compartment of material. If a predetermined tare weight for each vehicle is used in this process, the last material unloaded will be newspaper or whatever is the lowest unit-value material. At City's request, Contractor shall sort representative samples of materials to determine their actual material-by-material composition.

9. **Establishment of Vehicles' Tare Weights.** On or before November 1, 2014, Contractor shall provide the City with a copy of its standard methodology for determining tare weights for City's review and approval. Contractor shall modify its standard methodology if requested to do so by City. Between January 1 and March 1, 2015, Contractor shall weigh each vehicle of the City, the Participating Agencies and their Designated Haulers which will or may be used to deliver Municipal Solid Waste or Recyclable Materials to the Station, to determine their unloaded ("tare") weights. Vehicles to be weighed include, but are not limited to, front, side and rear loaders, roll-off trucks, street sweepers, recycling trucks, pickup trucks, vans and trucks and trailers. In addition, during the same period of time, Contractor shall weigh each transfer trailer which will or may be used to deliver Residue and unprocessed Municipal Solid Waste to the Disposal Facility.

   The tare weight of each vehicle shall be recorded by Owner (i.e., City, hauler or Contractor) and vehicle number and the tare weights of all vehicles will be furnished to the City within thirty (30) days after each vehicle is weighed. Contractor shall be responsible for coordinating the weighing of vehicles with City and the other Participating Agencies and their Designated Haulers.

   When additional or replacement vehicles are placed into service by the City, the other Participating Agencies or their Designated Haulers, or the Contractor and when the City or other Participating

Agencies change their Designated Haulers, Contractor shall promptly weigh such additional and replacement vehicles and the vehicles of the new Designated Hauler and provide the tare weights to the City within thirty (30) days after the vehicles are weighed.

All weighing shall be conducted at the Station by a certified weighmaster. Weighing shall be conducted in accordance with Contractor's standard methodology, in the form approved by the City.

Contractor shall have the right to conduct random re-weighing of all vehicles, provided that re-weighing of any vehicles shall occur no more than twice a year. All vehicles delivering Municipal Solid Waste or Recyclable Materials to the Station or delivering Municipal Solid Waste to the Disposal Facility shall be reweighed by Contractor, following the City approved methodology, at six (6) month intervals. In addition, any specific vehicle shall be reweighed by Contractor at City's request, within one (1) week after City delivers a written request to do so. Adjusted tare weights shall be furnished to the City within thirty (30) days after re-weighing.

10. **Cubic Yard - Ton Conversions.** If the scales and weighing equipment are temporarily out of service, Contractor shall:

    1. for collection vehicles owned by Designated Haulers, use the average Tons recorded for each vehicle for its three deliveries immediately preceding the outage;

    2. for debris boxes, use the rated capacity of the box in cubic yards multiplied by the yards to tons factor for miscellaneous Publicly Hauled Waste on Exhibit M; and

    3. for Publicly Hauled Waste, Contractor shall measure and record the amount of such waste in cubic yards. Cubic yards shall be converted to Tons for purposes of payments due under Articles 6 and 7 by utilizing the conversion factors set forth in Exhibit M.

    Contractor shall arrange for scales to be repaired or temporary substitute scales to be used as soon as possible and, in any event, within forty-eight (48) hours after the failure of the permanent scales.

11. **Personnel.** There will be at least one employee of Contractor physically in attendance at the Station at all times, whether or not the Station is operating, or open.

    During the hours of 6 a.m. to 7 p.m., seven (7) days a week, there will be a Station Manager or lead worker who is the representative of Contractor on-site. City will be informed of his/her name. At all other times, there will be a supervisory employee designated as emergency coordinator who will be on-call. Employees who are on-site (and the City) will be instructed on how to contact this emergency coordinator.

    When the Station is operating outside of the regular operating hours, there will be a night supervisor on-site. If there is more than one employee on-site, one will be in charge and employees (and the City) will be informed as to the chain of command.

    There will be at least one employee of Contractor dedicated to storm water management at the Station, who is a qualified storm water pollution prevention plan practitioner. City will be informed of his/her name. The Contractor's storm water employee will implement day-to-day storm water best

management practices and record keeping at the Station, as provided in the Storm Water Pollution Prevention Plan document for the Station, as amended at any time. The Storm Water Pollution Prevention Plan document is on file with the City and available for review upon request.

12. **Training of Personnel.** Contractor shall provide adequate operational, safety and compliance training for all of its employees who are involved in performing and supervising operations at the Station. All such personnel shall be trained in the identification and proper handling and disposal of Hazardous and Medical Wastes as required by the Hazardous Waste Exclusion Program (HWEP). Personnel training will comply with all applicable laws, regulations and permits governing Station operations. Contractor will also provide adequate storm water management training, as provided for and described in the Storm Water Pollution Prevention Plan document for the Station, as continually amended, on file with City.

13. **Equipment.**

    A. General. All equipment shall comply with all applicable federal, state, and local laws, including (1) U.S. Department of Transportation: Federal Motor Vehicle Safety Standards; Federal Motor Carrier Safety Regulations; Interstate Motor Carrier Noise Emissions Standards, (2) U.S. Environmental Protection Agency: Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines, and (3) Bay Area Air Quality Management District.

    B. Tractors and Trailers. All tractors and transfer trailers (individually and in combination) shall comply with the laws described in subsection A. Tractors and transfer trailers shall be painted in a uniform color scheme approved by the City of Sunnyvale and shall prominently display a SMaRT Station service mark (logo), the design and placement of which are subject to City approval.

    C. Between October 1 and December 1, 2014 Contractor shall submit to City a list of the equipment it proposes to use at the Station and in delivering Municipal Solid Waste to the Disposal Facility.

    D. Contractor shall furnish backup, substitute or replacement equipment necessary to continue uninterrupted operations, maintenance, transfer and disposal when equipment regularly in service is inoperable or unavailable.

    E. All loaded transfer trailers must be parked on the tipping floor.

    F. Contractor shall use blade guards and rubber tires on all mobile equipment operated in and around the Station and shall use due care in their operation of equipment to avoid damaging the tipping floors and Station pavement.

14. **Cleaning and Maintenance.**

    G. General. Contractor shall maintain all properties, facilities and equipment used in providing service under this Agreement in a safe, clean, neat and operable condition at all times.

H. Cleaning. Tractors, transfer trailers and other rolling stock shall be kept clean, shall be thoroughly washed on the exterior at least once every week and thoroughly cleaned with pressurized hot water at least once per year. Rolling stock used at the facility, such as loaders and forklifts may be cleaned on the tipping floor, with wash water drained to tipping floor sump. Cleaning of tractors and trailers shall be performed at a location off-site.

Building office areas shall be cleaned daily. Work areas within buildings and structures shall be swept daily and vacuumed daily and floors washed twice a week. Deep cleaning of the bathroom and kitchen floors and counters shall be conducted on a quarterly basis.

All areas within the Station work areas shall be cleaned of spillage and swept on a daily basis. Dust and debris shall be removed daily from stationery equipment and rolling stock. The refuse transfer truck loading area shall be cleaned and swept during and at the end of each operating day. Facility roadways, outside work areas and parking areas shall be cleaned and swept daily.

Municipal Solid Waste may not be left on the tipping floor for more than 24 hours.

Municipal Solid Waste (other than Recyclable Materials) shall be removed to the Disposal Facility within 48 hours after its delivery to the Station. Municipal Solid Waste shall not be burned or buried at the Station Site. Wastes shall not be disposed of into storm drains or into sanitary sewers without proper pretreatment meeting the requirements of the Sunnyvale Industrial Waste Program.

The transfer building(s) shall be thoroughly cleaned with pressurized hot water at least once per year and one month prior to expiration of the Term of this Agreement. Contractor shall follow best management practices (BMP) to prevent wash water from reaching storm drains.

I. Painting. Vehicles shall be repainted and/or refurbished so that they present an acceptable appearance in the opinion of the City's Public Works Director.

All surfaces on the interior of all buildings and structures shall be repainted or refurbished by Contractor so that they present an acceptable appearance in the opinion of the City's Environmental Services Director, provided that painting will not be required more often than once every four years. The type of paint, color and method of application shall be submitted to the City for review and approval prior to commencement of repainting work.

J. Maintenance and Repair; Alterations.

1. City's Obligations. Subject to Section 20, City shall maintain in good condition the roofs, structural portions and exterior walls (but not plate glass, glass windows, window frames, doors and door frames, which are the responsibility of Contractor), and paved exterior areas, unless such maintenance and repair becomes necessary in whole or in part due to acts of Contractor, in which case Contractor shall pay City the reasonable cost of such maintenance. City shall regularly maintain (e.g. water, weed, prune and repair) all

landscaped areas within the Station Site. City shall repair or replace, if and when necessary, the tipping floor.

2. Contractor's Obligations. Subject to Section 20, Contractor shall keep and maintain in good, clean, safe condition and repair the Station building, appurtenances and every part thereof, including without limitation the stationary equipment, such as conveyors and below grade conveyor pits, compactors, trommels, balers, shredders and screens; plumbing and sewage facilities; mechanical, electrical, lighting, heating, ventilating and air conditioning systems; fire and dust suppression systems; fuel storage and dispensing facilities; weigh scales, scalehouse, fencing, drains and drainage control systems, and all personal property furnished by Contractor including vehicles.

   Contractor shall perform periodic maintenance on all equipment, in accordance with applicable manufacturer's specifications and schedules and so as to maintain in force any manufacturer's/vendor's warranties. City will assist Contractor in securing manufacturer's/vendor's repair and replacement of equipment due under warranties (if any) provided to City in connection with the purchase of such equipment which Contractor is required to maintain and repair.

   Contractor shall also repair any damage to any facilities in a timely manner, whether owned by it or City, caused by the actions of its employees, subcontractors, customers or other agents. Contractor shall replace all plant materials (trees, bushes, etc.) which are damaged or killed by Contractor's operations with plant materials of the same type, unless a different type is approved in advance by the City. All completed replanting shall be approved by the Recycling Manager.

   Contractor shall be responsible for securing replacement parts (and for maintaining an inventory of spare parts as agreed on with City) for all equipment and for Station systems and facilities which it is required to maintain and repair. City will reimburse Contractor for the out-of-pocket cost of replacement parts used for stationary equipment owned by City listed in Exhibit H-1. The cost of all other replacement parts, including those for equipment furnished by Contractor and for Station systems and facilities, will be borne by Contractor and is therefore included in the compensation provided under Article 5. The cost of all labor required for maintenance and repair performed by Contractor will be borne by Contractor and is included in the compensation provided under Article 5.

   Contractor shall not make any alterations to the Station or to facilities or equipment owned by City without City's prior written consent. In order to obtain such consent, Contractor shall submit plans and specifications, or other form of description as required by City, to City prior to commencing any alteration. If Contractor performs any alteration work prior to receiving City approval, City may require Contractor to remove all such work at Contractor's sole expense and restore the Station, facility or equipment to its prior condition.

K. Wastewater Disposal. The wastewater collected in the Station's sumps (from Municipal Solid Waste, wash-down operations, etc.) does not meet the standards for discharge to the

Sunnyvale Water Pollution Control Plant. Contractor shall be responsible for periodic pumping of collected wastewater by a pumping truck, its transport offsite and proper disposal in accordance with applicable regulations. The Contractor shall be responsible for the cost of pumping, transport and proper treatment and/or disposal.

L. Prohibitions. Under no circumstances shall Contractor conduct non-emergency maintenance of any equipment in or on uncovered areas of the Station.

15. **Complaints about Operation of Transfer Station.** All complaints about the operation or maintenance of the Station shall be directed to the person designated as Station Manager by Contractor. Such complaints shall not be directed by Contractor to City. The Station Manager shall compile a log of all complaints brought to his or her attention or that of his or her staff, indicating the date and time the complaint was received; the name, address and telephone number of the party making the complaint; and the action taken to correct or modify the situation complained of. Each month Contractor shall send to City a copy of the log of complaints for the previous month.

16. **Tours of Transfer Station.** Upon reasonable request of City, Contractor shall provide tours of the Station. Such tours shall not unreasonably disrupt Station operations. Contractor shall not be required to conduct such tours more frequently than once per week. City shall not be charged for labor, overhead, overtime, or any other costs associated with any such tours.

17. **Brochures.** Contractor shall prepare an educational brochure, printed on recycled paper, describing the Station operations and addressing conservation, recycling and general solid waste management programs. The City shall be provided the brochure in draft and shall have absolute authority over its text and format. Upon approval by City, Contractor shall arrange for the brochure to be printed and will provide City with 10,000 copies. Alternatively, at City's option, Contractor will provide City with $25,000 and City will take responsibility for design and production of the brochure. All written material prepared for distribution by Contractor regarding the Station shall be approved by City prior to its distribution.

18. **Customer Courtesy.** Contractor shall train its employees in Customer courtesy and shall prohibit the use of loud or profane language. If any employee is found to be discourteous or not to be performing services in the manner required by this Agreement, Contractor shall take all necessary corrective measures including, but not limited to, transfer, discipline, or termination.

19. **Destruction of Premises.** If the Station is totally or partially destroyed from a risk covered by insurance in effect at the time, City shall restore the Station to substantially the same condition as it was in immediately before destruction, provided that City's obligation hereunder is limited to the amount of insurance proceeds it receives. Such destruction shall not terminate this Agreement.

    If the Station is totally or partially destroyed by a risk not covered by insurance then in effect, City shall have the election to terminate this Agreement or to restore the premises, such election to be made within a reasonable time after the destruction occurs.

20. **Use of Premises.** Contractor shall use the Station and Station Site only for the operations described under this Agreement and for directly related support purposes.

21. **Spill Response Plan.** Contractor shall prepare a Spill Prevention, Containment and Countermeasure (SPCC) Plan in accordance with 40 CFR 112. Contractor shall also provide kits for cleanup of spills of hazardous materials, including used motor oil, on the Station Site. Contractor shall implement the Spill Response component of the Hazardous Waste Exclusion Program set out as Exhibit G to this Agreement.

22. **Hazardous Materials.** Contractor shall obtain proper permits and registrations (including EPA ID number) required to perform its obligations under this Agreement, and the Hazardous Waste Exclusion Program.

23. **Site Security Cameras.** Contractor shall be responsible for maintaining existing site security cameras and for installing any additional cameras necessary to assure adequate site security.

24. **Green Business Certification.** The SMaRT Station administration building was certified as a Green Business in 2010 and as a result, City and Contractor staff is required to meet general environmental practices and targeted resource conservation and pollution prevention measures. Exhibit V-3 provides a list of practices Contractor must meet to maintain certification. Once every five years a re-certification process will be conducted by the City and Contractor shall cooperate

Exhibit K

Cover page only

Pages 1-106 appended

Final Report | **May 2003**

Waste Characterization Methodology for Determining Allocation of Curbside Recycling Revenues

City of Sunnyvale

Presented to | **Mark Bowers, Solid Waste Program Manager**
Department of Public Works/Solid Waste Division
City of Sunnyvale
456 W. Olive Avenue
Sunnyvale, CA 94086

Presented by | **Brown, Vence & Associates**
65 Battery Street, Suite 200
San Francisco, CA 94111

EXHIBIT L

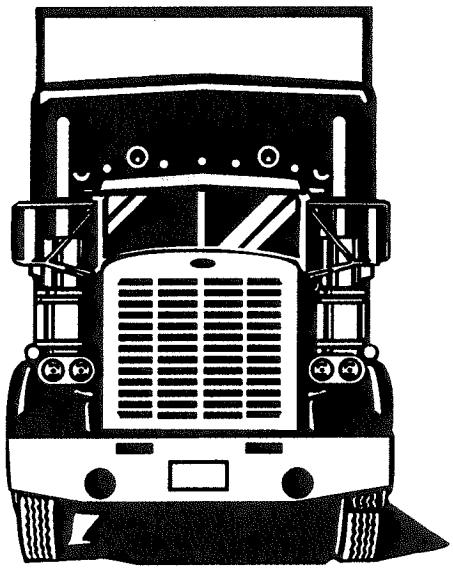
STANDARD OPERATION PROCEDURES

FOR THE DETECTION AND MANAGEMENT

OF RADIOACTIVE MATERIALS

AT THE

SUNNYVALE MATERIALS RECOVERY AND TRANSFER STATION



OVERVIEW

The State of California is considering two bills that would make radiation monitoring a requirement at State authorized landfills. Although this will not directly affect materials recovery facilities, like the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station), it does mean that trash that is transferred from the SMaRT Station to Kirby Canyon or any other landfill will be monitored for radioactivity. Installation of a radiation monitoring system would allow the SMaRT Station to identify whether any incoming loads contained radioactive materials, make appropriate decisions regarding disposition, present records in case of liability claims, and protect workers. Metals from the SMaRT Station also are recovered and sent on to local metal recyclers with gate radiation detectors. A radiation monitoring system would help the SMaRT Station also avoid sending radioactive metals on to these facilities.

Knowing the amount of radiation in incoming loads of waste will give the SMaRT Station operators confidence that the workers are not being exposed to radiation. Workers may be in the proximity of materials contaminated by persons who received nuclear medical treatment. Fortunately, the radioactivity in these materials is short-lived and relatively harmless.[1] It would be only under unusual circumstances that materials from residences would contain harmful levels of radiation.

Although installation of radiation detection equipment may produce intermittent impacts at the SMaRT Station, it will allow managers to protect workers, identify loads containing radioactive materials, and make informed decisions regarding their disposition.

[1] See the following documents for US NRC Release Procedures for Patients that have received nuclear medicine treatment: US Nuclear Regulatory Guide 8.39, "Release of Patients Administered Radioactive Materials," and Appendix U in NRC's NUREG-1556, Volume 9 "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Medical Use Licenses,"

INTRODUCTION

The SMaRT Station receives refuse from three San Francisco Bay Area cities, Sunnyvale, Mountain View, and Palo Alto. The 110,000 square foot facility processes around 1,100 tons of refuse per day. Around 175 trucks make deliveries to the SMaRT Station each day and 40 trucks take garbage that cannot be recycled to the Kirby Canyon landfill. The facility is operated by GreenTeam/Zanker, who employs 70+ sorters on 3 sort lines to separate paper, glass, and plastic. Concrete, wood, and scrap metal are sorted by hand on the tipping floor. The SMaRT Station also prepares materials for market and yard waste for composting. All types of industrial vehicles participate in this process: 18-wheel transfer trucks, rear, front, and side-loading refuse, yard waste and recycling trucks, and roll-off trucks. The public also brings waste to the facility's drop-off center in all types of vehicles. In addition, the SMaRT Station receives treated medical waste from the Stanford University Medical Center for transfer to Kirby Canyon landfill.

Over the years, odd things have passed through the SMaRT Station, including goat heads and fake grenades. To date, the SMaRT Station is aware of only one incident in which radioactive materials have entered the facility. A load of scrap metal sent from the SMaRT Station to SimsMetals, a local metal recycler, was returned after Sims gate monitors detected radioactivity in the load. The source was an aircraft dial that was received at the SMaRT Station from an unidentified source. Other types of radioactive materials may have passed through the SMaRT Station undetected by either the SMaRT Station or Kirby Canyon landfill neither of which has monitored waste for radiation until now. As of this writing, the Kirby Canyon landfill does not monitor incoming loads for radioactivity.

Radiation Monitoring Equipment

The SMaRT Station monitors radioactive materials at the incoming scales using two sets of fixed plastic scintillation detectors manufactured by Ludlum Measurements, Inc. Each pair of detectors is connected to a microprocessor that provides continuous monitoring of background radiation and automatic adjustment of alarm setting to compensate for background fluctuations. The system includes a microprocessor with an analog meter, indicator lights for power, alarms, checking, and overspeed, and control buttons. The system is equipped with a date/time printer, red alarm strobe, cables, and a check source. A portable survey meter will be used to identify the general location of radioactive materials in incoming loads. A hand-held radioisotope analyzer will then be used to identify the isotope in order to assist in making a decision as to handling and ultimate disposition of the material.

Recordkeeping

The SMaRT Station maintains a daily operation log for the radiation monitoring system. The log will record the daily check of the system, daily readings of the background radiation levels, and records of any detection at or above Action Level One. The SMaRT Station will maintain records of each incident on a Vehicle Survey Form. Information regarding an incident will be recorded in the daily log book and on the Vehicle Survey Form. Completed Vehicle Survey Forms will be stored in the SMaRT STATION SAFETY FILES. See Appendix E for Vehicle Survey Instructions and a model of the Vehicle Survey Form. Training records for SMaRT Station staff that carry out this SOP will be stored in the SMaRT STATION SAFETY FILES.

Training

SMaRT Station personnel who carry out the SOP will be provided with a copy of the SOP and training specific to their responsibilities.

SOP Revision

This SOP should be reviewed and revised periodically. At a minimum, revisions should be made when any of the following occurs:

- New policies or regulations governing the monitoring or disposal of radioactive material are implemented by the State or Federal government.
- The SOP is ineffective during an incident.
- The facility operation changes causing interference with the current plan.
- New monitoring equipment is installed.
- Contacts change in the State Radiological Health Branch, City staff and contractor staff at the SMaRT Station, and City Hazardous Materials Coordinator.

STANDARD OPERATING PROCEDURE

Scalehouse operators must be familiar with the operation of the radiation monitoring equipment (See Appendix A), daily source checks and log procedures (Appendix B), calibration (Appendix C), and the following information and procedures.

Detection of Radiation and Response

Radiation levels above background have been detected when the microprocessor in the scalehouse is emitting an audible tone and its red alarm indicator light is blinking (see Figure 1).

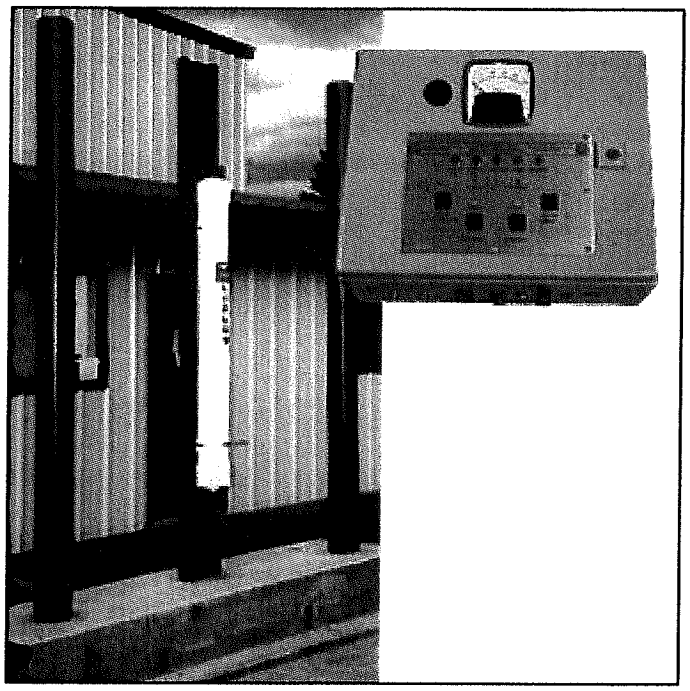


Figure 1: Detector and microprocessor.

Logging Alarms

All excursions over Action Level One should be logged. Use the date/time printer in the scalehouse to log the radiation level (see Figure 2). Describe the incident in the Daily Log.

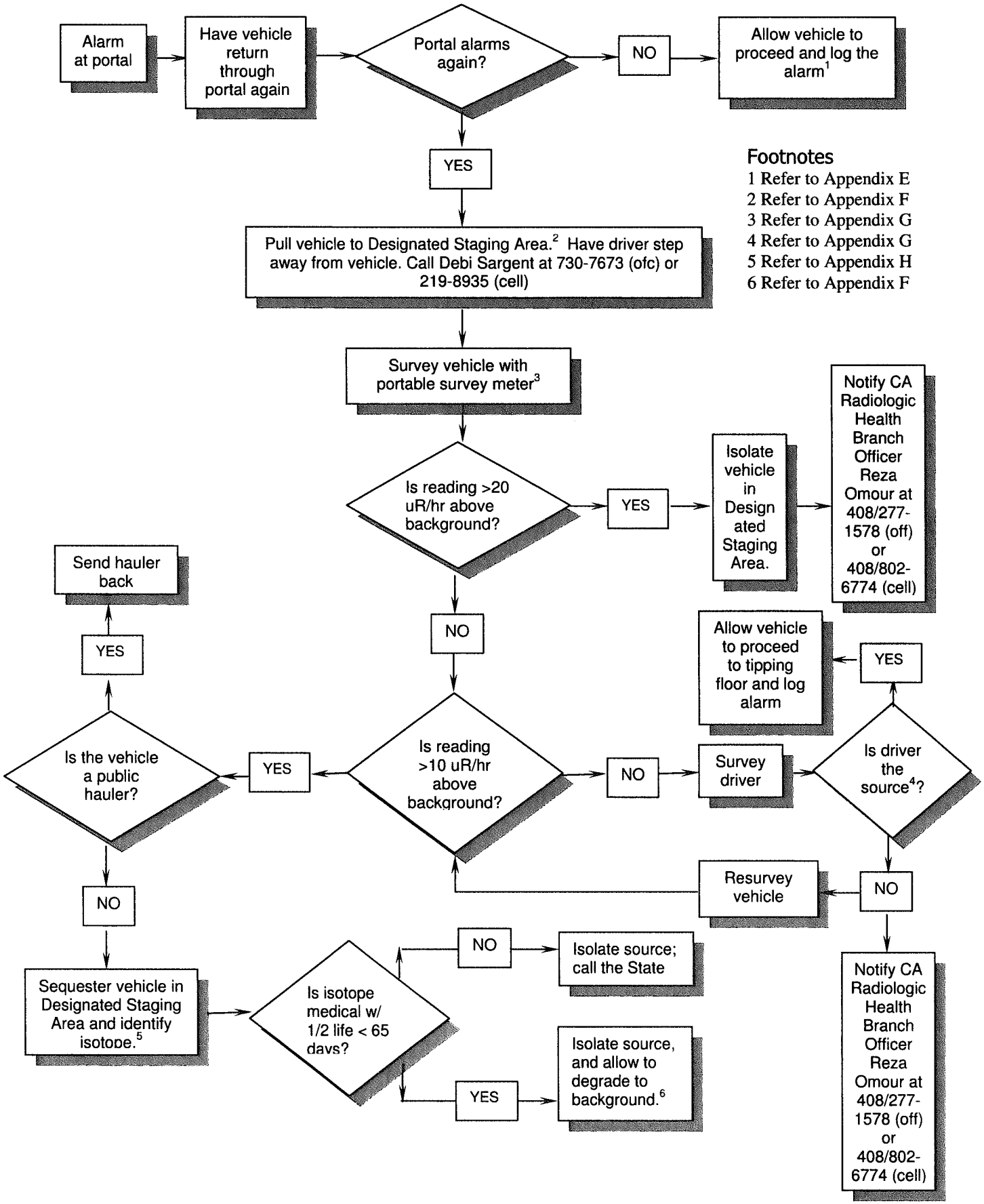
Action Levels

An Action Level is an amount of radiation indicating the need to take specific actions. Because background radiation fluctuates, action levels are set relative to the background. Action Level One is set at 10uR/hr above background, and Action Level Two is set at 20uR/hr above background. [2].

The SMaRT Station uses two actions levels, each requiring different response actions. The system will alarm at Action Level One. When the alarm is triggered, the amount of radiation is at least 10 uR/hr above the background level. Average background levels will be mounted on the system display in the scalehouse. (Background at the SMaRT Station was found to be between 10uR/hr and 12uR/hr based on the procedures and data in Appendix C.)

[2] The Ludlum Model 3500 Series microprocessors continuously monitor background radiation and automatically adjust a user-determined alarm setting (in our case 10uR/hr above background) to compensate for the changes in the background. The system also accounts for the shielding affect as a vehicle passes in front of the detectors. The system first establishes the new background level, compares each individual reading against the non-vehicle background, then against the vehicle background. If any readings exceed the adjusted alarm set-point, they are then further analyzed to determine if there is a potential source in the load.

Scalehouse Alarm Protocol



Footnotes

1 Refer to Appendix E
2 Refer to Appendix F
3 Refer to Appendix G
4 Refer to Appendix G
5 Refer to Appendix H
6 Refer to Appendix F

Action Level One

Action level one occurs when a radiation monitor (with an alarm set point of 10uR/hr above background) alarms indicating the potential presence of RAM in the waste load.

Action Level One Response

Take the following actions for a vehicle that has triggered the alarm:

1. Direct the vehicle to slowly pass by the detectors a second time.
2. If the radiation monitor does not alarm on the second pass, allow the vehicle to proceed and log the alarm.
3. If the radiation monitor alarms on the second pass, take the following actions:
   - move the vehicle to the Designated Staging Area (See Appendix E)
   - have the driver stand 50 feet away from the vehicle
   - Call Debi Sargent at 730-7673 (office) or 408/219-8935 (cellular). If you cannot reach Debi Sargent, call Rich Gurney at 730-7277.
4. Survey the vehicle body and cab as described in Appendix G.
5. If the vehicle survey produces readings greater than 20uR/hr, sequester the vehicle in the Designated Staging Area.
   - Proceed with Action Level Two response
   - Call the State Radiological Health Branch Officer in San Jose, Reza Omour, at 408/277-1578 (office) or 408/802-6774 (cellular).
6. If the vehicle survey produces readings less than 10uR/hr, survey the driver at a distance of 50 feet from the vehicle.
   - If the driver is the source of the radiation, check to see if he/she had a recent treatment with nuclear medicine.
   - If so, allow the truck to proceed.
   - If the driver is not the source of radiation, re-survey the truck. If the truck radiation levels are now at or below background, the truck may proceed as normal.
7. If the vehicle survey produces readings less than 20uR/hr but greater than 10uR/hr, do one of the following:
   - For public haulers, send the vehicle back its point of origin to determine the source of the radiation.
   - For all other vehicles, allow the vehicle to remain in the Designated Staging Area and identify the isotope present following the procedures in Appendix G.

Sequester of a Medical Isotope-Contaminated load

To be sequestered at the SMaRT Station (qualify for disposal), the identified radioisotope must meet the following conditions:

- Produce a detected dose rate less than Action Level Two
- Exist as a medical isotope in the MCA spectrometer library with a half-life less than 65 days (see Appendix J: Radioisotope Libraries and Classification).

[In PA no modeling is necessary to support the disposal of medically contaminated waste at landfills. The vast majority of nuclear medicine and radiotherapy patients are administered radionuclide in the less than 65 day decay category and their excreta is disposed in the sanitary sewer system as permitted by State and Federal law. The small amount of patient-contaminated medical waste will be well under these levels and at landfill facilities should cause no problems or concern.]

Rejection of the Waste load

If the SMaRT Station rejects the load, the following steps are taken:

Survey the entire vehicle to determine radiation field about the truck (see Appendix F for survey forms)

Contact the appropriate CADHS official and notify them of your intentions to reject a load.

[In PA they fax a truck survey form to the State and request that they fax back to the Station, a signed DOT Exemption Form for the vehicle so the vehicle can transport the material to an appropriate facility.

In PA, if the driver leaves the vehicle without a DOT exemption form and before RAM can be evaluated, contact the PA State Police and provide them with any information you may have on the vehicle such as make, model, color, company name, license plate number, time left and the direction in which the vehicle was traveling and, if possible, the intended destination. This is to ensure that the driver does not dispose of the contaminated waste improperly. Notify the appropriate DEP Area Health Physicist listed in Appendix I and alert that individual of the situation.]

Appendix A - RADIATION MONITORING EQUIPMENT

Appendix B - CALIBRATION LOG

Appendix C - DAILY ACTIVITIES

SOURCE CHECKS AND DAILY LOG

Appendix D - DETEMINATION OF UNSHIELDED BACKGROUND RADIATION

Appendix E - LOGGING ALARMS

Appendix F - DESIGNATED STAGING AREA

Appendix G - VEHICLE SURVEY PROCEDURE

Appendix H - RADIOISOTOPE IDENTIFICATION PROCEDURE

Appendix I - VISUAL CUES: RADIOACTIVE ITEMS & SYMBOLS

Appendix J - CONTACTS

Appendix K - RADIOISOTOPE LIBRARIES AND CLASSIFICATION

Appendix E - LOGGING ALARMS

Alarm Log

Name:	Date:
Facility:	Time:

Vehicle Data	Driver Data
Registration:	Name:
Make/Model:	License (# and St)
Year:	Employer:
Color:	Insurance:
No. of doors:	

DESCRIPTION OF OCCURRENCE

Attach readout from gate monitor.

Distinguishing Marks on Vehicle (Commercial name, graffiti, damage, load cover, cap or enclosure for truck bed, etc.)

Appendix F - DESIGNATED STAGING AREA

- Remove driver and all other personnel at least 50 feet from the vehicle.
- Use the GMSM to establish an exclusion boundary based on a detected dose rate of 2mrem/hr. Place a rope and signs at this boundary.
- Physically secure the load or maintain it under surveillance while it remains at the facility.
- Contact the individual responsible for supervising response to alarms at the facility.
- Contact the appropriate Local or State Health Physicist for approvals.
- If isolating medical waste with isotopes of less than or equal to 65 days . . .

Appendix G - VEHICLE SURVEY PROCEDURE

Portable Survey Meter Use and Procedures

Survey the Truck

1. Move driver at least 50 feet away from vehicle during survey.
2. Turn meter ON.
3. Check BATTERY condition. If battery is not charged, replace battery before proceeding.
4. Set scale for x100
5. Turn on Audible speaker.
6. Check probe function:

- Hold probe against CHECK SOURCE on side of meter
- Reading should match that on the calibration label.

7. Establish BACKGROUND radiation level
   - Hold probe away from meter
   - Note background radiation level
   - Record background reading on Survey Form.
8. Scan the vehicle:
   - Hold meter within 5 cm (2 inches) of surface.
   - Move the meter slowly on each side, front, rear, and inside cab of truck.
9. If any readings are more than 10uR/hr over the background level, the vehicle should be considered a possible radiation source.
   - Mark hot spots with chalk.
   - If the counts vary wildly at a certain spot, hover over that spot until the counts stabilize and determine whether the reading is above background.
   - Record readings on Vehicle Survey Form.
10. Compare survey readings to the Action Levels (see Scalehouse Alarm Protocol Flowchart).

Survey the Driver

11. Scan the driver and any passenger:
    - Hold meter within 5 cm (2 inches) of surface.
    - Move the meter slowly by driver's clothing, hands, shoes, face, and hair.
12. If the driver or passenger shows readings more than 10uR/hr over the background level, ask whether either has undergone recent nuclear medical treatment.
    - If either has, allow the driver and vehicle to proceed.
    - If none has, notify the local CA Radiologic Health Branch Officer Reza Omour at 408/277-1578 (office) or 408/802-6774 (cellular).
13. Record readings on Vehicle Survey Form.

Vehicle Survey Form

Surveyor Name:	Date:
Facility:	Time:

Vehicle Diagram (front, rear, side, as applicable)
(Sketch in vehicle diagram and mark the locations measured and the readings.)

Survey Instrument
Meter Used:
Meter Settings:
Background Readings:

DESCRIPTION OF OCCURRENCE

Waste was (Circle one): Rejected Processed Disposed

Vehicle Transporter/Supplier/Handler
Name:
Address:
Phone:
Vehicle ID and License Number:

Appendix I - VISUAL CUES: RADIOACTIVE ITEMS & SYMBOLS

Fiestaware and Vaseline Glass

Uranium compounds have been used for centuries to color glass. A 2,000 year old sample of yellow glass found near Naples, Italy contains uranium oxide. Uranium trioxide (UO_3) is an orange powder and has been used in the manufacture of Fiestaware plates. Other uranium compounds have also been used to make Vaseline glass and glazes. The uranium within these items is radioactive and should be treated with care.
http://education.jlab.org/itselemental/ele092.html

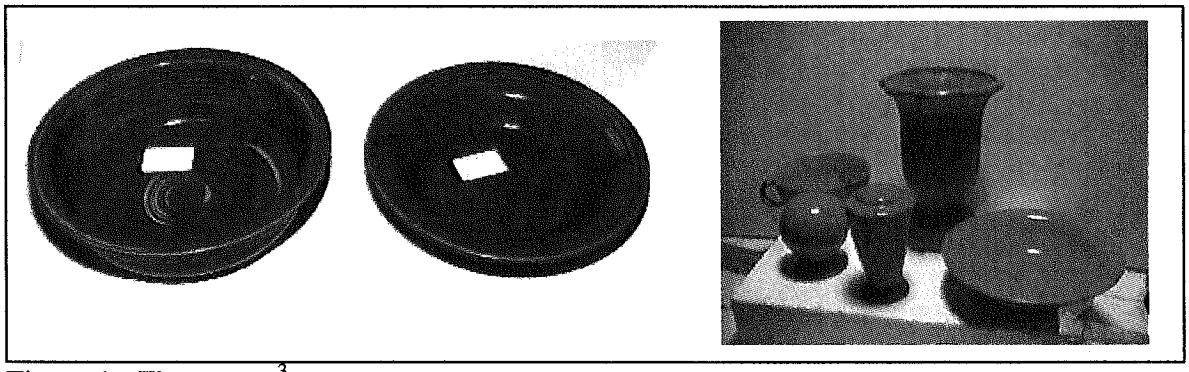


Figure 1: Fiestaware[3]

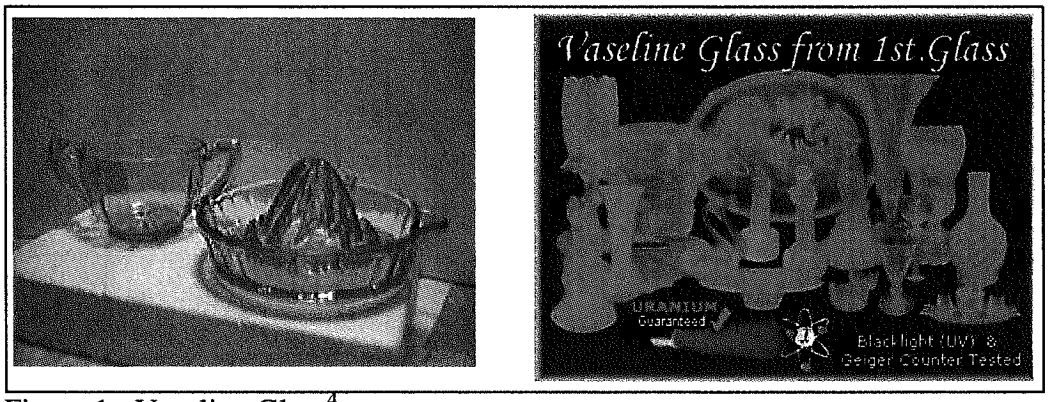


Figure 1: Vaseline Glass[4]

[3] Source: http://www.dangerouslaboratories.org/rglass.html
[4] Source: http://www.dangerouslaboratories.org/rglass.html

Ionization Smoke Alarms

Two types of smoke detectors are ionization and photoelectric detectors. Ionization smoke detectors use an ionization chamber and a source of ionizing radiation to detect smoke. This type of smoke detector is more common because it is inexpensive and better at detecting the smaller amounts of smoke produced by flaming fires. Inside ionization detector is a small amount (perhaps 1/5000th of a gram) of americium-241. The radioactive element americium has a half-life of 432 years, and is a good source of alpha particles and gamma rays or photons.

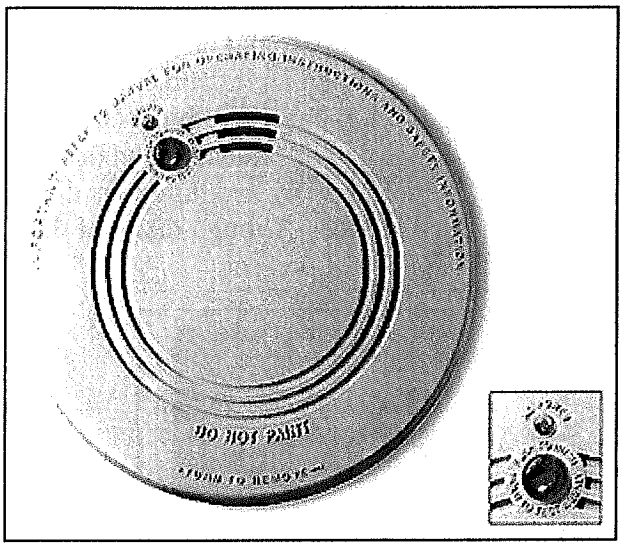


Figure 3: Ionization Smoke Detector[5]

Another way to talk about the amount of americium in the detector is to say that a typical detector contains 0.9 micro curie of americium-241. A curie is a unit of measure for nuclear material. If you are holding a curie of something in your hand, you are
holding an amount of material that undergoes 37,000,000,000 nuclear transformations per second. Generally, that means that 37 billion atoms in the sample are decaying and emitting a particle of nuclear radiation (such as an alpha particle) per second. One gram of the element radium generates approximately 1 curie of activity (Marie Curie, the woman after whom the curie is named, did much of her research using radium).[6]

[5] Source: http://info.load-otea.hrdc-drhc.gc.ca/fire_prevention/bulletins/smoke.shtml
[6] Source: http://home.howstuffworks.com/smoke2.htm

Luminous Dials on Aircraft Gauges and Household Appliances

Many older flight instruments have radium activated luminous markings. Although the external radiation hazard due to normal handling of these instruments is negligible, repair of them presents a potential health problem. The self luminous material, generally found on dial faces and pointers and adjacent to or on switches, tends to flake with age. When an instrument is damaged or dismantled, particles of the radium paint can be ingested, inhaled, or absorbed through a break in the skin. Ingestion can occur following accumulation of radioactive material on the hands, cigarettes, and food. Benefits derived from use of radium activated luminous dials rarely warrant the health hazards involved in reconditioning the dial faces. Though many of the dials have long since lost their light emitting property, the radium is still present.[7]

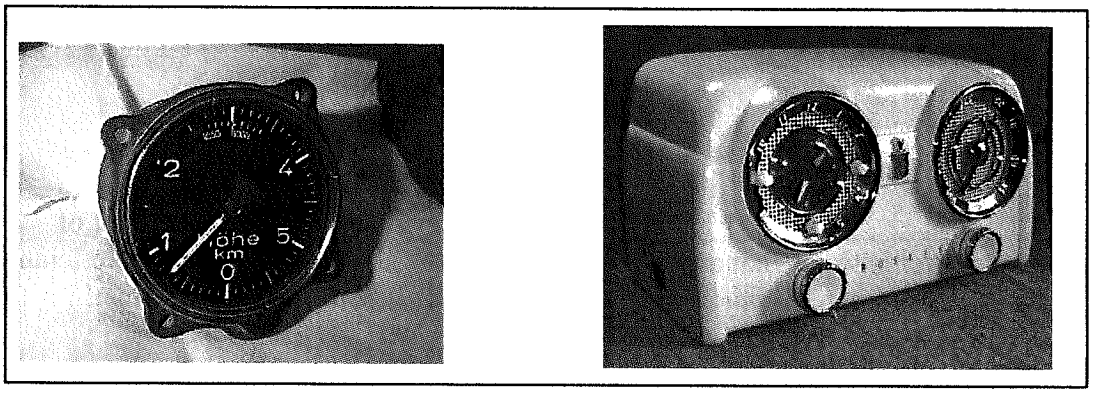
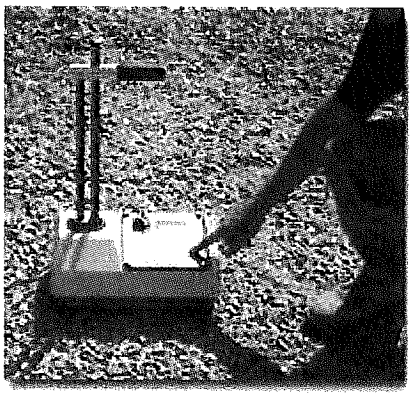


Figure 4: Luminous Dials on Aircraft and Household Equipment[8]

Density Gauges

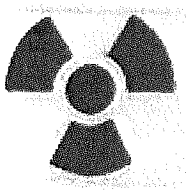


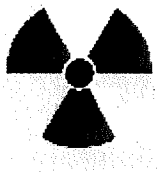
[7]http://www2.faa.gov/avr/aam/3910-3a.htm

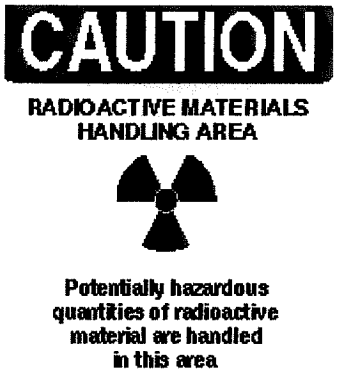
[8] Sources: www.aviation-antiques.com/instruments-4.html and www.radioattic.com/attics/hartman.htm

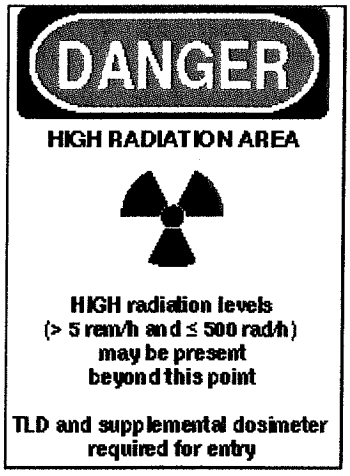
Radiation Signs

This symbol is called a tri-foil and it is the international symbol for radiation. The symbol can be magenta or black, on a yellow background. This sign is posted where radioactive materials are handled, or where radiation-producing equipment is used. This sign is used as a warning to protect people from being exposed to radioactivity. Be alert for this symbol in a load that has triggered the radiation detection alarm.









http://www.epa.gov/radiation/students/symbols.html

The following list is from IEM's website

Fertilizers
Vermiculite
Gas Lantern Mantles
Thickness Gauges
Voltage Gauges and Current Surge Protectors
Spark Plug Gap Irradiators
Fluorescent lamps
Electric Blanket Thermostats
Exit Signs
Military Applications
Cardiac pacemakers
Static eliminators
Tobacco products

Salt Substitutes
Lightning Rods
Mettler Balances
Radioluminescent gauges for aircraft
Clock dials
Pull chains on light bulbs
Switches
Chamber pot lids
Doorknobs
Religious statuary
Telephone dials
Fishing lures
Markers at military bases to assist movement during blackout periods
Optical lenses
High quality lenses (night sights for military applications)
35 mm camera lenses
Welding rods
Rocket nozzles
Lighting filaments
Black ceramic spot plates to visualize light-colored precipitates and porcelain dentures
Cloisonné jewelry (orange coloring)
Kaolin (used in many magazines to produce a high gloss appearance)
Kaopectate (anti-diarrhea medication)
Cat litter

Appendix J - CONTACTS

The City of Sunnyvale person responsible for the implementation of the Action Plan is **Debi Sargent**, the Contract Administrator for the SMaRT Station operator.

- Office 408/730-7673
- Cellular 408/219-8935

The City of Sunnyvale backup person in case Debi Sargent is not available is **Rich Gurney**, the Recycling Supervisor for the City of Sunnyvale.

- Office 408/730-7277
- Pager 408/231-9457

The GreenTeam/Zanker person responsible for the implementation of the Action Plan is **Todd Storti**, the General Manager of GreenTeam/Zanker, operator of the SMaRT Station operations.

- Office 408/752-2795
- Cellular 408/594-2798

The GreenTeam/Zanker Environmental, Health, and Safety Manager is **Maira Simone**.

- Office 408/752-8530
- Cellular 408/590-4760

The City of Sunnyvale Hazardous Materials Coordinator is **Ron Staricha**.

- Office 408/730-7219

The State contact for the radiation monitoring at the SMaRT Station is **Reza Omour**, the San Jose Office Chief of the Department of Health Services Radiologic Health Branch:

- Office 408/277-1578
- Cellular 408/802-6774

Exhibit M
Volume-to-Weight Conversions

Material	Conversion	Description
Regular Refuse	**308 lbs/cy**	Regular refuse includes household discards, clothing, packaging materials, kitchen and table food waste, animal waste. White Goods in this category include stoves, washers and dryers and metal furniture. Non-recyclable Green Waste (such as palm, ivy and yucca) is included in this category. Measurable quantities of dirt will be charged at the concrete/dirt/sod rate.
Demolition Debris	**1,000 lbs/cy**	Demolition Debris means mixed waste building materials, tree stumps, limbs and roots larger than 6" diameter, conduit, fencing, wood, wallboard, old carpets and floor pads, floor and ceiling tiles, etc. Includes discarded furniture, large metal items, water heaters, sinks, toilets and items resulting from construction, remodeling, repair or tear down operations. Tires are in this category due to the density per cubic yard and special handling requirements. There is a limit of 4 tires per load.
Concrete, Dirt & Sod	**2,000 lbs/cy**	Concrete in excess of 2'x2'x4", concrete with wood, metal, wire or rebar, concrete that does not meet the specifications of "clean concrete". Dirt mixed with yard trimmings or asphalt or rock, and Sod. Also includes brick and pavers/paving stones and sand.
Asphalt material	**1,380 lbs/cy**	Asphalt roofing material, shingles, asphalt that does not meet the specifications of "clean asphalt".
Clean Wood	**329 lbs/cy**	Clean wood is segregated, unpainted, untreated pallets, wood and lumber pieces up to 6" in diameter and 6' in length. Material must be free of metal and paper. Material must not be banded bundled tied or wrapped.
Clean Green Materials	**308 lbs/cy**	Includes, grass, leaves, small branches and other landscaping maintenance materials. Material cannot be mixed with garbage, wood, sand, dirt or rock. Materials may not exceed 6 feet in length and six inches in diameter. No palm, yucca, cactus, bamboo, ivy or poison oak.
Clean Asphalt	**1,380 lbs/cy**	Clean asphalt and grindings <u>less than</u> 2'x2'x3". No garbage, dirt, excess wire, pipe or rebar. Asphalt contaminated with other materials will be charged at the regular asphalt rate. Does not include asphalt shingles or roofing materials.
Clean Concrete	**1,855 lbs/cy**	Clean concrete and rock less than 2'x2'x4". No garbage, dirt, excess wire, pipe or rebar. Concrete contaminated with excess pipe, wire and rebar, or mixed with other materials will be charged at the concrete/dirt/sod rate.
Clean Dirt	**2,000 lbs/cy**	Clean soil. No rock, vegetation or other contaminants.
Sofa	**76 lbs/unit**	Sofas, chairs, loveseats 8' or less. Charged per item.
Mattress/Box Spring	**55 lbs/unit**	Any size mattress or box spring. Charged per item.

Exhibit M
Volume-to-Weight Conversions

Material	Conversion	Description
Refrigerator, freezer/AC unit	**267 lbs/unit**	Residential units only.
Minimum Charge	**308 lbs/cy**	Minimum charge per vehicle.
Fee for uncovered loads	**No weight value**	In accordance with Sunnyvale Municipal Code 8.16.190

Note: Conversion factors shown above will be used for loads less than 12 cubic yards in volume. Loads greater than or equal to 12 cubic yards will be weighed and recorded in accordance with the CalRecycle Disposal Reporting System regulations.

Exhibit N—1

Procedure for Adjustment to Monthly Invoices for Publicly Hauled Waste Disposal Fees and Facility Use Fees

Conversion of Yards of Publicly Hauled Waste to Tons

Example:

Publicly Hauled Waste Received January 2008

Waste Type	Cubic Yards	Conversion Factor (lbs./cyd)	Tons
Regular Refuse	1,200	308	184.8
Demolition Debris	1,100	1,000	550.0
Asphalt	75	1,000	37.5
Concrete, Dirt, Sod	45	1,000	22.5
Clean Green Materials	300	308	46.2
TOTAL	2,720		841.0

Note: Conversion factors shown above will be used for loads less than 12 cubic yards in volume. Loads greater than or equal to 12 cubic yards will be weighed and recorded in accordance with the CalRecycle Disposal Reporting System regulations.

Adjustments to tonnage for Public Haul weighed loads

Exhibit N-2

Sunnyvale

Date In	TT	Trans Num	Bill Acct Name	OT Label	S-Entry Label	S-Vol	Rate	S-Tip Fee	Convf	Converted Tons	Actual Pounds	Actual tons	Difference
8/2/2013	21	816718	CA CASH PUBLIC	100-Sunnyvale	210-Demolition Debris	12.34	34	419.56	1000	6.17	8220	4.11	-2.06
8/5/2013	21	817096	CA CASH PUBLIC	100-Sunnyvale	210-Demolition Debris	2	-999	68	1000	1.00		0	-1
8/5/2013	21	817096	CA CASH PUBLIC	100-Sunnyvale	216-Sofa	8.76	-999	76	1000	4.38		0	-4.38
8/5/2013	21	817096	CA CASH PUBLIC	100-Sunnyvale	217-Mattress-Box	5.32	-999	70	1000	2.66	1580	0.79	-1.87
8/9/2013	21	817966	CA CASH PUBLIC	100-Sunnyvale	210-Demolition Debris	15.2	34	516.8	1000	7.60	4280	2.14	-5.46
8/20/2013	21	819913	CA CASH PUBLIC		210-Demolition Debris	2	-999	68	1000	1.00		0	-1
8/20/2013	21	819913	CA CASH PUBLIC	100-Sunnyvale	216-Sofa	2.19	-999	19	1000	1.10		0	-1.095
8/20/2013	21	819913	CA CASH PUBLIC	100-Sunnyvale	217-Mattress-Box	9.3	-999	122.39	1000	4.65	7000	3.5	-1.15
8/20/2013	21	819975	CA CASH PUBLIC	100-Sunnyvale	216-Sofa	6.57	34	57	1000	3.29		0	-3.285
8/20/2013	21	819975	CA CASH PUBLIC	100-Sunnyvale	217-Mattress-Box	11.97	34	157.5	1000	5.99	2880	1.44	-4.545
8/22/2013	21	820401	CA CASH PUBLIC	100-Sunnyvale	210-Demolition Debris	2	34	68	1000	1.00		0	-1
8/22/2013	21	820401	CA CASH PUBLIC	100-Sunnyvale	216-Sofa	6.57	34	57	1000	3.29		0	-3.285
8/22/2013	21	820401	CA CASH PUBLIC	100-Sunnyvale	217-Mattress-Box	5.32	34	70	1000	2.66	3920	1.96	-0.7
8/26/2013	21	820971	CA CASH PUBLIC	100-Sunnyvale	210-Demolition Debris	0.5	-999	17	1000	0.25		0	-0.25
8/26/2013	21	820971	CA CASH PUBLIC	100-Sunnyvale	216-Sofa	6.57	-999	57	1000	3.29		0	-3.285
8/26/2013	21	820971	CA CASH PUBLIC	100-Sunnyvale	217-Mattress-Box	9.31	-999	122.5	1000	4.66	3540	1.77	-2.885
8/27/2013	21	821211	CA CASH PUBLIC	100-Sunnyvale	216-Sofa	13.1412	8.675	114	1000	6.57	4980	2.49	-4.0806
												0	0
						0			Totals	59.53	36400.00	18.20	(41.33)

Mountain View

Date In	TT	Trans Num	Bill Acct Name	OT Label	S-Entry Label	S-Vol	Rate	S-Tip Fee	Convf	Converted Tons	Actual Pounds	Actual tons	Difference
												0	0.00
												0	0.00
									Totals	0.00	0.00	0.00	0.00

Palo Alto

Date In	TT	Trans Num	Bill Acct Name	OT Label	S-Entry Label	S-Vol	Rate	S-Tip Fee	Convf	Converted Tons	Actual Pounds	Actual tons	Difference
												0	0.00
						0			Totals	0.00	-	0.00	0.00
						0	Total SMaRT Station			59.53	36,400	18.20	(41.33)

8/14/13 ul.

SMaRT Station
Operated by Bay Counties SMaRT
July
2013

Operational Reports for Debi Sargent

Due by 15th of Every Month

Log of Special Occurences & Incidents DL

Hazardous Waste Random Load Check Report DL

Universal Waste Oil Log DL

Wastewater Gallons DL

Baghouse Log DL

Generator Test Report DL

12CY+ Weight Transactions 8/16/13

Weekly Cleaning Schedule DL

Mercury Containing Items Log DL

Specialty/Foothill Curbside Electronic_____ & Paper Report DL

SMaRT Station ®

Operated by Bay Counties SMaRT

Log of Special Occurrences & Incidents - July 2013

none to report

SMaRT Station ®
Operated by Bay Counties SMaRT

Darin's Weekly Cleaning Schedule — Week Ending 7/5/13

AREA	Day Completed					
Tipping Floor	**Freq**	**M**	**T**	**W**	**Th**	**F**
Area around roll-offs near concrete bunker	*Daily*	✓	✓	✓	✓	✓
Area around HazMat shed and roll-offs	*Daily*	✓	✓	✓	✓	✓
Backside near diesel pump	*Daily*	✓	✓	✓	✓	✓
Refrigerator recovery area	*Daily*	✓	✓	✓	✓	✓
Prohibited waste pallets emptied	*Daily*	✓	✓	✓	✓	✓
Transfer Area/Shop	**Freq**	**M**	**T**	**W**	**Th**	**F**
Floors behind push walls	*Daily*	✓	✓	✓	✓	✓
Driveway to top loader	*Daily*	✓	✓	✓	✓	✓
Inspect and clean AMFAB	*Daily*	✓	✓	✓	✓	✓
Tops of push walls	*Weekly*	✓				
Eyewash stations (2nd weekend of month)	*Monthly*					

Pit Cleaning	**Date**	**Date**	**Date**	**Date**	**Date**
Compactor Conveyor	7.3	7.6			
Top Loader Conveyor	7.1	7.2	7.3	7.4	7.5
Wood Room Conveyor	7.1	7.2	7.3	7.4	7.5
Residential Feed Conveyor	7.6				
Com[illegible]dal Feed Conveyor	7.6				
LITTER PATROL	7.1	7.2	7.3	7.4	7.5

Floor Clean	**Date**	**West Clean Time**	**OPS Mgr. Initial**	**East Clean Time**	**OPS Mgr. Initial**
Comments	7.1	8:00	✓	3:30	✓
	7.2	8:00	✓	3:30	✓
	7.3	8:00	✓	3:30	✓
	7.4	8:00	✓	3:30	✓
	7.5	8:00	✓	3:30	✓

Weekly Storm Drain Maintenance Log

AREA		Day Completed				
Storm Drains	**Frequency**	**M**	**T**	**W**	**Th**	**F**
Check for and Remove Nearby Oil/Fuel Spills	*Daily*	✓	✓	✓	✓	✓
Make Sure Area Outside Tip Floor is Clean	*Daily and When Rain Expected*	✓	✓	✓	✓	✓
Remove Grates and Clean on Tip Floor	*Weekly*	✓				
Remove Large Debris From on Top of Grates	*When Present*	✓	✓	✓	✓	✓
Report Strong H2S Smell Coming From Drains	*When Present*	/	/	/	/	/
Check Bags Present on all Storm Drains	*When Raining or Expected*	✓	✓	✓	✓	✓
Rem[illegible] and Compost, Fines, Dirt	*When Raining or Expected*	/	/	/	/	/
Water Flow to Storm Drains	*When Raining*	/	/	/	/	/

Comments: