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October 17, 2014

By Electronic Transmission

Richard W. Corey
Executive Officer
California Air Resources Board
1001 I St.
Sacramento, CA 95814

ECC Comments on ARB's Preliminary Determination in its Investigation of Offsets Issued for Destruction of Ozone Depleting Substances at Clean Harbors Facility

Dear Mr. Corey:

I write on behalf of Environmental Credit Corp. ("ECC") concerning the Air Resources Board's ("ARB's") investigation of offset credits issued for the destruction of ozone depleting substances ("ODS") at the Clean Harbors facility in El Dorado, Arkansas (the "Clean Harbors facility" or the "Facility"). ECC is North America's leading developer of projects that create greenhouse gas emissions reduction credits ("offsets" or "credits"), and is the registered Offset Project Operator for ECC's Offset Project CAOD0006-C ("ECC Project" or simply the "Project"). As a longtime stakeholder in offset markets, ECC has a strong interest in ensuring that all offsets represent real environmental improvement, and ECC has long supported ARB's efforts to protect the integrity of such markets. However, ARB's Preliminary Determination in its investigation of offsets generated by the ECC Project's ODS destruction activity at the Clean Harbors facility is procedurally flawed and factually and legally unfounded.

On May 29, 2014, ARB took approximately 4.3 million offset credits and began an investigation into the validity of these offsets in light of an alleged violation of the Resource Conservation and Recovery Act ("RCRA") by Clean Harbors at the Facility. On October 8, 2014 ARB issued a Preliminary Determination in connection with this investigation (the "PD"). In its Preliminary Determination ARB tentatively determined that 142,199 offset credits issued for Offset Project CAOD0006-C should be invalidated, because on February 3, 2012, at the time the offsets were generated, the Facility was not in compliance with its RCRA permit.

ECC is deeply concerned by the manner in which ARB conducted this investigation, including its seizure of the offsets prior to final determination, ARB's willingness to give

conclusive weight to what are only allegations of RCRA noncompliance, and ARB's formalistic application of the ODS Protocol despite its recognition that "the offsets at issue here are real, quantified, and verified." PD at 2. ECC articulates these general concerns in detail at the end of this letter, but first addresses ARB's Preliminary Determination on its own terms.

First, accepting for the moment ARB's analysis that the Clean Harbors facility was in violation of its RCRA permit on February 2 and 3 due to its sale of brine byproducts, the RCRA violation simply does not bear on the validity of the offsets generated by the ECC Project because it had been cured on February 3 hours *before* the ECC Project's ODS destruction began.

Second, to the extent that ARB's Preliminary Determination rests on the proposition that "[t]he ozone depleting substances destroyed at the Clean Harbors facility are classified as listed hazardous wastes under RCRA," its analysis is critically flawed. PD at 7. Used clorofluorocarbons ("CFCs") simply are *not* listed hazardous wastes. The vast majority of ODS in existence in the United States are used, and are not treated as hazardous wastes. It is absolutely essential to the ongoing viability of ODS destruction projects – projects that significantly further the objectives of AB 32 – that ARB correct this in its Final Determination.

ECC respectfully requests that ARB reverse its Preliminary Determination with respect to Offset Project CAOD0006-C, return the 142,199 offset credits generated by the Project to the CITSS accounts from which they were removed on May 29, 2014, and publicly acknowledge that used CFCs are not listed hazardous wastes.

1. The ECCs Project's ODS Destruction Did Not Occur During the Time that ARB Preliminarily Determined the Facility to be in Violation of its RCRA Permit, and Therefore the Offset Credits Generated by the ECC Project are Not Invalid.

a. The Facts in the Record.

Assuming for the moment that ARB is correct in its Preliminary Determination that the Clean Harbors facility was out of compliance with its RCRA permit on February 2 and 3, 2012, this alleged RCRA violation should not bear on the validity of offset credits generated by ECC's Offset Project CAOD0006-C, because the destruction of ODS in connection with that Project occurred after the alleged RCRA violation had been cured.

For many years the Clean Harbors facility held a permit issued by the state of Arkansas under RCRA that authorized it to sell a calcium chloride byproduct generated by the incineration of various substances, including but not limited to ODS, in the form of a liquid brine for end-use in oil and gas exploration and development. Shipments of this brine would historically depart the Facility by truck. On February 2, 2012, staff at the Facility received by e-mail an EPA inspection report in which EPA put forth its position that this brine was a solid and hazardous waste, and that sale of the brine as a commercial product for application in oil and gas exploration was a violation of RCRA.

Attached to this letter as Exhibit A are the Clean Harbors records concerning the departure of the brine tankers from the Facility. These indicate that the last tanker of brine to leave the Facility departed on February 3, 2012 at or shortly after 4:12 pm. A form entitled "Straight Bill of Lading" indicates that this last shipment was assigned Shipment Number 34487. Exhibit A at 9 & 13. A "weigh ticket" for Shipment Number 344847 dated February 3, 2012 is time-stamped 4:06 pm. Exhibit A at 8 & 12. A form entitled "Outbound Waste Shipment Approval" for Shipment Number 344847 was signed by Clean Harbors staff authorizing final departure of the tanker on February 3, 2012 at 4:12 pm. Exhibit A at 11. Clean Harbors staff have confirmed that the time indicated on this form corresponds very closely with the time that Shipment Number 34487 left the Clean Harbors facility.

According to ARB's Preliminary Determination, the alleged violation of the RCRA permit for the Clean Harbors facility began on February 2, 2012 at the time the Clean Harbors facility received the EPA inspection report, and ended on February 3, 2012 at the time the final tanker of brine left the Facility. PD at 7. Thus, the alleged RCRA violation ended at or shortly after 4:12 p.m. on February 3, 2012.

Clean Harbors' records also conclusively indicate that the destruction of the ECC Project ODS commenced at 8:05 pm on February 3, 2012 — several hours *after* the Facility came back into compliance with RCRA. Attached as Exhibit B is a report containing data generated by the Continuous Emission Monitoring ("CEM") system associated with the incineration unit at the Clean Harbors facility ("CEM System Report"). This particular CEM System Report was generated on February 3 through 7, 2012 for the ECC Project. As ARB staff knows, CEM system reports are part of the standard verification process for ODS destruction offset projects, and this CEM System Report is cited in the verification reports for the ECC Project (cited as "Freon Report"). The second column of the CEM System Report documents the flow rate of ODS into the Secondary Combustion Chamber of the Clean Harbors incineration unit every five minutes, and the third column documents the flow rate of ODS into Kiln One of the unit. The first values appear in these columns at 8:05 pm on February 3, and the last at 6:40 am on February 7. This is the period of the ECC Project's ODS destruction, and thus the period during which the Project's activity was implemented at the Clean Harbors facility. It did not begin until well after the time that, according to ARB, the Facility came back into compliance with its RCRA permit.

b. Application of the CTR and the ODS Protocol to the Facts in the Record.

As noted by ARB in its Preliminary Determination, the regulatory requirements that govern the eligibility and issuance of offset credits for the destruction of ODS are contained in the Cap and Trade Regulation ("CTR") and the Ozone Depleting Substances Projects Compliance Offset Protocol ("ODS Protocol").[1] PD at 3. Section 95858(c)(2) of the CTR

[1] The version of the ODS Protocol now in effect was adopted by ARB on October 20, 2011. All references to the ODS Protocol in this letter are to this 2011 version unless otherwise specified. On September 18, 2014, ARB

provides that ARB *may* determine that an ARB offset credit is invalid for several reasons, including that:

> The offset project activity *and* implementation of the offset project was not in accordance with all local, state, or national environmental and health and safety regulations during the Reporting Period for which the ARB offset credit was issued.

17 C.C.R. § 95858(c)(2) (emphasis added); *see also* 17 C.C.R. § 95973(b) ("an offset project must also fulfill all local, regional, and national environmental and health and safety laws and regulations that apply based on the offset project location and that *directly apply* to the offset project.") (emphasis added).

The current ODS Protocol also contains requirements for "regulatory compliance," and provides in relevant part as follows:

> As stated in the Regulation, an Offset Project Operator or Authorized Project Designee must fulfill all applicable local, regional and national requirements on environmental impact assessments that apply based on the offset project location. Offset projects must also meet any other local, regional, and national requirements that might apply. Offset projects are not eligible to receive ARB or registry offset credits for GHG reductions that occur as the result of collection or destruction activities that are not in compliance with regulatory requirements.
>
> The regulatory compliance requirement extends to the operation of destruction facilities where the ODS is destroyed. Destruction facilities have the potential to contribute to environmental impacts beyond ozone depletion and climate change. *Accordingly, all destruction facilities must meet the full burden of applicable regulatory requirements* ***during the time the ODS destruction occurs.*** Any upsets or exceedances of permitted emission limits

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adopted a new version of the ODS Protocol, and also amendments to the CTR. At the time of this writing, the 2014 version of the Protocol and CTR have not yet gone into effect. I note, however, that under the 2014 ODS Protocol, the "regulatory compliance requirements" apply only to "the collection, recovery, storage, transportation, mixing and destruction of ODS." ODS Protocol (Sept. 18, 2014) § 3.8. Further, it is ARB's policy that early action offset projects, which the ECC Project at issue here is, must transition to ARB's compliance offset protocols, and that when they do they must adhere to the most current version of those protocols. *See* 17 C.C.R. § 95990(k)(1)(C) (as amended Sept. 18, 2014). It is clear that under the September 18, 2014 version of the ODS Protocol and the CTR, which as ARB notes, "must be read in harmony with each other," PD at 3, "regulatory compliance" for post-destruction activities such as waste stream management by the destruction facility would not be a condition of validity for the offset credits generated by the ODS destruction.

> must be managed in keeping with an authorized startup, shutdown, and malfunction plan required by EPA (40 CFR 63.1206).

ODS Protocol at § 3.5 (emphasis added).

The first paragraph of ODS Protocol section 3.5 applies to "offset projects," and requires that the ODS project itself (as distinct from non-project related activities taking place in the same facility as the project) comply with local, regional, and national regulatory requirements. Note also that the CTR's provision setting forth the requirements of an offset project make clear that the concern is with compliance with those laws and regulations that "directly apply" to the project. *See* CTR § 95973(b) ("an offset project must also fulfill all local, regional, and national environmental and health and safety laws and regulations that apply based on the offset project location and that *directly apply* to the offset project.") (emphasis added). The ODS destruction activities of the ECC Project were at all times in full compliance with all regulatory requirements that directly apply to those activities. As discussed more fully below, to the extent that ARB asserts that the ECC Project's ODS were listed hazardous wastes under RCRA, ARB is in error.

In addition to the requirement that the ODS destruction project itself comply with all applicable regulatory requirements, the second paragraph of ODS Protocol section 3.5 requires that the "destruction facilities must meet the full burden of applicable regulatory requirements *during the time the ODS destruction occurs*." As discussed above, and assuming the validity of ARB's Preliminary Determination, the Clean Harbors facility was in compliance with its RCRA permit at the time the ECC Project's ODS was destroyed. The alleged RCRA violation ended at or shortly after 4:12 pm on February 3, 2012, when the last tanker carrying brine departed the Facility, and the ECC Project's ODS destruction did not begin until 8:05 pm. Because the RCRA violation alleged by ARB had been cured prior to "the time the ODS destruction occur[ed]" at the Facility, it cannot be a basis for invalidation of the offset credits associated with the Project. ODS Protocol at § 3.5, PD at 3 & 7.

2. Used CFCs Designated for Destruction as Part of an ODS Offset Project are Not Hazardous Wastes.

a. Used CFCs are Not a listed Hazardous Waste.

ARB's analysis of RCRA compliance at the Clean Harbors facility appears to suggest that it might rest on the proposition that "[t]he ozone depleting substances destroyed at the Clean Harbors facility are classified as listed hazardous wastes under RCRA." PD at 7. A substance may qualify as a "hazardous waste" under RCRA in two ways: Either the substance is listed, or it displays the characteristics of a hazardous waste. While it is true that certain unused CFC wastes are in certain circumstances listed as hazardous, used CFCs are not listed. It is almost certain that the CFCs shipped to the Clean Harbors facility for destruction in connection with the ECC Project were used, as the vast majority of all CFCs in the US today are. Note that they've

not been produced in the US for over 20 years. Accordingly, neither EPA nor anyone in the ODS recycling and destruction industry treats them as a RCRA-listed hazardous waste.

It is well established that used CFCs are not listed hazardous wastes under RCRA. Although there are listings for R11 (U121) and R12 (U075), see 40 C.F.R. 261.33(f), these listings apply only to the unused commercial products. For example, in a 1989 Federal Register notice, EPA stated that

> The U-list ... does not apply to chemicals that have been used for their intended purpose. Thus, CFC refrigerants that are removed from a refrigeration system ... would not be classified as [U-listed] "commercial products."

54 Fed. Reg. 31335, 31336 (July 28, 1989) (attached hereto as Exhibit C). Similarly, in a letter issued a year earlier, EPA stated that

> used refrigerant would not meet the listing description ... for trichlorofluoromethane (U121) or dichlorodifluoromethane (U075) because it has been used. The listings in Section 261.33 ... apply to the commercially pure grades of the listed chemicals, technical grades, and formulations in which the listed chemical is the sole active ingredient, but not to used chemicals.

Letter from Sylvia K. Lowrance, Director, Office of Solid Waste, EPA, to Marshall R. Turner, Vice President of Manufacturing, Racon Refrigerants (July 21, 1988) (RCRA Online #11355) (attached hereto as Exhibit D). Moreover, in a letter addressed to the predecessor to ARB's sister agency, the California Department of Toxic Substances Control, dated August 2, 1989, EPA cited the Federal Register notice quoted above, and explained that

> CFCs used as refrigerants, [sic] do not meet any of the hazardous waste listings. Thus a used CFC refrigerant is a hazardous waste only if it exhibits one or more of the characteristics of a hazardous waste.

Letter from Michael J. Petruska, Acting Chief, Waste Characterization Branch, EPA, to James T. Allen, Ph. D., Chief, Alternative Technology Section, Toxic Substances Control Division, Department of Health Services (August 2, 1989) (RCRA Online # 11451) (attached hereto as Exhibit E). Because the vast majority of CFCs in the US are used, it is almost certain that the

CFCs processed in connection with the ECC Project were used, and thus did not qualify as hazardous waste.[2]

b. Used CFCs Do Not Have Hazardous Characteristics.

EPA also has determined that under normal conditions CFCs do not typically exhibit hazardous characteristics. *See* 54 Fed. Reg. at 31,336 (there is "no ... practical possibility during normal use" that used CFC refrigerants would exhibit the characteristic of corrosivity); *see also* EPA Letter to J. T. Allen, California Department of Toxic Substances Control (August 2, 1989) ("a generator may cite the Federal Register notice to demonstrate that such materials do not exhibit a hazardous characteristic under normal operating conditions."). EPA has indicated that used CFCs can contain some of the constituents covered by the Toxicity Characteristic Leaching Procedure ("TCLP"), such as carbon tetrachloride and chloroform, in concentrations above the TCLP limits. See 56 Fed. Reg. 5910, 5910-11 (February 13, 1991) (attached hereto as Exhibit F). However, because of concerns that regulating such CFCs as hazardous wastes could promote or incentivize improper venting, EPA issued an exclusion from the definition of hazardous waste

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[2] In the highly unlikely event that there were unused or "virgin" CFCs present in the ODS destroyed in connection with the ECC Project, those materials likewise should not be treated as a listed hazardous waste. Unused R11 and R12 refrigerants are listed as hazardous wastes "if and when they are discarded or intended to be discarded." 40 C.F.R. 261.33. A material destined for disposal or destruction would be deemed "intended to be discarded." However, EPA has made clear that there are certain exceptions when the material still has value that will be recovered prior to disposal or destruction. For example, EPA has determined that "[when] unused or expired pharmaceuticals are being returned ... for possible manufacturer credit, they still have potential value to the pharmacy or hospital and are thus not considered wastes." *See* 73 Fed. Reg. 73,520, 73,525 (December 2, 2008). Significantly, this is true even if it is known in advance that the products will be disposed or destroyed after the determination is made whether they are eligible for credit. *Id.* These products become solid wastes only after the determination is made that they do not have value. *Id.* Similarly, EPA has concluded that unused explosives seized by law enforcement personnel are not wastes while being stored for use as evidence in a legal proceeding, even when it is known that they will be destroyed afterwards. *See* Letter from Sylvia K. Lowrance, Director, Office of Solid Waste, EPA, to Phillip C. McGuire, Associate Director, Law Enforcement, Bureau of Alcohol, Tobacco and Firearms (August 11, 1988) ("we believe that [confiscated] explosives and explosive material become waste when the court (or BATF) no longer has any use for them").

In the present case, any unused CFCs that may possibly have been in the ODS associated with the ECC Project clearly had value that the project developers intended to recover (*i.e.*, their value as the basis of offset credits), even though they are ultimately destined for destruction. The conclusion that these CFCs are not wastes is even more compelling than for the pharmaceuticals and explosives discussed above, because the disposal or destruction of those products occurs after the materials have lost their value (*i.e.*, after the credit has been determined for the pharmaceuticals or after the explosives are no longer needed by the court). In contrast, any unused CFCs retain their value as they begin to be destroyed, because it is the destruction itself that makes the them eligible for the generation of offset credits. Although the CFCs are being destroyed, it is precisely *through* destruction that their value is realized. This is the opposite of "discard." Moreover, recognizing this exemption is consistent with the spirit of AB32, as it encourages the destruction of harmful ODS.

for used CFCs that are "reclaimed for further use." *Id.* at 5915 (codified at 40 C.F.R. 261.4(b)(12)).

Processing the CFCs in order to generate offset credits would appear to constitute an acceptable "further use." *Cf.* 73 Fed. Reg. 73, 520, 73,525 (December 2, 2008) ("[When] ... pharmaceuticals are being returned ... for possible manufacturer credit, they still have potential value to the pharmacy or hospital and are thus not considered wastes [even if the pharmaceuticals will be destroyed after the credit is given]"). Of course, at the time EPA issued the exclusion, such offset credits did not exist and, in fact, there were no practical methods for destroying CFCs or processing them into other chemicals. *See* 56 Fed. Reg. at 5913 ("these chemicals are difficult to destroy"); *id.* at n.2 ("The Agency is assessing the possibility that such chemicals could either be destroyed or transformed into other chemicals" (emphasis added)). However, now that such technologies do exist, the rationale for excluding CFCs destined for reuse as refrigerants (*i.e.*, avoiding incentives that could lead to venting to the atmosphere) should be extended with equal or greater force to CFCs destined for destruction (thereby permanently eliminating the risk of venting) *and* the generation of valuable offset credits. This policy also would further AB32's goal of reducing greenhouse gas emissions.

3. The Process and Approach Used by ARB in Conducting This Investigation Are Not Consistent With the Law, the Regulation, or the Spirit of AB 32.

ECC has been deeply troubled by several aspects of ARB's investigation of the Clean Harbors facility and the offset credits generated there. ECC understands that ARB's investigation was instigated by the EPA's April 2014 Compliance Agreement and Final Order with Clean Harbors in which EPA identified several concerns. However, EPA never issued a Notice of Violation to Clean Harbors, nor did Clean Harbors ever admit liability. ARB's investigation of the validity of a significant number of ODS offsets has been a profoundly destabilizing event; the fact that ARB took this action in the absence of any formal finding of a RCRA violation is troubling.

ARB's formalistic application of the ODS protocol, and its refusal to exercise discretion as required under the CTR, are also concerning. The CTR clearly provides ARB significant discretion when considering the validity of offset credits. *See* 17 C.C.R. § 95985(c)(2) ("ARB *may* determine that an ARB offset credit is invalid for the following reasons") (emphasis added). Instead of exercising this discretion so as to limit its investigation to the scope and integrity of the offset projects at issue, ARB has taken the position that it *must* invalidate any offset credits that was issued for ODS destruction activities at any facility that at the time of destruction was out of compliance with *any* environmental or health and safety regulation no matter how ancillary to the offset project activities. ARB's very aggressive enforcement posture in this investigation likely will have broad impacts on the viability of offset markets, not only in the ODS destruction industry, but in other offset industries as well.

The timing and process of ARB's investigation are also objectionable. This investigation began on May 29, 2014, when ARB took 4.3 million credits that were generated at the Clean Harbors facility. ARB's seizure of these credits *before* determining that such credits were invalid was improper and unlawful. This is made worse by the fact that ARB seized these credits without *any* regulator having made a formal finding of any violation at the Clean Harbors facility. ARB proceeded to maintain custody of the offsets for more than four months. There is no regulatory or statutory authority for ARB's extraordinary approach to this investigation. ARB's improvised and arbitrary procedure has caused significant regulatory uncertainty in a market that is wholly dependent on regulatory certainty.

4. Conclusion.

Even assuming that a RCRA violation did occur as ARB has preliminarily determined, such a violation could not bear on the invalidation of the offset credits generated by Offset Project CAOD0006-C because the ODS destruction in connection with that project did not begin until several hours after the alleged RCRA violation ended.

Moreover, ARB has seriously erred in its assessment that CFCs are listed as hazardous waste under RCRA. Nearly all ODS destruction projects involve the destruction of used CFCs, which simply are not listed hazardous wastes. Moreover, EPA has made it clear — in part because it is important to encourage responsible management of such chemicals — that CFCs ordinarily do not display hazardous characteristics. As discussed above, even the rare unused CFCs do not constitute listed hazardous waste when they are designated for destruction as part of an ODS offset project, as such CFCs have value for their potential to generate offset credits. Because most CFCs are used, and so are not listed as hazardous wastes, most ODS project operators do not treat them as such. Should ARB unilaterally and without legal support take the position that used CFCs should be treated as listed hazardous wastes, the financial viability of the entire ODS destruction industry may be threatened.

We therefore respectfully request that ARB promptly return all 142,199 offset credits associated with Offset Project CAOD0006-C to the CITSS accounts from which they were removed on May 29, 2014, and clarify that it does not view ODS as a listed hazardous waste.

Sincerely yours,

Nicholas W. van Aelstyn

Enclosures

EXHIBIT A

[Note – Pagination added for ease of reference]

Feb-12

Rick Billings
Steve Porter
Trey Walker
Christine Tracy

DATE	BL#	P.O.#	CARRIER	DESTIN.	POUNDS	GALL'S	BARRELS
2.2.12	344846	10361-8	RJS	Alvarado	46,420	3,968	94
2.3.12	344847	10361-9	RJS	Alvarado	45,880	3,921	93
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
					92,300	**7,889**	**188**

WEIGHED ON A FAIRBANKS SCALE

DATE _____

CUSTOMER'S NAME _____

ADDRESS _____

COMMODITY _____

CARRIER R S TRANS

DATE	TIME	
2-02-12	8:41PM	lb GROSS
33120 lb GROSS		46,420
2-02-12	9:43PM	lb TARE – DRIVER ON _____ OFF ✓
79540 lb GROSS		lb NET @ _____ PER lb PRICE _____

SHIPPER _____

WEIGHER SH

REMARKS Dixson

390 326

FAIRBANKS CAT. 96747

WORK ORDER NO. 3/18/16

DOCUMENT NO. 344846

STRAIGHT BILL OF LADING

TRANSPORTER 1 RJ's Transport VEHICLE ID #

EPA ID # TRANS. 1 PHONE

TRANSPORTER 2 VEHICLE ID #

EPA ID # TRANS. 2 PHONE

DESIGNATED FACILITY	SHIPPER Clean Harbors El Dorado		
FACILITY EPA ID #	SHIPPER EPA ID #		
ADDRESS	ADDRESS 304 American Rd		
CITY Alvarado STATE TX ZIP	CITY El Dorado	STATE AR	ZIP 71730

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1	TT		A. Calcium Chloride		
			B. PC# 10361-8		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

46,420

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	[illegible]	[illegible]	2-1-12
TRANSPORTER 1	Hilton Dixon	Hilton Dixon	1-7-12
TRANSPORTER 2			
RECEIVED BY			

3

WORK ORDER NO. [illegible]

DOCUMENT NO. 344846

STRAIGHT BILL OF LADING

TRANSPORTER 1 [illegible] VEHICLE ID #

EPA ID # TRANS. 1 PHONE

TRANSPORTER 2 VEHICLE ID #

EPA ID # TRANS. 2 PHONE

DESIGNATED FACILITY			SHIPPER [illegible]
FACILITY EPA ID #			SHIPPER EPA ID #
ADDRESS			ADDRESS 504 [illegible] Rd
CITY [illegible]	STATE TX	ZIP	CITY El Dorado STATE LA ZIP [illegible]

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1	[illegible]		A. [illegible]		
			B. [illegible]		

WEIGHED ON A FAIRBANKS SCALE

OMER'S NAME

ESS

IODITY

IER R J Trans

DATE TIME

lb GROSS

lb TARE – DRIVER ON OFF ✓

lb NET @ PER lb PRICE

2-02-12 8:41PM
33120 lb GROSS 46,420
2-02-12 9:43PM
79540 lb GROSS

ER

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REMARKS Dixson
390 326

BANKS CAT. 96747

TRANSPORTER 1 [illegible] PRINT	SIGN	DATE
TRANSPORTER 2 PRINT	SIGN	DATE
RECEIVED BY		

3

OUTBOUND WASTE SHIPMENT APPROVAL

☐ Waste Water ☐ Fuel ☐ lean ☐ Haz Solids ☐ Non Haz Solids ☑ Others_____

DRUM #	NA
IN-HOUSE PROFILE	NA
OUTBOUND PROFILE	NA
DOT Description:	NON HAZAR[illegible]US [illegible]LCIUM CHLORIDE
Manifest#	BOL [illegible]
Trailer #	
Vendor Name	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.

Driver Name: Hilton Dixon | Dispatcher name: Williams

Driver's cell phone: 225 939 0434 | Dispatcher's phone: 225 229 2557

Trailer Verified as Stainless Steel (Read from trailer name plate) ☐ | Trailer is compatible with waste load ☐

Trailer Capacity: _____ | Was trailer washed? Yes ☐ No | Seek approval to load | Approved Initials: _____

Trailer has heel? No ☐ Yes ☐ | Seek approval to load | Approved Initials: _____

☐ Trailer inspection by: J L Marshall | Date/Time: 2-2-12

Comments:

The following personnel approve that this load meets all DOT and RCRA requirements for shipping.

Approved by: Tony Eppler (OPERATIONS MANAGER / SHIFT SUPERVISOR) | Date/Time 2-2-12 7:39 Am

Approved by: J L Marshall (Driver) | Date/Time 2-2-12

WORK ORDER NO. 3148/Le

DOCUMENT NO. 344846

STRAIGHT BILL OF LADING

TRANSPORTER 1 RJ's Transport VEHICLE ID # _____

EPA ID # _____ TRANS. 1 PHONE _____

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER Clean Harbors El Dorado
FACILITY EPA ID #	SHIPPER EPA ID #
ADDRESS	ADDRESS 309 Arkansas Rd
CITY Almelo STATE TX ZIP	CITY El Dorado STATE AR ZIP 71730

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1	TT		A. Chlorine Chloride		
			B. RCRA 10361-8		

WEIGHED ON A FAIRBANKS SCALE

OMER'S NAME _____

ESS _____

IODITY _____

IER RJ TRANS

DATE	TIME	
2-02-12	8:41PM	lb GROSS
33120 lb GROSS		46,420
2-02-12	9:43PM	
79540 lb GROSS		

lb TARE – DRIVER ON _____ OFF ✓

lb NET @ _____ PER lb PRICE _____

ER _____

IER SH

REMARKS Dixson

390 326

BANKS CAT. 96747

TRANSPORTER 1 PRINT Milton Dixson	SIGN	DATE 2-2-12
TRANSPORTER 2 PRINT	SIGN	DATE
RECEIVED BY PRINT	SIGN	DATE

3

WORK ORDER NO. [illegible]

DOCUMENT NO. 344846 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 [illegible] VEHICLE ID # _____

EPA ID # _____ TRANS. 1 PHONE _____

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER [illegible]
FACILITY EPA ID #	SHIPPER EPA ID #
ADDRESS	ADDRESS [illegible]
CITY STATE ZIP	CITY [illegible] STATE ZIP

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1	tt		A. [illegible]		
			B. [illegible]		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

PRINT SHIPPER	SIGN	DATE 2/12
PRINT TRANSPORTER 1	SIGN	DATE
PRINT TRANSPORTER 2	SIGN	DATE
PRINT RECEIVED BY	SIGN	DATE

WEIGHED ON A FAIRBANKS SCALE

DATE _____

CUSTOMER'S NAME _____ 344847

ADDRESS _____

COMMODITY _____

CARRIER _____

DATE	TIME		
2.6.12	4:07PM	lb GROSS	
28600 lb GROSS		lb TARE – DRIVER	ON _____ OFF ✓
	45,880	lb NET @ _____	PER lb PRICE _____
2.06.12	4:26PM		
28480 lb GROSS			

SHIPPER _____

WEIGHER _____

REMARKS _____

FAIRBANKS CAT. 96747

WORK ORDER NO. 344847

DOCUMENT NO. 344847

STRAIGHT BILL OF LADING

TRANSPORTER 1 RJS Transport VEHICLE ID #

EPA ID # TRANS. 1 PHONE

TRANSPORTER 2 VEHICLE ID #

EPA ID # TRANS. 2 PHONE

DESIGNATED FACILITY			SHIPPER Clean Harbors El Dorado		
FACILITY EPA ID #			SHIPPER EPA ID #		
ADDRESS			ADDRESS 309 American Rd		
CITY Athens	STATE TX	ZIP	CITY El Dorado	STATE AR	ZIP 71730

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1	TT		A. Calcium Chloride		
			B. PO# 10361-9		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	[illegible]	[signature]	2-7-12
TRANSPORTER 1	[illegible]	[signature]	2-7-12
TRANSPORTER 2			
RECEIVED BY			

3

CHI 107

WORK ORDER NO. 5517

DOCUMENT NO. 344847 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 1 PHONE _____

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER
FACILITY EPA ID #	SHIPPER EPA ID #
ADDRESS	ADDRESS
CITY STATE ZIP	CITY STATE ZIP

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
			A.		
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SHIPPER	PRINT	SIGN	DATE 2-12
TRANSPORTER 1	PRINT	SIGN	DATE
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

OUTBOUND WASTE SHIPMENT APPROVAL

☐ Waste Water ☐ Fuel ☐ lean ☐ Haz Solids ☐ Non Haz Solids ☑ Others__________

DRUM #	NA
IN-HOUSE PROFILE	NA
OUTBOUND PROFILE	NA
DOT Description:	NON HAZARDOUS CALCIUM CHLORIDE
Manifest#	BOL# 84487
Trailer #	
Vendor Name	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.

Driver Name: Hilton Dixon	Dispatcher name: William
Driver's cell phone: Hilton Dixon 225 7390434	Dispatcher's phone: 2258799557
Trailer Verified as Stainless Steel (Read from trailer name plate) ☐	Trailer is compatible with waste load ☐

Trailer Capacity:________

Was trailer washed? Yes ☐ No ☐ Seek approval to load Approved Initials: ______

Trailer has heel? No ☐ Yes ☐ Seek approval to load Approved Initials: ______

☐ Trailer inspection by: [signature] Date/Time: 2-3-12 4:12

Comments:

The following personnel approve that this load meets all DOT and RCRA requirements for shipping.

Approved by: [signature] (OPERATIONS MANAGER or SHIFT SUPERVISOR)	Date/Time 2-1-12 7:39 Am
Approved by: [signature] (Driver) Hilton Dixon	Date/Time 2-3-12 4:12

WEIGHED ON A FAIRBANKS SCALE

DATE _____

CUSTOMER'S NAME _____

ADDRESS _____

COMMODITY _____

CARRIER BJ's

DATE	TIME
2-03-12	3:07PM
32600 lb GROSS	
	45,880
2-03-12	4:06PM
78480 lb GROSS	

lb GROSS

lb TARE – DRIVER ON _____ OFF ✓

lb NET @ _____ PER lb PRICE _____

SHIPPER _____

WEIGHER ✓

REMARKS Thirty Dixon

FAIRBANKS CAT. 96747

WORK ORDER NO. 341847

DOCUMENT NO. 344847

STRAIGHT BILL OF LADING

TRANSPORTER 1 RJ's Transport VEHICLE ID # _____

EPA ID # _____ TRANS. 1 PHONE _____

TRANSPORTER 2 _____ VEHICLE ID # _____

EPA ID # _____ TRANS. 2 PHONE _____

DESIGNATED FACILITY	SHIPPER Clean Harbors El Dorado
FACILITY EPA ID #	SHIPPER EPA ID #
ADDRESS	ADDRESS 309 American Rd
CITY El Dorado STATE AR ZIP	CITY El Dorado STATE AR ZIP 71730

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1	TT		A. Refinery Chemicals		
			B. PCH 10361-9		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SHIPPER	PRINT Mike Price	SIGN	DATE 2-1-12
TRANSPORTER 1	PRINT Hilton Dixon	SIGN	DATE 2-1-12
TRANSPORTER 2	PRINT	SIGN	DATE
RECEIVED BY	PRINT	SIGN	DATE

EXHIBIT B

Clean Harbors El Dorado
USA
ZIPU 6401635

2/9/2012

	Lbs/Min	Lbs/Min	in of H2O	PPM	Degree Farenheit	GPM	pH	0= Interlock
Interlock Values ==>			>(-0.1)	>100	<1848	<600	<2.8	0/1
	Flow Rate SCC	Flow Rate K1	Pressure	CO flow rate	Exit Temp	Scrubber H2O Flow	pH	Interlock flag
Rounded Datestamp	**103FI1128**	**KILN1\FI_182**	**103PIC1006**	**STACK_CO_HRA**	**127TI1005_AVE**	**127FI1220_AVE**	**127AI1373_AVE**	**INTERLOCK**
2/3/12 7:00:00 PM	0.000	0.000	-4.32	2.57	1,903	903	4.02	1
2/3/12 7:05:00 PM	0.000	0.000	-4.53	2.55	1,906	904	4.00	1
2/3/12 7:10:00 PM	0.000	0.000	-5.13	2.42	1,907	905	4.00	1
2/3/12 7:15:00 PM	0.000	0.000	-5.11	2.38	1,907	905	4.00	1
2/3/12 7:20:00 PM	0.000	0.000	-4.89	2.37	1,910	903	4.00	1
2/3/12 7:25:00 PM	0.000	0.000	-4.20	2.32	1,911	902	4.00	1
2/3/12 7:30:00 PM	0.000	0.000	-4.53	3.03	1,911	902	4.00	1
2/3/12 7:35:00 PM	0.000	0.000	-4.99	3.05	1,916	902	3.98	1
2/3/12 7:40:00 PM	0.000	0.000	-5.11	3.02	1,920	902	3.99	1
2/3/12 7:45:00 PM	0.000	0.000	-4.91	3.00	1,921	901	3.99	1
2/3/12 7:50:00 PM	0.000	0.000	-4.97	2.92	1,925	901	3.98	0
2/3/12 7:55:00 PM	0.000	0.000	-5.24	3.02	1,931	901	3.95	0
2/3/12 8:00:00 PM	0.000	0.000	-5.19	3.03	1,937	900	3.95	0
2/3/12 8:05:00 PM	0.000	3.172	-5.24	3.12	1,936	900	4.01	1
2/3/12 8:10:00 PM	0.000	3.835	-5.24	3.17	1,939	898	4.09	1
2/3/12 8:15:00 PM	0.000	3.782	-5.21	3.17	1,944	897	4.12	1
2/3/12 8:20:00 PM	0.000	4.621	-5.24	3.22	1,949	898	4.07	1
2/3/12 8:25:00 PM	0.000	3.864	-5.18	3.25	1,947	899	4.01	1
2/3/12 8:30:00 PM	0.000	3.833	-5.21	3.25	1,948	901	3.99	1
2/3/12 8:35:00 PM	0.000	3.806	-4.98	2.52	1,942	901	4.01	1
2/3/12 8:40:00 PM	0.000	3.924	-5.18	2.52	1,941	900	4.01	1
2/3/12 8:45:00 PM	0.000	3.737	-5.18	2.55	1,942	900	4.01	1
2/3/12 8:50:00 PM	0.000	3.609	-5.23	2.55	1,941	900	4.02	1
2/3/12 8:55:00 PM	0.000	5.069	-4.95	2.53	1,933	900	4.02	1
2/3/12 9:00:00 PM	0.000	3.779	-4.88	2.50	1,932	900	3.98	1
2/3/12 9:05:00 PM	0.000	3.669	-4.51	3.58	1,936	901	3.93	1
2/3/12 9:10:00 PM	0.000	3.509	-4.57	3.58	1,942	902	3.89	1
2/3/12 9:15:00 PM	0.000	4.585	-4.32	3.68	1,945	903	3.87	1
2/3/12 9:20:00 PM	0.000	3.716	-4.47	3.68	1,952	904	3.87	1
2/3/12 9:25:00 PM	0.000	3.856	-4.54	3.63	1,961	904	3.90	1
2/3/12 9:30:00 PM	0.000	3.642	-4.27	3.67	1,970	904	3.97	1

2/3/12 9:35:00 PM	0.000	3.951	-4.73	3.67	1,972	903	4.01	1
2/3/12 9:40:00 PM	0.000	3.967	-4.65	3.67	1,980	903	4.01	1
2/3/12 9:45:00 PM	0.000	3.450	-4.84	3.68	1,986	903	3.98	1
2/3/12 9:50:00 PM	0.000	0.000	-4.89	3.67	1,988	903	3.98	1
2/3/12 9:55:00 PM	0.000	3.141	-5.17	3.67	1,990	903	3.98	1
2/3/12 10:00:00 PM	0.000	3.715	-5.11	3.68	1,992	903	3.98	1
2/3/12 10:05:00 PM	0.000	5.295	-4.86	3.63	1,993	904	3.98	1
2/3/12 10:10:00 PM	0.000	3.723	-4.61	2.58	1,988	904	3.99	1
2/3/12 10:15:00 PM	0.000	3.812	-4.28	2.62	1,987	904	4.00	1
2/3/12 10:20:00 PM	0.000	4.059	-4.39	2.63	1,987	904	4.00	1
2/3/12 10:25:00 PM	0.000	3.522	-4.49	2.68	1,990	903	4.00	1
2/3/12 10:30:00 PM	0.000	0.000	-4.83	2.67	1,996	903	3.98	1
2/3/12 10:35:00 PM	0.000	3.545	-3.88	2.63	2,002	903	3.96	1
2/3/12 10:40:00 PM	0.000	0.000	-4.17	2.67	2,002	904	3.96	1
2/3/12 10:45:00 PM	0.000	0.000	-4.48	2.67	2,003	904	3.96	1
2/3/12 10:50:00 PM	0.000	0.000	-4.24	61.37	2,006	905	4.00	1
2/3/12 10:55:00 PM	0.000	0.000	-5.21	62.05	2,018	904	4.02	1
2/3/12 11:00:00 PM	0.000	0.000	-5.07	62.18	2,029	904	4.03	1
2/3/12 11:05:00 PM	0.000	0.000	-5.24	62.23	2,035	904	4.00	1
2/3/12 11:10:00 PM	0.000	0.000	-5.24	62.22	2,028	904	3.98	1
2/3/12 11:15:00 PM	0.000	0.000	-5.24	62.15	2,020	904	3.98	1
2/3/12 11:20:00 PM	0.000	0.000	-5.24	62.08	2,009	904	4.00	1
2/3/12 11:25:00 PM	0.000	4.037	-5.24	62.00	1,999	903	4.02	1
2/3/12 11:30:00 PM	0.000	4.785	-5.22	62.05	1,993	904	4.01	1
2/3/12 11:35:00 PM	0.000	0.000	-5.23	62.05	1,991	904	4.00	1
2/3/12 11:40:00 PM	0.000	0.000	-5.24	61.95	1,985	903	4.01	1
2/3/12 11:45:00 PM	0.000	0.000	-5.24	61.93	1,977	903	4.02	1
2/3/12 11:50:00 PM	0.000	0.000	-5.24	61.83	1,960	903	4.01	1
2/3/12 11:55:00 PM	0.000	0.000	-5.24	3.10	1,948	903	4.01	1
2/3/12 12:00:00 AM	0.000	0.000	-4.27	19.63	1,946	1,099	3.97	1
2/4/12 12:05:00 AM	0.000	0.000	-5.05	2.28	1,930	903	4.00	1
2/4/12 12:10:00 AM	0.000	0.000	-5.19	2.27	1,930	903	4.00	1
2/4/12 12:15:00 AM	0.000	0.000	-5.12	2.23	1,930	903	3.99	1
2/4/12 12:20:00 AM	0.000	0.000	-5.07	2.25	1,929	903	3.98	1
2/4/12 12:25:00 AM	0.000	0.000	-5.24	2.30	1,930	904	3.99	1
2/4/12 12:30:00 AM	0.000	0.000	-5.01	2.27	1,925	903	3.99	1
2/4/12 12:35:00 AM	0.000	0.000	-5.22	2.27	1,920	902	3.98	1
2/4/12 12:40:00 AM	0.000	0.000	-5.23	2.28	1,920	902	3.98	1
2/4/12 12:45:00 AM	0.000	0.000	-5.24	2.28	1,920	902	4.02	1
2/4/12 12:50:00 AM	0.000	0.000	-5.21	2.35	1,920	902	3.97	1

2/4/12 12:55:00 AM	0.000	4.032	-5.23	2.35	1,920	903	3.96	1
2/4/12 1:00:00 AM	0.000	4.175	-5.13	2.25	1,919	904	3.95	1
2/4/12 1:05:00 AM	0.000	4.144	-4.86	2.25	1,920	905	3.98	1
2/4/12 1:10:00 AM	0.000	3.825	-4.68	2.18	1,924	905	3.99	1
2/4/12 1:15:00 AM	0.000	3.967	-4.51	2.20	1,924	905	4.00	1
2/4/12 1:20:00 AM	0.000	3.934	-4.81	2.20	1,930	905	4.00	1
2/4/12 1:25:00 AM	0.000	4.922	-4.70	2.07	1,925	904	3.99	1
2/4/12 1:30:00 AM	0.000	3.939	-4.75	2.05	1,925	904	3.99	1
2/4/12 1:35:00 AM	0.000	4.708	-4.18	2.05	1,928	904	4.02	1
2/4/12 1:40:00 AM	0.000	0.000	-4.09	249.15	1,927	904	3.97	0
2/4/12 1:45:00 AM	0.000	0.000	-5.24	251.78	1,925	904	3.95	0
2/4/12 1:50:00 AM	0.000	0.000	-5.24	252.20	1,924	905	3.96	0
2/4/12 1:55:00 AM	0.000	0.000	-5.24	252.40	1,925	905	3.98	0
2/4/12 2:00:00 AM	0.000	0.000	-5.24	252.50	1,922	905	3.99	0
2/4/12 2:05:00 AM	0.000	0.000	-5.24	252.57	1,922	905	3.99	0
2/4/12 2:10:00 AM	0.000	0.000	-5.24	252.65	1,925	905	4.00	0
2/4/12 2:15:00 AM	0.000	0.000	-4.55	257.17	1,929	905	4.00	0
2/4/12 2:20:00 AM	0.000	0.000	-3.52	277.68	1,920	916	4.00	0
2/4/12 2:25:00 AM	0.000	0.000	-3.40	277.72	1,919	943	3.99	0
2/4/12 2:30:00 AM	0.000	0.000	-3.35	277.72	1,920	966	4.01	0
2/4/12 2:35:00 AM	0.000	0.000	-3.29	277.72	1,920	966	4.01	0
2/4/12 2:40:00 AM	0.000	0.000	-3.19	277.72	1,920	966	4.01	0
2/4/12 2:45:00 AM	0.000	0.000	-3.15	30.57	1,920	966	4.01	0
2/4/12 2:50:00 AM	0.000	0.000	-4.07	28.47	1,923	992	3.95	1
2/4/12 2:55:00 AM	0.000	0.000	-4.96	46.25	1,916	1,016	3.95	0
2/4/12 3:00:00 AM	0.000	0.000	-5.12	46.27	1,906	1,035	4.00	0
2/4/12 3:05:00 AM	0.000	0.000	-5.02	46.25	1,904	1,053	4.08	1
2/4/12 3:10:00 AM	0.000	0.000	-5.17	46.17	1,895	1,068	4.09	1
2/4/12 3:15:00 AM	0.000	0.000	-5.06	46.22	1,894	1,073	4.04	1
2/4/12 3:20:00 AM	0.000	0.144	-4.93	41.70	1,893	1,079	4.01	1
2/4/12 3:25:00 AM	0.000	3.869	-4.64	21.22	1,885	1,086	3.98	1
2/4/12 3:30:00 AM	0.000	3.809	-4.65	21.23	1,876	1,093	3.97	1
2/4/12 3:35:00 AM	0.000	4.290	-4.64	21.20	1,875	1,091	3.97	1
2/4/12 3:40:00 AM	0.000	4.080	-4.68	21.22	1,880	1,064	3.97	1
2/4/12 3:45:00 AM	0.000	4.093	-4.20	21.22	1,879	1,040	3.96	1
2/4/12 3:50:00 AM	0.000	4.063	-4.11	21.17	1,877	1,026	3.97	1
2/4/12 3:55:00 AM	0.000	4.889	-4.28	20.23	1,878	1,019	3.96	1
2/4/12 4:00:00 AM	0.000	3.881	-4.04	2.27	1,889	1,011	3.92	1
2/4/12 4:05:00 AM	0.000	4.136	-3.80	2.20	1,897	1,005	3.88	1
2/4/12 4:10:00 AM	0.000	4.009	-3.90	3.43	1,905	1,006	3.87	1

2/4/12 4:15:00 AM	0.000	4.791	-3.81	3.40	1,916	1,009	3.89	1
2/4/12 4:20:00 AM	0.000	4.784	-4.18	3.38	1,925	1,010	3.91	1
2/4/12 4:25:00 AM	0.000	5.149	-4.19	3.38	1,930	1,009	3.95	1
2/4/12 4:30:00 AM	0.000	5.311	-3.71	3.33	1,932	1,008	4.01	1
2/4/12 4:35:00 AM	0.000	5.339	-3.43	3.37	1,939	1,007	3.99	1
2/4/12 4:40:00 AM	0.000	5.360	-3.64	3.32	1,951	1,006	3.98	1
2/4/12 4:45:00 AM	0.000	5.443	-3.78	3.27	1,958	1,005	3.98	1
2/4/12 4:50:00 AM	0.000	5.324	-3.85	3.27	1,958	1,002	4.01	1
2/4/12 4:55:00 AM	0.000	5.368	-4.03	3.20	1,958	998	4.01	1
2/4/12 5:00:00 AM	0.000	5.361	-4.34	3.47	1,954	995	3.99	1
2/4/12 5:05:00 AM	0.000	5.397	-4.42	6.38	1,954	993	3.98	1
2/4/12 5:10:00 AM	0.000	5.308	-3.62	6.38	1,947	992	3.99	1
2/4/12 5:15:00 AM	0.000	4.950	-4.51	6.38	1,937	992	3.99	1
2/4/12 5:20:00 AM	0.000	4.975	-4.46	6.55	1,937	992	4.00	1
2/4/12 5:25:00 AM	0.000	4.066	-4.24	6.62	1,933	992	3.98	1
2/4/12 5:30:00 AM	0.000	4.032	-4.31	6.62	1,928	994	3.97	1
2/4/12 5:35:00 AM	0.000	3.786	-4.33	6.57	1,920	995	4.00	1
2/4/12 5:40:00 AM	0.000	3.971	-3.85	6.65	1,908	995	3.99	1
2/4/12 5:45:00 AM	0.000	3.851	-4.21	6.67	1,907	995	3.99	1
2/4/12 5:50:00 AM	0.000	3.720	-4.26	6.70	1,908	996	4.00	1
2/4/12 5:55:00 AM	0.000	4.994	-4.18	6.75	1,907	996	3.98	1
2/4/12 6:00:00 AM	0.000	3.997	-3.86	6.73	1,908	997	3.98	1
2/4/12 6:05:00 AM	0.000	3.965	-4.06	6.57	1,912	998	4.00	1
2/4/12 6:10:00 AM	0.000	3.928	-4.11	4.15	1,911	998	3.98	1
2/4/12 6:15:00 AM	0.000	4.487	-3.86	2.88	1,912	998	3.98	1
2/4/12 6:20:00 AM	0.000	3.840	-3.79	2.30	1,918	998	3.97	1
2/4/12 6:25:00 AM	0.000	4.114	-3.94	2.08	1,918	997	3.99	1
2/4/12 6:30:00 AM	0.000	0.000	-4.14	2.02	1,920	995	4.03	1
2/4/12 6:35:00 AM	0.000	0.000	-4.15	2.02	1,918	995	4.02	1
2/4/12 6:40:00 AM	0.000	0.000	-4.08	1.98	1,918	997	4.01	1
2/4/12 6:45:00 AM	0.000	0.000	-4.20	1.93	1,922	999	3.97	1
2/4/12 6:50:00 AM	0.000	0.000	-4.09	1.93	1,922	1,003	3.96	1
2/4/12 6:55:00 AM	0.000	0.000	-3.98	1.90	1,922	1,005	4.00	1
2/4/12 7:00:00 AM	0.000	0.000	-3.84	1.98	1,922	1,006	3.98	1
2/4/12 7:05:00 AM	0.000	0.000	-3.64	1.98	1,925	1,007	3.98	1
2/4/12 7:10:00 AM	0.000	0.000	-3.50	1.97	1,933	1,007	3.99	1
2/4/12 7:15:00 AM	2.205	0.000	-3.51	2.00	1,941	1,007	3.99	1
2/4/12 7:20:00 AM	1.403	0.000	-3.82	2.00	1,948	1,006	4.00	1
2/4/12 7:25:00 AM	0.932	0.000	-4.01	2.05	1,948	1,004	3.98	1
2/4/12 7:30:00 AM	0.000	0.000	-3.93	2.05	1,947	1,003	3.95	1

2/4/12 7:35:00 AM	0.000	0.000	-3.84	2.03	1,948	1,002	3.96	1
2/4/12 7:40:00 AM	0.000	0.000	-3.55	2.03	1,943	999	3.98	1
2/4/12 7:45:00 AM	0.000	0.000	-3.45	2.03	1,943	996	3.99	1
2/4/12 7:50:00 AM	0.000	0.000	-3.71	2.00	1,941	992	3.99	1
2/4/12 7:55:00 AM	0.000	0.000	-3.78	2.02	1,939	990	3.99	1
2/4/12 8:00:00 AM	0.099	0.000	-4.02	2.02	1,935	989	3.99	1
2/4/12 8:05:00 AM	0.000	0.000	-3.93	1.95	1,926	989	3.99	1
2/4/12 8:10:00 AM	0.000	0.000	-4.02	1.95	1,915	988	3.99	1
2/4/12 8:15:00 AM	0.247	0.000	-3.88	1.83	1,909	988	4.00	1
2/4/12 8:20:00 AM	0.000	0.000	-3.91	1.78	1,909	988	4.00	1
2/4/12 8:25:00 AM	0.000	0.000	-3.84	1.78	1,910	988	3.99	1
2/4/12 8:30:00 AM	0.000	0.000	-3.61	2.47	1,916	988	4.00	1
2/4/12 8:35:00 AM	0.000	0.000	-3.80	2.55	1,913	989	4.00	1
2/4/12 8:40:00 AM	0.000	0.000	-3.98	2.55	1,913	1,001	3.99	1
2/4/12 8:45:00 AM	0.000	0.000	-3.94	2.57	1,915	1,010	4.01	1
2/4/12 8:50:00 AM	0.748	0.000	-4.00	2.68	1,913	1,021	3.98	1
2/4/12 8:55:00 AM	0.000	0.000	-4.03	2.68	1,914	1,030	3.98	1
2/4/12 9:00:00 AM	0.000	0.000	-4.05	2.68	1,913	1,039	3.99	1
2/4/12 9:05:00 AM	0.000	0.000	-3.87	2.72	1,911	1,049	4.00	1
2/4/12 9:10:00 AM	0.000	0.000	-3.27	2.73	1,909	1,060	3.98	1
2/4/12 9:15:00 AM	0.000	0.000	-3.47	2.77	1,905	1,083	3.97	1
2/4/12 9:20:00 AM	0.000	0.000	-3.53	2.82	1,899	1,112	3.97	1
2/4/12 9:25:00 AM	0.000	0.000	-2.85	2.82	1,891	1,144	3.99	1
2/4/12 9:30:00 AM	0.000	0.000	-3.07	2.83	1,888	1,179	3.98	1
2/4/12 9:35:00 AM	0.000	0.000	-3.63	2.23	1,888	1,224	3.98	1
2/4/12 9:40:00 AM	0.000	0.000	-3.05	2.25	1,889	1,259	3.99	1
2/4/12 9:45:00 AM	0.000	0.000	-3.46	2.32	1,887	1,289	3.96	1
2/4/12 9:50:00 AM	0.000	0.000	-3.83	2.32	1,888	1,321	3.97	1
2/4/12 9:55:00 AM	0.000	0.000	-3.94	2.28	1,889	1,354	4.00	1
2/4/12 10:00:00 AM	0.648	0.000	-3.62	2.33	1,889	1,387	3.97	1
2/4/12 10:05:00 AM	0.000	0.000	-3.64	2.35	1,889	1,422	3.97	0
2/4/12 10:10:00 AM	0.000	0.000	-3.29	2.35	1,889	1,457	3.99	1
2/4/12 10:15:00 AM	0.496	0.000	-3.35	2.42	1,884	1,475	4.00	1
2/4/12 10:20:00 AM	1.507	0.000	-2.93	2.43	1,878	1,492	3.99	1
2/4/12 10:25:00 AM	1.691	0.000	-2.57	2.40	1,877	1,508	3.97	1
2/4/12 10:30:00 AM	1.193	0.000	-2.47	2.42	1,879	1,521	3.99	1
2/4/12 10:35:00 AM	0.000	0.000	-2.46	2.38	1,882	1,524	3.97	1
2/4/12 10:40:00 AM	0.000	0.000	-2.36	2.35	1,885	1,526	3.97	1
2/4/12 10:45:00 AM	0.000	0.000	-2.86	2.35	1,889	1,528	4.00	1
2/4/12 10:50:00 AM	0.313	0.000	-2.63	2.30	1,884	1,530	3.97	1

2/4/12 10:55:00 AM	1.111	0.000	-1.75	2.22	1,882	1,533	3.97	1
2/4/12 11:00:00 AM	1.467	0.000	-1.51	2.22	1,879	1,536	4.00	1
2/4/12 11:05:00 AM	0.000	0.000	-1.46	2.17	1,877	1,535	4.00	1
2/4/12 11:10:00 AM	0.000	0.000	-1.60	2.10	1,877	1,534	4.01	1
2/4/12 11:15:00 AM	0.000	0.000	-0.97	2.10	1,877	1,533	4.00	0
2/4/12 11:20:00 AM	0.000	0.000	-1.44	6.20	1,876	1,532	4.00	0
2/4/12 11:25:00 AM	0.000	0.000	-1.31	6.23	1,871	1,532	4.01	0
2/4/12 11:30:00 AM	0.000	0.000	-1.46	6.23	1,868	1,531	4.00	0
2/4/12 11:35:00 AM	0.000	0.000	-1.76	32.52	1,860	1,530	4.01	0
2/4/12 11:40:00 AM	0.000	0.000	-3.44	32.68	1,851	1,528	3.99	1
2/4/12 11:45:00 AM	0.000	0.000	-2.95	32.68	1,847	1,526	3.99	0
2/4/12 11:50:00 AM	0.000	0.000	-2.94	32.75	1,847	1,522	4.00	0
2/4/12 11:55:00 AM	0.000	0.000	-2.88	32.78	1,848	1,519	4.00	1
2/4/12 12:00:00 PM	0.000	0.000	-2.98	32.75	1,852	1,514	4.00	1
2/4/12 12:05:00 PM	0.000	0.000	-3.88	32.78	1,857	1,510	4.01	1
2/4/12 12:10:00 PM	0.000	0.000	-2.40	32.78	1,859	1,506	3.98	1
2/4/12 12:15:00 PM	0.000	0.000	-2.46	32.77	1,859	1,504	3.97	1
2/4/12 12:20:00 PM	0.000	0.000	-2.78	33.07	1,863	1,501	3.98	1
2/4/12 12:25:00 PM	0.000	0.000	-3.29	34.33	1,870	1,497	3.96	1
2/4/12 12:30:00 PM	0.000	0.000	-3.35	34.35	1,878	1,494	3.97	1
2/4/12 12:35:00 PM	0.000	0.000	-3.64	34.35	1,881	1,492	3.97	1
2/4/12 12:40:00 PM	3.683	0.000	-3.51	7.97	1,887	1,490	3.98	1
2/4/12 12:45:00 PM	5.631	0.000	-3.47	7.85	1,895	1,490	3.98	1
2/4/12 12:50:00 PM	5.448	0.000	-3.00	7.85	1,903	1,490	3.98	1
2/4/12 12:55:00 PM	5.214	0.000	-2.98	7.80	1,910	1,491	3.98	1
2/4/12 1:00:00 PM	5.202	0.000	-3.17	7.88	1,913	1,492	3.97	1
2/4/12 1:05:00 PM	5.603	0.000	-3.28	7.87	1,919	1,494	3.96	1
2/4/12 1:10:00 PM	5.392	0.000	-3.57	7.98	1,920	1,496	3.97	1
2/4/12 1:15:00 PM	5.535	0.000	-3.71	8.03	1,928	1,497	4.00	1
2/4/12 1:20:00 PM	4.751	0.000	-3.87	8.03	1,931	1,498	4.00	1
2/4/12 1:25:00 PM	0.000	0.000	-3.91	3.52	1,932	1,498	4.00	1
2/4/12 1:30:00 PM	0.000	0.000	-3.93	2.37	1,936	1,498	3.99	1
2/4/12 1:35:00 PM	0.930	0.000	-3.78	2.42	1,936	1,499	4.00	1
2/4/12 1:40:00 PM	0.864	0.000	-3.70	2.52	1,938	1,499	4.00	1
2/4/12 1:45:00 PM	1.766	0.000	-3.67	2.52	1,937	1,499	4.00	1
2/4/12 1:50:00 PM	2.818	0.000	-3.51	2.50	1,937	1,499	4.01	1
2/4/12 1:55:00 PM	2.081	0.000	-4.61	2.55	1,936	1,499	4.00	1
2/4/12 2:00:00 PM	2.250	0.000	-4.50	2.52	1,934	1,499	4.00	1
2/4/12 2:05:00 PM	1.875	0.000	-4.50	2.50	1,934	1,500	4.01	1
2/4/12 2:10:00 PM	1.324	0.000	-4.64	2.55	1,931	1,500	4.00	1

2/4/12 2:15:00 PM	2.663	0.000	-4.58	2.50	1,929	1,500	3.99	1
2/4/12 2:20:00 PM	1.856	0.000	-4.66	2.57	1,932	1,501	3.98	1
2/4/12 2:25:00 PM	1.400	0.000	-4.70	2.57	1,931	1,500	3.99	1
2/4/12 2:30:00 PM	1.824	0.000	-4.47	2.57	1,931	1,495	3.99	1
2/4/12 2:35:00 PM	1.132	0.000	-4.48	2.62	1,935	1,494	4.01	1
2/4/12 2:40:00 PM	1.456	0.000	-4.41	2.62	1,934	1,494	4.01	1
2/4/12 2:45:00 PM	0.000	0.000	-4.46	2.67	1,937	1,495	4.00	0
2/4/12 2:50:00 PM	0.000	0.000	-4.46	2.72	1,945	1,495	3.98	1
2/4/12 2:55:00 PM	0.000	0.000	-4.75	2.68	1,945	1,496	3.98	1
2/4/12 3:00:00 PM	0.438	0.000	-4.54	2.75	1,947	1,496	4.00	1
2/4/12 3:05:00 PM	0.000	0.000	-4.19	2.77	1,946	1,495	3.99	1
2/4/12 3:10:00 PM	0.000	0.000	-3.83	2.78	1,947	1,495	3.98	0
2/4/12 3:15:00 PM	0.000	0.000	-4.23	383.60	1,951	1,494	3.98	0
2/4/12 3:20:00 PM	0.000	0.000	-4.36	387.38	1,955	1,493	4.01	0
2/4/12 3:25:00 PM	0.000	0.000	-4.77	387.85	1,963	1,492	4.03	0
2/4/12 3:30:00 PM	0.000	0.000	-4.61	388.02	1,961	1,493	4.00	0
2/4/12 3:35:00 PM	0.000	0.000	-4.83	388.07	1,962	1,500	3.98	0
2/4/12 3:40:00 PM	0.000	0.000	-4.27	409.53	1,954	1,499	3.97	0
2/4/12 3:45:00 PM	0.000	0.000	-4.96	409.67	1,945	1,498	3.97	0
2/4/12 3:50:00 PM	0.000	0.000	-4.91	409.67	1,940	1,496	3.99	0
2/4/12 3:55:00 PM	0.000	0.000	-4.76	409.72	1,936	1,495	4.01	0
2/4/12 4:00:00 PM	0.000	0.000	-4.76	409.72	1,933	1,493	4.02	0
2/4/12 4:05:00 PM	0.000	0.000	-4.66	409.70	1,929	1,491	4.04	0
2/4/12 4:10:00 PM	0.000	0.000	-4.57	409.72	1,923	1,488	4.10	0
2/4/12 4:15:00 PM	0.000	0.000	-4.31	409.65	1,914	1,488	4.15	0
2/4/12 4:20:00 PM	0.000	0.000	-4.58	28.83	1,896	1,488	4.16	1
2/4/12 4:25:00 PM	0.000	0.000	-4.62	25.03	1,887	1,486	4.11	1
2/4/12 4:30:00 PM	0.000	0.000	-4.76	24.60	1,883	1,486	4.05	1
2/4/12 4:35:00 PM	0.442	0.000	-4.67	24.37	1,873	1,486	4.02	1
2/4/12 4:40:00 PM	2.588	0.000	-4.40	24.25	1,872	1,486	4.03	1
2/4/12 4:45:00 PM	2.285	0.000	-4.23	2.82	1,874	1,488	4.02	1
2/4/12 4:50:00 PM	2.048	0.000	-4.10	2.62	1,874	1,488	4.01	1
2/4/12 4:55:00 PM	0.726	0.000	-3.62	2.62	1,875	1,489	4.01	1
2/4/12 5:00:00 PM	2.300	0.000	-4.18	2.62	1,876	1,490	3.98	1
2/4/12 5:05:00 PM	2.749	0.000	-4.29	2.55	1,879	1,492	3.93	1
2/4/12 5:10:00 PM	0.349	0.000	-3.99	2.52	1,885	1,494	3.88	1
2/4/12 5:15:00 PM	0.685	0.000	-4.24	2.47	1,892	1,493	3.83	1
2/4/12 5:20:00 PM	0.000	0.000	-4.19	2.40	1,898	1,490	3.82	1
2/4/12 5:25:00 PM	0.000	0.000	-4.52	2.33	1,904	1,487	3.82	1
2/4/12 5:30:00 PM	0.000	0.000	-4.30	2.27	1,909	1,487	3.88	1

2/4/12 5:35:00 PM	0.000	0.000	-4.06	2.22	1,914	1,488	3.96	1
2/4/12 5:40:00 PM	0.000	0.000	-3.82	2.18	1,919	1,488	3.98	1
2/4/12 5:45:00 PM	1.025	0.000	-4.01	2.10	1,923	1,488	3.98	1
2/4/12 5:50:00 PM	1.957	0.000	-4.09	2.05	1,929	1,488	3.99	1
2/4/12 5:55:00 PM	0.955	0.000	-4.27	2.03	1,932	1,488	4.00	1
2/4/12 6:00:00 PM	1.597	0.000	-4.15	1.95	1,930	1,488	3.99	1
2/4/12 6:05:00 PM	0.256	0.000	-4.06	1.88	1,928	1,488	3.99	1
2/4/12 6:10:00 PM	0.983	0.000	-3.51	1.88	1,925	1,489	4.00	1
2/4/12 6:15:00 PM	0.889	0.000	-3.97	1.85	1,925	1,489	4.00	1
2/4/12 6:20:00 PM	0.770	0.000	-4.15	1.80	1,926	1,492	4.00	1
2/4/12 6:25:00 PM	1.307	0.000	-4.00	1.83	1,927	1,491	4.00	1
2/4/12 6:30:00 PM	0.978	0.000	-4.02	1.83	1,929	1,489	4.00	1
2/4/12 6:35:00 PM	1.222	0.000	-3.75	1.82	1,931	1,490	3.97	1
2/4/12 6:40:00 PM	0.000	0.000	-3.68	1.82	1,933	1,489	3.97	1
2/4/12 6:45:00 PM	0.000	0.000	-3.91	1.82	1,933	1,489	3.99	1
2/4/12 6:50:00 PM	0.000	0.000	-3.89	1.85	1,933	1,489	4.00	1
2/4/12 6:55:00 PM	0.597	0.000	-4.04	1.93	1,937	1,489	4.00	1
2/4/12 7:00:00 PM	2.398	0.000	-3.67	2.00	1,937	1,489	3.99	1
2/4/12 7:05:00 PM	1.856	0.000	-3.66	2.00	1,938	1,488	3.99	1
2/4/12 7:10:00 PM	1.429	0.000	-3.61	2.05	1,941	1,488	4.00	1
2/4/12 7:15:00 PM	0.194	0.000	-3.44	2.13	1,941	1,487	3.99	1
2/4/12 7:20:00 PM	1.314	0.000	-3.91	2.13	1,945	1,488	4.00	1
2/4/12 7:25:00 PM	1.809	0.000	-3.83	2.15	1,946	1,490	4.00	1
2/4/12 7:30:00 PM	0.486	0.000	-3.81	2.27	1,948	1,493	4.00	1
2/4/12 7:35:00 PM	1.305	0.000	-3.88	2.27	1,951	1,496	4.01	1
2/4/12 7:40:00 PM	1.114	0.000	-3.83	2.30	1,951	1,495	4.00	1
2/4/12 7:45:00 PM	1.520	0.000	-3.85	2.37	1,951	1,495	3.99	1
2/4/12 7:50:00 PM	0.897	0.000	-4.22	2.40	1,950	1,495	3.98	1
2/4/12 7:55:00 PM	1.341	0.000	-4.06	2.35	1,947	1,494	3.97	1
2/4/12 8:00:00 PM	1.055	0.000	-4.28	2.33	1,946	1,494	3.98	1
2/4/12 8:05:00 PM	0.290	0.000	-4.05	2.42	1,941	1,494	3.97	1
2/4/12 8:10:00 PM	1.373	0.000	-4.07	2.42	1,941	1,494	3.97	1
2/4/12 8:15:00 PM	1.015	0.000	-4.22	2.37	1,941	1,494	3.99	1
2/4/12 8:20:00 PM	1.245	0.000	-4.20	2.35	1,937	1,493	3.99	1
2/4/12 8:25:00 PM	0.026	0.000	-3.92	2.35	1,936	1,493	3.99	1
2/4/12 8:30:00 PM	0.872	0.000	-4.32	2.35	1,932	1,494	4.00	1
2/4/12 8:35:00 PM	1.931	0.000	-4.30	2.22	1,932	1,494	3.99	1
2/4/12 8:40:00 PM	0.000	0.000	-4.38	2.22	1,928	1,494	4.00	1
2/4/12 8:45:00 PM	0.000	0.000	-4.11	2.15	1,921	1,493	4.01	1
2/4/12 8:50:00 PM	0.000	0.000	-4.34	2.12	1,921	1,493	4.00	1

2/4/12 8:55:00 PM	0.000	0.000	-4.40	2.10	1,923	1,493	4.00	1
2/4/12 9:00:00 PM	0.000	0.000	-4.32	2.05	1,921	1,491	3.99	1
2/4/12 9:05:00 PM	0.000	0.000	-4.39	1.98	1,922	1,489	3.99	1
2/4/12 9:10:00 PM	0.000	0.000	-4.42	1.90	1,925	1,488	3.99	1
2/4/12 9:15:00 PM	0.000	0.000	-4.11	1.90	1,922	1,487	4.01	1
2/4/12 9:20:00 PM	0.000	0.000	-4.08	1.83	1,922	1,487	4.02	1
2/4/12 9:25:00 PM	0.000	0.000	-3.82	1.78	1,928	1,488	4.02	1
2/4/12 9:30:00 PM	0.000	0.000	-3.73	1.63	1,930	1,489	4.02	1
2/4/12 9:35:00 PM	0.000	0.000	-3.30	1.63	1,933	1,490	4.02	1
2/4/12 9:40:00 PM	0.000	0.000	-3.05	1.58	1,940	1,491	4.03	1
2/4/12 9:45:00 PM	0.000	0.000	-3.35	1.52	1,949	1,491	4.03	1
2/4/12 9:50:00 PM	0.000	0.000	-3.09	1.62	1,961	1,492	4.01	1
2/4/12 9:55:00 PM	0.000	0.000	-3.19	1.60	1,971	1,493	4.01	1
2/4/12 10:00:00 PM	0.000	0.000	-3.54	1.55	1,979	1,493	4.03	1
2/4/12 10:05:00 PM	0.000	0.000	-3.39	1.53	1,975	1,496	4.02	1
2/4/12 10:10:00 PM	0.000	0.000	-3.59	1.45	1,975	1,497	4.02	1
2/4/12 10:15:00 PM	0.000	0.000	-4.13	1.37	1,975	1,498	3.98	1
2/4/12 10:20:00 PM	0.000	0.000	-3.36	1.95	1,975	1,494	3.98	1
2/4/12 10:25:00 PM	0.000	0.000	-3.68	4.45	1,976	1,493	4.01	1
2/4/12 10:30:00 PM	0.000	0.000	-4.34	4.48	1,972	1,493	3.99	1
2/4/12 10:35:00 PM	0.000	0.000	-4.11	4.50	1,965	1,493	3.99	1
2/4/12 10:40:00 PM	0.000	0.000	-3.97	4.50	1,962	1,493	3.99	1
2/4/12 10:45:00 PM	0.000	0.000	-3.85	4.50	1,952	1,494	3.98	1
2/4/12 10:50:00 PM	0.000	0.000	-4.01	246.07	1,944	1,493	3.98	0
2/4/12 10:55:00 PM	0.000	0.000	-4.31	251.28	1,933	1,493	4.00	0
2/4/12 11:00:00 PM	0.000	0.000	-4.60	251.75	1,930	1,493	4.03	0
2/4/12 11:05:00 PM	0.000	0.000	-4.61	251.88	1,930	1,493	4.04	0
2/4/12 11:10:00 PM	0.000	0.000	-4.49	251.97	1,930	1,493	4.04	0
2/4/12 11:15:00 PM	0.000	0.000	-4.67	251.97	1,930	1,493	4.04	0
2/4/12 11:20:00 PM	0.000	0.000	-4.36	251.95	1,930	1,493	4.04	0
2/4/12 11:25:00 PM	0.000	0.000	-4.63	251.33	1,930	1,493	4.04	0
2/4/12 11:30:00 PM	0.000	0.000	-4.38	248.82	1,930	1,493	4.04	0
2/4/12 11:35:00 PM	0.000	0.000	-4.35	248.77	1,930	1,493	4.04	0
2/4/12 11:40:00 PM	0.000	0.000	-4.35	248.70	1,930	1,493	4.04	0
2/4/12 11:45:00 PM	0.000	0.000	-4.35	248.70	1,930	1,493	4.04	0
2/4/12 11:50:00 PM	0.000	0.000	-4.88	248.70	1,930	1,493	4.04	0
2/4/12 11:55:00 PM	0.000	0.000	-4.65	6.87	1,923	1,489	4.04	0
2/4/12 12:00:00 AM	0.000	0.000	-5.24	2.42	1,936	903	4.01	1
2/5/12 12:05:00 AM	0.000	0.000	-5.00	1.08	1,907	1,482	4.22	1
2/5/12 12:10:00 AM	0.116	0.000	-4.90	0.97	1,902	1,482	4.30	1

2/5/12 12:15:00 AM	4.619	0.000	-4.80	0.90	1,890	1,488	4.35	1
2/5/12 12:20:00 AM	4.831	0.000	-4.82	0.88	1,879	1,491	4.30	1
2/5/12 12:25:00 AM	4.900	0.000	-4.72	0.90	1,875	1,492	4.24	1
2/5/12 12:30:00 AM	4.946	0.000	-4.57	0.97	1,869	1,493	4.24	1
2/5/12 12:35:00 AM	4.928	0.000	-3.84	1.05	1,861	1,494	4.24	1
2/5/12 12:40:00 AM	4.926	0.000	-4.13	1.10	1,859	1,495	4.24	1
2/5/12 12:45:00 AM	4.921	0.000	-4.38	1.10	1,854	1,492	4.26	1
2/5/12 12:50:00 AM	4.917	0.000	-4.61	1.03	1,854	1,489	4.22	1
2/5/12 12:55:00 AM	4.931	0.000	-4.49	1.05	1,862	1,489	4.15	1
2/5/12 1:00:00 AM	4.934	0.000	-4.79	1.12	1,872	1,490	4.04	1
2/5/12 1:05:00 AM	4.942	0.000	-4.48	1.10	1,878	1,492	3.96	1
2/5/12 1:10:00 AM	4.970	0.000	-4.38	1.07	1,883	1,496	3.88	1
2/5/12 1:15:00 AM	4.992	0.000	-4.56	1.07	1,893	1,496	3.87	1
2/5/12 1:20:00 AM	4.995	0.000	-3.94	35.98	1,897	1,496	3.89	1
2/5/12 1:25:00 AM	5.012	0.000	-4.46	36.47	1,902	1,497	3.93	1
2/5/12 1:30:00 AM	5.021	0.000	-4.62	36.50	1,910	1,497	3.96	1
2/5/12 1:35:00 AM	5.031	0.000	-4.61	36.50	1,915	1,496	3.96	1
2/5/12 1:40:00 AM	5.035	0.000	-4.63	36.50	1,919	1,496	3.97	1
2/5/12 1:45:00 AM	5.044	0.000	-4.59	36.52	1,924	1,496	3.99	1
2/5/12 1:50:00 AM	5.043	0.000	-4.57	36.55	1,929	1,499	3.99	1
2/5/12 1:55:00 AM	5.043	0.000	-4.67	36.57	1,932	1,499	3.97	1
2/5/12 2:00:00 AM	5.047	0.000	-4.67	36.63	1,933	1,499	3.98	1
2/5/12 2:05:00 AM	4.991	0.000	-4.69	36.70	1,939	1,497	4.00	1
2/5/12 2:10:00 AM	5.014	0.000	-4.53	36.70	1,947	1,495	3.98	1
2/5/12 2:15:00 AM	5.073	0.000	-4.48	36.68	1,947	1,495	3.98	1
2/5/12 2:20:00 AM	5.078	0.000	-4.45	36.68	1,952	1,495	3.99	1
2/5/12 2:25:00 AM	5.070	0.000	-4.46	2.03	1,959	1,495	4.00	1
2/5/12 2:30:00 AM	5.066	0.000	-4.66	1.33	1,959	1,494	4.01	1
2/5/12 2:35:00 AM	5.088	0.000	-4.77	1.22	1,960	1,494	4.02	1
2/5/12 2:40:00 AM	5.081	0.000	-4.50	1.17	1,961	1,494	3.99	1
2/5/12 2:45:00 AM	5.080	0.000	-4.38	1.17	1,960	1,494	3.99	1
2/5/12 2:50:00 AM	5.091	0.000	-4.06	1.17	1,960	1,494	3.98	1
2/5/12 2:55:00 AM	5.072	0.000	-3.95	1.15	1,966	1,497	4.00	1
2/5/12 3:00:00 AM	5.085	0.000	-4.09	1.13	1,975	1,497	3.98	1
2/5/12 3:05:00 AM	5.070	0.000	-3.89	1.12	1,983	1,496	3.98	1
2/5/12 3:10:00 AM	5.080	0.000	-4.04	1.20	1,991	1,495	3.98	1
2/5/12 3:15:00 AM	5.058	0.000	-3.94	1.20	2,000	1,494	3.99	1
2/5/12 3:20:00 AM	5.070	0.000	-4.30	1.20	2,006	1,494	3.98	1
2/5/12 3:25:00 AM	5.060	0.000	-4.36	1.20	2,008	1,494	3.98	1
2/5/12 3:30:00 AM	5.053	0.000	-4.60	1.20	2,008	1,494	3.96	1

2/5/12 3:35:00 AM	5.069	0.000	-4.66	1.20	2,008	1,494	3.96	1
2/5/12 3:40:00 AM	5.091	0.000	-4.61	1.20	2,010	1,494	3.99	1
2/5/12 3:45:00 AM	5.112	0.000	-4.36	1.20	2,013	1,494	3.99	1
2/5/12 3:50:00 AM	5.117	0.000	-4.59	1.20	2,008	1,492	4.01	1
2/5/12 3:55:00 AM	5.126	0.000	-4.42	1.20	1,998	1,491	3.98	1
2/5/12 4:00:00 AM	5.138	0.000	-4.78	1.20	1,980	1,491	3.99	1
2/5/12 4:05:00 AM	5.143	0.000	-4.39	1.18	1,969	1,490	3.98	1
2/5/12 4:10:00 AM	5.143	0.000	-4.29	1.13	1,961	1,492	3.98	1
2/5/12 4:15:00 AM	5.145	0.000	-4.27	1.05	1,957	1,495	3.99	1
2/5/12 4:20:00 AM	5.143	0.000	-3.95	1.03	1,957	1,497	4.01	1
2/5/12 4:25:00 AM	5.123	0.000	-3.98	1.03	1,958	1,496	4.00	1
2/5/12 4:30:00 AM	5.123	0.000	-4.01	1.08	1,961	1,496	4.01	1
2/5/12 4:35:00 AM	5.142	0.000	-3.99	1.12	1,969	1,495	4.02	1
2/5/12 4:40:00 AM	5.154	0.000	-3.90	1.12	1,980	1,492	4.00	1
2/5/12 4:45:00 AM	5.151	0.000	-4.29	1.12	1,989	1,489	4.00	1
2/5/12 4:50:00 AM	5.166	0.000	-4.09	1.12	1,994	1,488	3.99	1
2/5/12 4:55:00 AM	5.163	0.000	-4.20	1.13	2,001	1,488	3.99	1
2/5/12 5:00:00 AM	5.158	0.000	-3.65	1.13	2,010	1,488	3.98	1
2/5/12 5:05:00 AM	5.178	0.000	-4.51	1.13	2,025	1,489	3.98	1
2/5/12 5:10:00 AM	5.161	0.000	-4.58	1.12	2,031	1,492	4.00	1
2/5/12 5:15:00 AM	5.198	0.000	-4.95	1.13	2,023	1,492	4.00	1
2/5/12 5:20:00 AM	5.203	0.000	-5.01	1.15	2,014	1,492	4.00	1
2/5/12 5:25:00 AM	5.226	0.000	-5.16	1.17	2,007	1,492	4.01	1
2/5/12 5:30:00 AM	5.231	0.000	-4.86	1.18	1,995	1,492	3.99	1
2/5/12 5:35:00 AM	5.234	0.000	-4.97	1.15	1,986	1,492	3.98	1
2/5/12 5:40:00 AM	5.242	0.000	-5.15	1.15	1,971	1,492	3.98	1
2/5/12 5:45:00 AM	5.232	0.000	-5.14	1.22	1,960	1,492	3.97	1
2/5/12 5:50:00 AM	5.251	0.000	-5.19	1.28	1,951	1,492	3.96	1
2/5/12 5:55:00 AM	5.227	0.000	-4.42	1.33	1,938	1,492	3.96	1
2/5/12 6:00:00 AM	5.229	0.000	-4.36	1.43	1,933	1,493	3.98	1
2/5/12 6:05:00 AM	5.211	0.000	-4.52	1.47	1,932	1,498	4.00	1
2/5/12 6:10:00 AM	5.161	0.000	-4.58	1.52	1,932	1,500	4.01	1
2/5/12 6:15:00 AM	5.161	0.000	-4.44	1.57	1,936	1,500	3.99	1
2/5/12 6:20:00 AM	5.164	0.000	-4.41	1.62	1,945	1,500	3.99	1
2/5/12 6:25:00 AM	5.173	0.000	-4.39	1.68	1,954	1,501	3.97	1
2/5/12 6:30:00 AM	5.194	0.000	-4.42	1.68	1,962	1,499	3.97	1
2/5/12 6:35:00 AM	5.140	0.000	-4.46	1.68	1,975	1,498	4.03	1
2/5/12 6:40:00 AM	5.198	0.000	-4.20	1.77	1,986	1,498	3.98	1
2/5/12 6:45:00 AM	5.198	0.000	-4.17	1.80	2,003	1,499	3.98	1
2/5/12 6:50:00 AM	5.206	0.000	-3.80	1.78	2,019	1,502	4.03	1

2/5/12 6:55:00 AM	5.197	0.000	-4.19	1.75	2,031	1,508	4.01	1
2/5/12 7:00:00 AM	5.209	0.000	-4.57	1.67	2,042	1,514	3.98	1
2/5/12 7:05:00 AM	5.175	0.000	-4.52	1.67	2,042	1,517	3.99	1
2/5/12 7:10:00 AM	5.187	0.000	-4.55	1.68	2,040	1,519	3.98	1
2/5/12 7:15:00 AM	5.155	0.000	-4.94	1.67	2,034	1,521	3.99	1
2/5/12 7:20:00 AM	5.167	0.000	-4.93	1.67	2,024	1,524	4.00	1
2/5/12 7:25:00 AM	5.120	0.000	-4.63	1.70	2,015	1,526	4.00	1
2/5/12 7:30:00 AM	5.131	0.000	-4.45	1.75	2,013	1,527	3.99	1
2/5/12 7:35:00 AM	5.137	0.000	-4.17	1.78	2,013	1,529	3.97	1
2/5/12 7:40:00 AM	5.129	0.000	-4.10	1.78	2,014	1,532	3.97	1
2/5/12 7:45:00 AM	5.152	0.000	-3.66	1.80	2,015	1,535	3.98	1
2/5/12 7:50:00 AM	5.168	0.000	-4.31	1.80	2,014	1,540	3.97	1
2/5/12 7:55:00 AM	5.129	0.000	-4.71	1.87	2,013	1,538	3.98	1
2/5/12 8:00:00 AM	0.000	0.000	-4.64	1.87	2,010	1,524	3.98	1
2/5/12 8:05:00 AM	0.323	0.000	-4.69	1.85	2,010	1,501	3.96	1
2/5/12 8:10:00 AM	5.400	0.000	-4.79	1.83	2,010	1,478	3.96	1
2/5/12 8:15:00 AM	4.520	0.000	-4.83	1.85	2,014	1,455	3.97	1
2/5/12 8:20:00 AM	5.107	0.000	-4.75	1.85	2,019	1,434	3.96	1
2/5/12 8:25:00 AM	5.059	0.000	-4.88	1.78	2,028	1,415	3.95	1
2/5/12 8:30:00 AM	5.129	0.000	-4.89	1.68	2,032	1,402	3.96	1
2/5/12 8:35:00 AM	5.072	0.000	-4.75	1.62	2,026	1,388	3.98	1
2/5/12 8:40:00 AM	5.160	0.000	-4.62	1.53	2,018	1,374	3.95	1
2/5/12 8:45:00 AM	5.188	0.000	-3.92	1.50	2,008	1,358	3.96	1
2/5/12 8:50:00 AM	0.000	0.000	-3.95	1.47	2,002	1,335	3.97	1
2/5/12 8:55:00 AM	0.677	0.000	-4.30	1.47	2,002	1,304	4.00	1
2/5/12 9:00:00 AM	4.777	0.000	-4.25	1.47	2,006	1,281	4.00	1
2/5/12 9:05:00 AM	4.629	0.000	-4.65	1.52	2,014	1,273	4.00	1
2/5/12 9:10:00 AM	5.050	0.000	-4.79	1.52	2,021	1,267	4.00	1
2/5/12 9:15:00 AM	5.029	0.000	-5.14	1.43	2,022	1,260	3.99	1
2/5/12 9:20:00 AM	0.000	0.000	-5.24	1.40	2,018	1,253	3.99	1
2/5/12 9:25:00 AM	0.778	0.000	-5.23	1.47	2,013	1,253	4.01	1
2/5/12 9:30:00 AM	0.673	0.000	-5.21	1.53	2,007	1,261	4.00	1
2/5/12 9:35:00 AM	0.865	0.000	-5.24	1.62	2,001	1,275	3.98	1
2/5/12 9:40:00 AM	1.265	0.000	-5.22	1.65	1,995	1,287	3.99	1
2/5/12 9:45:00 AM	2.077	0.000	-5.23	1.72	1,988	1,300	4.00	1
2/5/12 9:50:00 AM	0.946	0.000	-4.80	1.72	1,980	1,314	3.97	1
2/5/12 9:55:00 AM	1.038	0.000	-4.85	1.80	1,972	1,329	3.97	1
2/5/12 10:00:00 AM	1.329	0.000	-4.68	1.80	1,967	1,360	3.98	1
2/5/12 10:05:00 AM	1.377	0.000	-4.58	1.80	1,965	1,389	3.99	1
2/5/12 10:10:00 AM	0.797	0.000	-4.46	1.87	1,964	1,416	3.98	1

2/5/12 10:15:00 AM	1.907	0.000	-4.33	2.02	1,965	1,436	3.97	1
2/5/12 10:20:00 AM	0.498	0.000	-4.20	2.17	1,971	1,461	3.96	1
2/5/12 10:25:00 AM	1.184	0.000	-4.18	2.23	1,987	1,487	3.97	1
2/5/12 10:30:00 AM	0.530	0.000	-4.19	2.23	2,006	1,498	4.01	1
2/5/12 10:35:00 AM	0.987	0.000	-4.41	2.25	2,024	1,499	4.01	1
2/5/12 10:40:00 AM	0.865	0.000	-4.28	2.30	2,040	1,499	3.98	1
2/5/12 10:45:00 AM	0.507	0.000	-4.28	2.37	2,058	1,499	3.98	1
2/5/12 10:50:00 AM	0.593	0.000	-4.31	2.42	2,076	1,499	4.00	1
2/5/12 10:55:00 AM	0.853	0.000	-4.32	2.43	2,096	1,498	4.01	1
2/5/12 11:00:00 AM	0.638	0.000	-4.29	2.40	2,114	1,497	4.00	1
2/5/12 11:05:00 AM	1.131	0.000	-4.31	2.45	2,124	1,497	3.99	1
2/5/12 11:10:00 AM	1.260	0.000	-4.53	2.47	2,127	1,489	4.00	1
2/5/12 11:15:00 AM	0.823	0.000	-4.96	2.48	2,133	1,476	4.03	1
2/5/12 11:20:00 AM	0.563	0.000	-5.12	2.47	2,131	1,463	4.01	1
2/5/12 11:25:00 AM	0.669	0.000	-5.18	2.40	2,123	1,450	3.96	1
2/5/12 11:30:00 AM	0.292	0.000	-5.19	2.47	2,118	1,437	3.96	1
2/5/12 11:35:00 AM	0.559	0.000	-5.22	2.53	2,114	1,420	4.00	1
2/5/12 11:40:00 AM	0.683	0.000	-4.99	2.57	2,103	1,403	4.03	1
2/5/12 11:45:00 AM	0.843	0.000	-5.20	2.57	2,088	1,388	4.00	1
2/5/12 11:50:00 AM	0.576	0.000	-5.16	2.58	2,073	1,373	3.99	1
2/5/12 11:55:00 AM	0.000	0.000	-5.24	2.68	2,050	1,358	3.99	0
2/5/12 12:00:00 PM	0.000	0.000	-4.32	3.58	2,022	1,344	4.00	0
2/5/12 12:05:00 PM	0.000	0.000	-3.90	20.05	1,992	1,336	4.01	0
2/5/12 12:10:00 PM	0.000	0.000	-4.20	30.08	1,976	1,334	4.01	0
2/5/12 12:15:00 PM	0.000	0.000	-5.00	30.12	1,955	1,337	3.98	1
2/5/12 12:20:00 PM	0.063	0.000	-5.08	30.10	1,940	1,349	3.98	1
2/5/12 12:25:00 PM	0.000	0.000	-5.11	30.10	1,927	1,361	3.98	1
2/5/12 12:30:00 PM	0.000	0.000	-5.05	30.05	1,912	1,374	3.99	1
2/5/12 12:35:00 PM	0.014	0.000	-4.28	29.90	1,904	1,389	4.02	1
2/5/12 12:40:00 PM	0.244	0.000	-4.86	29.73	1,896	1,406	3.98	1
2/5/12 12:45:00 PM	1.133	0.000	-4.88	29.57	1,891	1,424	3.98	1
2/5/12 12:50:00 PM	0.000	0.000	-4.79	29.43	1,884	1,437	4.00	1
2/5/12 12:55:00 PM	0.000	0.000	-4.31	29.27	1,884	1,451	4.01	1
2/5/12 1:00:00 PM	0.000	0.000	-4.21	29.07	1,890	1,466	3.99	1
2/5/12 1:05:00 PM	0.316	0.000	-4.26	28.08	1,899	1,484	3.98	1
2/5/12 1:10:00 PM	0.000	0.000	-4.24	11.50	1,920	1,496	3.99	1
2/5/12 1:15:00 PM	0.000	0.000	-4.09	1.38	1,928	1,504	4.00	1
2/5/12 1:20:00 PM	0.000	0.000	-4.10	1.22	1,939	1,509	4.01	1
2/5/12 1:25:00 PM	0.106	0.000	-4.12	1.17	1,952	1,512	4.02	1
2/5/12 1:30:00 PM	0.000	0.000	-4.13	1.25	1,970	1,510	3.98	1

2/5/12 1:35:00 PM	0.000	0.000	-4.56	1.25	1,989	1,504	3.96	1
2/5/12 1:40:00 PM	0.000	0.000	-4.28	1.28	2,003	1,499	3.98	1
2/5/12 1:45:00 PM	0.343	0.000	-3.99	2.85	2,016	1,499	4.00	1
2/5/12 1:50:00 PM	0.000	0.000	-3.90	2.87	2,037	1,501	3.97	1
2/5/12 1:55:00 PM	0.000	0.000	-4.32	2.82	2,053	1,504	3.97	1
2/5/12 2:00:00 PM	0.070	0.000	-4.33	2.73	2,059	1,504	4.00	1
2/5/12 2:05:00 PM	0.294	0.000	-4.16	2.65	2,071	1,502	4.01	1
2/5/12 2:10:00 PM	0.000	0.000	-4.74	2.60	2,079	1,498	3.97	1
2/5/12 2:15:00 PM	0.000	0.000	-4.78	2.50	2,080	1,493	3.97	1
2/5/12 2:20:00 PM	0.000	0.000	-4.96	2.45	2,072	1,488	4.00	1
2/5/12 2:25:00 PM	0.130	0.000	-4.35	2.42	2,060	1,487	4.00	1
2/5/12 2:30:00 PM	0.000	0.000	-4.08	2.35	2,052	1,487	4.00	1
2/5/12 2:35:00 PM	0.000	0.000	-3.99	2.28	2,046	1,491	4.00	1
2/5/12 2:40:00 PM	0.122	0.000	-4.03	2.27	2,040	1,499	3.99	1
2/5/12 2:45:00 PM	0.307	0.000	-4.58	2.25	2,022	1,504	3.99	1
2/5/12 2:50:00 PM	0.000	0.000	-4.83	0.77	2,005	1,506	4.00	1
2/5/12 2:55:00 PM	0.000	0.000	-4.70	0.73	1,996	1,507	4.00	1
2/5/12 3:00:00 PM	0.000	0.000	-4.58	0.82	1,985	1,507	3.99	1
2/5/12 3:05:00 PM	0.000	0.000	-4.75	0.88	1,971	1,508	3.99	1
2/5/12 3:10:00 PM	0.000	0.000	-4.93	0.87	1,961	1,508	3.99	1
2/5/12 3:15:00 PM	0.000	0.000	-4.46	0.85	1,952	1,507	4.00	1
2/5/12 3:20:00 PM	0.299	0.000	-4.58	0.82	1,946	1,509	3.98	1
2/5/12 3:25:00 PM	0.348	0.000	-4.72	0.73	1,945	1,513	3.98	1
2/5/12 3:30:00 PM	0.000	0.000	-4.41	0.70	1,946	1,515	3.98	1
2/5/12 3:35:00 PM	0.000	0.000	-4.18	0.67	1,947	1,513	3.98	1
2/5/12 3:40:00 PM	0.077	0.000	-4.09	0.68	1,947	1,511	3.99	1
2/5/12 3:45:00 PM	0.084	0.000	-4.02	0.77	1,952	1,508	4.01	1
2/5/12 3:50:00 PM	0.000	0.000	-4.04	0.85	1,965	1,506	3.99	1
2/5/12 3:55:00 PM	0.000	0.000	-4.00	0.88	1,982	1,505	3.99	1
2/5/12 4:00:00 PM	0.000	0.000	-3.84	0.97	1,996	1,502	4.00	1
2/5/12 4:05:00 PM	0.406	0.000	-3.95	1.07	2,013	1,501	4.03	1
2/5/12 4:10:00 PM	0.000	0.000	-4.02	1.22	2,029	1,499	4.02	1
2/5/12 4:15:00 PM	0.000	0.000	-4.06	1.33	2,046	1,498	4.02	1
2/5/12 4:20:00 PM	0.000	0.000	-4.01	1.50	2,063	1,497	4.03	1
2/5/12 4:25:00 PM	0.000	0.000	-3.91	1.60	2,081	1,496	4.01	1
2/5/12 4:30:00 PM	0.000	0.000	-4.32	1.68	2,094	1,495	4.01	1
2/5/12 4:35:00 PM	0.000	0.000	-4.28	1.70	2,101	1,495	4.03	1
2/5/12 4:40:00 PM	0.468	0.000	-4.49	1.72	2,104	1,495	3.99	1
2/5/12 4:45:00 PM	0.000	0.000	-4.38	1.68	2,103	1,494	3.98	1
2/5/12 4:50:00 PM	0.000	0.000	-4.29	1.55	2,101	1,493	3.99	1

2/5/12 4:55:00 PM	0.000	0.000	-4.43	1.42	2,100	1,491	4.00	1
2/5/12 5:00:00 PM	0.352	0.000	-4.30	1.35	2,097	1,491	3.96	1
2/5/12 5:05:00 PM	0.000	0.000	-4.29	1.27	2,094	1,490	3.95	1
2/5/12 5:10:00 PM	0.000	0.000	-4.31	1.18	2,091	1,490	3.97	1
2/5/12 5:15:00 PM	0.000	0.000	-4.42	1.13	2,087	1,489	3.99	1
2/5/12 5:20:00 PM	0.548	0.000	-4.44	1.12	2,079	1,490	3.96	1
2/5/12 5:25:00 PM	0.000	0.000	-4.53	1.03	2,068	1,490	3.96	1
2/5/12 5:30:00 PM	0.000	0.000	-4.28	1.00	2,061	1,490	3.97	1
2/5/12 5:35:00 PM	0.000	0.000	-4.58	0.98	2,052	1,489	3.95	1
2/5/12 5:40:00 PM	0.312	0.000	-4.81	0.98	2,042	1,488	3.96	1
2/5/12 5:45:00 PM	0.000	0.000	-4.90	1.10	2,031	1,488	4.00	1
2/5/12 5:50:00 PM	0.000	0.000	-5.17	1.18	2,019	1,487	4.01	1
2/5/12 5:55:00 PM	0.000	0.000	-4.99	1.18	2,004	1,486	4.01	1
2/5/12 6:00:00 PM	0.360	0.000	-5.01	1.25	1,991	1,487	4.00	1
2/5/12 6:05:00 PM	0.000	0.000	-4.82	1.25	1,977	1,491	4.00	1
2/5/12 6:10:00 PM	0.000	0.000	-4.61	1.27	1,962	1,496	3.99	1
2/5/12 6:15:00 PM	0.000	0.000	-4.46	1.27	1,949	1,501	3.99	1
2/5/12 6:20:00 PM	0.121	0.000	-4.85	1.27	1,939	1,504	3.98	1
2/5/12 6:25:00 PM	0.080	0.000	-4.70	1.25	1,934	1,505	3.98	1
2/5/12 6:30:00 PM	0.000	0.000	-4.22	1.17	1,934	1,504	3.99	1
2/5/12 6:35:00 PM	0.000	0.000	-3.45	1.05	1,936	1,503	4.00	1
2/5/12 6:40:00 PM	0.000	0.000	-3.26	0.98	1,942	1,501	3.98	1
2/5/12 6:45:00 PM	0.000	0.000	-3.70	0.90	1,946	1,493	3.97	1
2/5/12 6:50:00 PM	0.000	0.000	-4.41	0.85	1,948	1,476	3.98	1
2/5/12 6:55:00 PM	0.000	0.000	-4.53	0.85	1,948	1,456	4.02	1
2/5/12 7:00:00 PM	0.334	0.000	-4.67	0.85	1,947	1,435	4.03	1
2/5/12 7:05:00 PM	0.000	0.000	-4.54	0.87	1,945	1,407	4.01	1
2/5/12 7:10:00 PM	0.000	0.000	-5.24	0.90	1,945	1,380	4.00	1
2/5/12 7:15:00 PM	0.000	0.000	-4.94	0.95	1,944	1,364	4.03	1
2/5/12 7:20:00 PM	0.449	0.000	-4.82	1.03	1,944	1,354	4.04	1
2/5/12 7:25:00 PM	0.000	0.000	-5.04	1.17	1,945	1,348	4.01	1
2/5/12 7:30:00 PM	0.000	0.000	-4.99	1.27	1,940	1,342	4.01	1
2/5/12 7:35:00 PM	0.000	0.000	-4.62	1.35	1,931	1,337	4.02	1
2/5/12 7:40:00 PM	0.000	0.000	-4.55	1.45	1,924	1,331	4.00	1
2/5/12 7:45:00 PM	1.481	0.000	-4.61	1.53	1,917	1,329	4.00	1
2/5/12 7:50:00 PM	0.000	0.000	-4.60	1.57	1,915	1,331	4.00	1
2/5/12 7:55:00 PM	0.000	0.000	-4.67	1.60	1,917	1,342	3.96	1
2/5/12 8:00:00 PM	0.000	0.000	-4.53	1.60	1,917	1,354	3.96	1
2/5/12 8:05:00 PM	0.422	0.000	-4.51	1.65	1,918	1,368	3.99	1
2/5/12 8:10:00 PM	0.000	0.000	-4.53	1.65	1,923	1,384	4.00	1

2/5/12 8:15:00 PM	0.000	0.000	-4.50	1.67	1,926	1,399	3.95	1
2/5/12 8:20:00 PM	0.000	0.000	-4.49	1.62	1,934	1,402	3.95	1
2/5/12 8:25:00 PM	0.329	0.000	-4.42	1.55	1,934	1,401	4.01	1
2/5/12 8:30:00 PM	0.332	0.000	-4.51	1.47	1,937	1,401	3.98	1
2/5/12 8:35:00 PM	0.000	0.000	-4.35	1.43	1,940	1,401	3.96	1
2/5/12 8:40:00 PM	0.000	0.000	-4.29	1.38	1,945	1,400	3.96	1
2/5/12 8:45:00 PM	0.000	0.000	-4.48	1.37	1,949	1,400	4.03	1
2/5/12 8:50:00 PM	1.090	0.000	-4.18	1.28	1,957	1,399	4.00	1
2/5/12 8:55:00 PM	0.000	0.000	-4.12	1.27	1,962	1,397	3.98	1
2/5/12 9:00:00 PM	0.000	0.000	-4.13	1.23	1,971	1,395	4.00	1
2/5/12 9:05:00 PM	2.531	0.000	-4.08	1.20	1,976	1,393	4.01	1
2/5/12 9:10:00 PM	3.657	0.000	-3.94	1.15	1,985	1,393	4.00	1
2/5/12 9:15:00 PM	0.000	0.000	-4.47	1.08	1,980	1,395	3.97	1
2/5/12 9:20:00 PM	0.163	0.000	-4.57	1.03	1,977	1,399	3.96	1
2/5/12 9:25:00 PM	0.000	0.000	-4.44	0.97	1,975	1,403	3.94	1
2/5/12 9:30:00 PM	0.000	0.000	-4.77	0.95	1,969	1,405	3.95	1
2/5/12 9:35:00 PM	0.000	0.000	-5.03	0.87	1,964	1,404	4.02	1
2/5/12 9:40:00 PM	1.248	0.000	-4.99	0.83	1,960	1,403	4.01	1
2/5/12 9:45:00 PM	0.000	0.000	-4.84	0.78	1,956	1,402	3.94	1
2/5/12 9:50:00 PM	0.000	0.000	-4.33	0.78	1,957	1,401	3.94	1
2/5/12 9:55:00 PM	0.000	0.000	-4.43	0.72	1,949	1,403	3.99	1
2/5/12 10:00:00 PM	1.318	0.000	-4.65	0.67	1,948	1,406	3.95	1
2/5/12 10:05:00 PM	0.000	0.000	-4.54	0.63	1,942	1,410	3.95	1
2/5/12 10:10:00 PM	0.000	0.000	-4.24	0.60	1,941	1,410	3.96	1
2/5/12 10:15:00 PM	0.000	0.000	-4.25	0.53	1,942	1,407	3.98	1
2/5/12 10:20:00 PM	0.128	0.000	-4.42	0.50	1,945	1,401	4.01	1
2/5/12 10:25:00 PM	0.000	0.000	-4.42	0.47	1,949	1,395	4.01	1
2/5/12 10:30:00 PM	0.000	0.000	-4.49	0.53	1,955	1,391	4.01	1
2/5/12 10:35:00 PM	0.000	0.000	-4.58	0.57	1,962	1,390	4.03	1
2/5/12 10:40:00 PM	0.000	0.000	-4.76	0.53	1,965	1,390	4.02	1
2/5/12 10:45:00 PM	0.000	0.000	-4.43	0.53	1,966	1,391	4.02	1
2/5/12 10:50:00 PM	0.000	0.000	-4.07	0.48	1,965	1,395	4.01	1
2/5/12 10:55:00 PM	4.879	0.000	-3.76	0.45	1,965	1,397	4.01	1
2/5/12 11:00:00 PM	0.056	0.000	-3.85	0.42	1,972	1,399	4.00	1
2/5/12 11:05:00 PM	0.039	0.000	-4.01	0.40	1,978	1,401	3.98	1
2/5/12 11:10:00 PM	0.000	0.000	-4.17	0.33	1,978	1,402	3.98	1
2/5/12 11:15:00 PM	0.000	0.000	-4.41	0.32	1,975	1,403	4.00	1
2/5/12 11:20:00 PM	4.010	0.000	-4.60	0.32	1,971	1,404	4.00	1
2/5/12 11:25:00 PM	0.043	0.000	-4.66	0.32	1,963	1,404	4.03	1
2/5/12 11:30:00 PM	0.084	0.000	-4.71	0.25	1,960	1,404	3.97	1

2/5/12 11:35:00 PM	0.000	0.000	-4.81	0.17	1,955	1,404	3.95	1
2/5/12 11:40:00 PM	0.000	0.000	-4.73	0.13	1,953	1,403	3.94	1
2/5/12 11:45:00 PM	0.000	0.000	-4.30	0.10	1,953	1,403	3.94	1
2/5/12 11:50:00 PM	0.489	0.000	-4.55	0.07	1,949	1,404	3.96	1
2/5/12 11:55:00 PM	0.000	0.000	-4.39	0.07	1,941	1,405	3.97	1
2/5/12 12:00:00 AM	0.000	0.000	-4.97	1.65	1,916	1,486	4.15	1
2/6/12 12:05:00 AM	3.948	0.000	-3.80	0.03	1,935	1,403	4.00	1
2/6/12 12:10:00 AM	0.016	0.000	-3.86	0.02	1,934	1,402	3.99	1
2/6/12 12:15:00 AM	0.253	0.000	-3.92	0.02	1,934	1,401	3.98	1
2/6/12 12:20:00 AM	0.000	0.000	-3.73	0.02	1,936	1,400	3.97	1
2/6/12 12:25:00 AM	0.000	0.000	-3.91	0.07	1,944	1,400	3.97	1
2/6/12 12:30:00 AM	0.000	0.000	-3.96	0.10	1,953	1,399	4.00	1
2/6/12 12:35:00 AM	0.000	0.000	-3.88	0.10	1,964	1,399	3.97	1
2/6/12 12:40:00 AM	0.000	0.000	-4.10	0.10	1,975	1,400	3.96	1
2/6/12 12:45:00 AM	0.000	0.000	-3.81	0.18	1,979	1,396	3.97	1
2/6/12 12:50:00 AM	0.000	0.000	-3.62	0.18	1,989	1,392	4.00	1
2/6/12 12:55:00 AM	0.000	0.000	-3.54	0.18	2,001	1,390	3.99	1
2/6/12 1:00:00 AM	0.000	0.000	-3.91	0.18	2,012	1,387	3.99	1
2/6/12 1:05:00 AM	0.000	0.000	-3.72	0.18	2,016	1,384	4.01	1
2/6/12 1:10:00 AM	0.000	0.000	-3.56	0.18	2,017	1,383	4.00	1
2/6/12 1:15:00 AM	0.000	0.000	-3.73	0.23	2,026	1,381	4.02	1
2/6/12 1:20:00 AM	0.000	0.000	-4.10	0.23	2,038	1,382	4.01	1
2/6/12 1:25:00 AM	0.000	0.000	-4.05	0.22	2,039	1,385	4.01	1
2/6/12 1:30:00 AM	0.029	0.000	-3.83	0.17	2,033	1,388	4.03	1
2/6/12 1:35:00 AM	0.000	0.000	-3.65	0.15	2,032	1,392	4.03	1
2/6/12 1:40:00 AM	0.000	0.000	-3.79	0.15	2,033	1,399	4.00	1
2/6/12 1:45:00 AM	0.000	0.000	-3.92	0.15	2,037	1,404	4.00	1
2/6/12 1:50:00 AM	0.387	0.000	-3.78	0.07	2,032	1,409	4.01	1
2/6/12 1:55:00 AM	0.000	0.000	-3.64	0.10	2,031	1,412	4.00	1
2/6/12 2:00:00 AM	0.000	0.000	-3.59	0.10	2,033	1,413	4.01	1
2/6/12 2:05:00 AM	0.000	0.000	-3.77	0.10	2,037	1,409	3.98	1
2/6/12 2:10:00 AM	4.732	0.000	-3.95	0.10	2,033	1,404	3.99	1
2/6/12 2:15:00 AM	3.637	0.000	-3.74	0.10	2,026	1,401	4.03	1
2/6/12 2:20:00 AM	4.869	0.000	-3.55	0.07	2,022	1,399	4.05	1
2/6/12 2:25:00 AM	4.208	0.000	-3.64	0.08	2,024	1,399	4.05	1
2/6/12 2:30:00 AM	6.012	0.000	-3.86	0.20	2,030	1,399	4.01	1
2/6/12 2:35:00 AM	5.084	0.000	-3.83	0.20	2,034	1,401	4.00	1
2/6/12 2:40:00 AM	4.812	0.000	-3.70	0.18	2,029	1,403	4.02	1
2/6/12 2:45:00 AM	5.719	0.000	-3.76	0.18	2,029	1,402	3.97	1
2/6/12 2:50:00 AM	5.137	0.000	-3.91	0.18	2,030	1,400	3.97	1

2/6/12 2:55:00 AM	4.816	0.000	-4.11	0.18	2,030	1,391	4.01	1
2/6/12 3:00:00 AM	4.271	0.000	-4.00	0.17	2,022	1,388	3.99	1
2/6/12 3:05:00 AM	4.304	0.000	-3.81	0.15	2,021	1,388	4.01	1
2/6/12 3:10:00 AM	0.000	0.000	-3.80	0.15	2,022	1,390	4.03	1
2/6/12 3:15:00 AM	0.093	0.000	-3.93	0.15	2,024	1,394	4.00	1
2/6/12 3:20:00 AM	2.555	0.000	-3.86	0.15	2,024	1,399	3.98	1
2/6/12 3:25:00 AM	3.955	0.000	-3.58	0.15	2,023	1,402	3.96	1
2/6/12 3:30:00 AM	4.736	0.000	-3.42	0.12	2,019	1,406	3.92	1
2/6/12 3:35:00 AM	0.000	0.000	-3.21	12.02	2,019	1,408	3.92	0
2/6/12 3:40:00 AM	3.069	0.000	-3.64	12.03	2,026	1,400	3.96	1
2/6/12 3:45:00 AM	3.082	0.000	-3.15	12.03	2,033	1,393	4.01	1
2/6/12 3:50:00 AM	5.297	0.000	-3.49	12.03	2,029	1,388	3.98	1
2/6/12 3:55:00 AM	4.846	0.000	-3.53	12.03	2,022	1,389	3.98	1
2/6/12 4:00:00 AM	4.766	0.000	-3.16	12.37	2,022	1,395	3.98	1
2/6/12 4:05:00 AM	5.564	0.000	-3.11	12.97	2,025	1,398	3.96	1
2/6/12 4:10:00 AM	6.084	0.000	-3.16	12.97	2,036	1,401	3.97	1
2/6/12 4:15:00 AM	5.988	0.000	-3.44	12.97	2,045	1,401	3.99	1
2/6/12 4:20:00 AM	5.967	0.000	-3.71	12.97	2,052	1,392	4.00	1
2/6/12 4:25:00 AM	5.608	0.000	-3.72	12.97	2,052	1,377	4.03	1
2/6/12 4:30:00 AM	5.637	0.000	-3.54	13.00	2,052	1,360	4.09	1
2/6/12 4:35:00 AM	6.919	0.000	-3.47	13.00	2,054	1,339	4.11	1
2/6/12 4:40:00 AM	5.734	0.000	-3.70	0.98	2,050	1,321	4.04	1
2/6/12 4:45:00 AM	5.062	0.000	-3.55	0.97	2,046	1,306	4.01	1
2/6/12 4:50:00 AM	5.710	0.000	-3.56	0.97	2,045	1,290	4.01	1
2/6/12 4:55:00 AM	5.525	0.000	-3.35	0.97	2,048	1,274	4.03	1
2/6/12 5:00:00 AM	5.050	0.000	-3.93	0.97	2,057	1,257	4.03	1
2/6/12 5:05:00 AM	4.515	0.000	-4.15	0.63	2,036	1,239	4.04	1
2/6/12 5:10:00 AM	4.512	0.000	-4.17	0.03	2,019	1,223	4.03	1
2/6/12 5:15:00 AM	4.480	0.000	-4.09	0.03	2,009	1,208	3.98	1
2/6/12 5:20:00 AM	5.836	0.000	-4.04	0.03	2,005	1,201	3.94	1
2/6/12 5:25:00 AM	5.553	0.000	-3.27	0.03	2,004	1,200	3.88	1
2/6/12 5:30:00 AM	5.313	0.000	-3.82	0.03	1,998	1,199	3.85	1
2/6/12 5:35:00 AM	5.285	0.000	-3.79	0.00	1,989	1,198	3.86	1
2/6/12 5:40:00 AM	6.128	0.000	-3.67	0.00	1,988	1,201	3.90	1
2/6/12 5:45:00 AM	2.426	0.000	-3.61	0.00	1,988	1,205	3.94	1
2/6/12 5:50:00 AM	6.423	0.000	-4.15	0.00	1,992	1,199	3.99	1
2/6/12 5:55:00 AM	5.836	0.000	-4.12	0.00	1,994	1,193	3.99	1
2/6/12 6:00:00 AM	5.463	0.000	-4.09	0.00	1,993	1,188	3.99	1
2/6/12 6:05:00 AM	5.294	0.000	-4.12	0.03	1,998	1,184	4.00	1
2/6/12 6:10:00 AM	5.152	0.000	-4.21	0.03	2,012	1,179	4.00	1

2/6/12 6:15:00 AM	5.396	0.000	-4.25	0.03	2,021	1,174	4.00	1
2/6/12 6:20:00 AM	5.367	0.000	-4.48	0.03	2,025	1,169	4.03	1
2/6/12 6:25:00 AM	5.388	0.000	-4.44	0.03	2,018	1,166	4.02	1
2/6/12 6:30:00 AM	5.274	0.000	-4.22	0.03	2,013	1,162	4.00	1
2/6/12 6:35:00 AM	5.129	0.000	-4.19	0.03	2,006	1,159	3.97	1
2/6/12 6:40:00 AM	0.000	0.000	-4.04	0.03	2,000	1,154	3.97	1
2/6/12 6:45:00 AM	0.000	0.000	-3.73	20.33	2,000	1,150	4.01	1
2/6/12 6:50:00 AM	0.000	0.000	-3.77	26.32	2,003	1,152	3.96	1
2/6/12 6:55:00 AM	0.000	0.000	-3.87	26.33	1,996	1,156	3.96	1
2/6/12 7:00:00 AM	0.000	0.000	-4.11	26.33	1,994	1,159	3.97	1
2/6/12 7:05:00 AM	0.162	0.000	-4.25	26.35	1,991	1,159	3.93	1
2/6/12 7:10:00 AM	1.113	0.000	-3.78	26.32	1,991	1,158	3.92	1
2/6/12 7:15:00 AM	0.912	0.000	-3.93	26.32	1,992	1,157	3.92	1
2/6/12 7:20:00 AM	0.390	0.000	-4.01	26.32	1,995	1,157	3.91	1
2/6/12 7:25:00 AM	0.693	0.000	-4.30	26.32	1,997	1,152	3.91	1
2/6/12 7:30:00 AM	0.270	0.000	-4.10	26.32	1,998	1,148	3.95	1
2/6/12 7:35:00 AM	0.516	0.000	-4.26	26.32	1,998	1,144	3.97	1
2/6/12 7:40:00 AM	0.221	0.000	-4.16	26.32	1,998	1,141	3.94	1
2/6/12 7:45:00 AM	0.947	0.000	-4.06	26.32	1,985	1,140	3.94	1
2/6/12 7:50:00 AM	0.541	0.000	-3.69	6.02	1,975	1,139	4.04	1
2/6/12 7:55:00 AM	0.245	0.000	-3.34	0.45	1,975	1,139	4.10	1
2/6/12 8:00:00 AM	0.422	0.000	-3.91	0.45	1,975	1,139	4.07	1
2/6/12 8:05:00 AM	0.019	0.000	-3.87	0.45	1,964	1,139	4.01	1
2/6/12 8:10:00 AM	0.555	0.000	-3.93	0.43	1,951	1,140	3.98	1
2/6/12 8:15:00 AM	0.513	0.000	-4.24	0.43	1,936	1,140	3.98	1
2/6/12 8:20:00 AM	0.197	0.000	-4.34	0.43	1,931	1,140	4.01	1
2/6/12 8:25:00 AM	0.535	0.000	-4.33	0.43	1,930	1,139	4.04	1
2/6/12 8:30:00 AM	0.000	0.000	-4.44	0.43	1,930	1,139	4.01	1
2/6/12 8:35:00 AM	0.194	0.000	-4.54	0.43	1,930	1,139	4.00	1
2/6/12 8:40:00 AM	0.126	0.000	-5.03	0.43	1,931	1,139	4.02	1
2/6/12 8:45:00 AM	0.001	0.000	-4.97	0.43	1,929	1,139	3.98	1
2/6/12 8:50:00 AM	0.251	0.000	-4.94	0.43	1,927	1,139	3.94	1
2/6/12 8:55:00 AM	0.000	0.000	-4.28	0.03	1,918	1,139	3.94	0
2/6/12 9:00:00 AM	0.000	0.000	-3.35	42.82	1,918	1,139	3.93	1
2/6/12 9:05:00 AM	0.000	0.000	-4.39	42.87	1,919	1,140	3.94	1
2/6/12 9:10:00 AM	0.717	0.000	-4.25	42.87	1,917	1,140	3.99	1
2/6/12 9:15:00 AM	0.399	0.000	-4.32	42.93	1,917	1,142	4.00	1
2/6/12 9:20:00 AM	0.200	0.000	-4.21	42.97	1,919	1,145	3.99	1
2/6/12 9:25:00 AM	0.739	0.000	-4.12	42.97	1,922	1,147	3.99	1
2/6/12 9:30:00 AM	1.095	0.000	-4.75	42.97	1,918	1,150	4.00	1

2/6/12 9:35:00 AM	0.024	0.000	-4.60	42.97	1,910	1,152	4.01	1
2/6/12 9:40:00 AM	0.479	0.000	-3.89	42.97	1,910	1,154	3.97	1
2/6/12 9:45:00 AM	0.000	0.000	-3.84	42.97	1,915	1,156	3.97	1
2/6/12 9:50:00 AM	0.000	0.000	-4.25	42.97	1,915	1,158	3.99	1
2/6/12 9:55:00 AM	0.000	0.000	-4.31	42.97	1,915	1,160	3.98	1
2/6/12 10:00:00 AM	0.000	0.000	-3.74	42.97	1,914	1,161	3.96	1
2/6/12 10:05:00 AM	0.051	0.000	-4.16	31.28	1,912	1,162	3.97	1
2/6/12 10:10:00 AM	1.616	0.000	-3.96	31.50	1,918	1,160	4.02	1
2/6/12 10:15:00 AM	2.235	0.000	-4.68	31.50	1,928	1,157	4.08	1
2/6/12 10:20:00 AM	0.000	0.000	-4.72	31.43	1,926	1,153	4.13	1
2/6/12 10:25:00 AM	0.000	0.000	-4.35	31.40	1,921	1,151	4.07	1
2/6/12 10:30:00 AM	0.329	0.000	-4.25	31.40	1,921	1,150	4.02	1
2/6/12 10:35:00 AM	0.200	0.000	-4.17	31.40	1,928	1,149	3.98	1
2/6/12 10:40:00 AM	2.467	0.000	-4.15	31.40	1,934	1,148	3.97	1
2/6/12 10:45:00 AM	0.000	0.000	-4.03	31.40	1,931	1,146	4.01	1
2/6/12 10:50:00 AM	0.812	0.000	-3.06	32.10	1,930	1,145	4.00	1
2/6/12 10:55:00 AM	0.000	0.000	-3.13	83.03	1,934	1,145	3.97	0
2/6/12 11:00:00 AM	0.000	0.000	-3.71	83.85	1,940	1,146	3.98	1
2/6/12 11:05:00 AM	1.558	0.000	-4.00	83.88	1,941	1,146	3.97	1
2/6/12 11:10:00 AM	0.000	0.000	-4.54	52.70	1,931	1,147	3.97	1
2/6/12 11:15:00 AM	0.423	0.000	-4.32	52.48	1,928	1,148	3.96	1
2/6/12 11:20:00 AM	0.000	0.000	-4.18	52.48	1,931	1,149	3.95	1
2/6/12 11:25:00 AM	1.441	0.000	-4.03	52.48	1,938	1,149	3.95	1
2/6/12 11:30:00 AM	2.423	0.000	-4.03	52.48	1,945	1,150	3.98	1
2/6/12 11:35:00 AM	0.030	0.000	-3.93	52.48	1,950	1,150	4.03	1
2/6/12 11:40:00 AM	2.631	0.000	-3.89	52.48	1,952	1,150	4.00	1
2/6/12 11:45:00 AM	0.442	0.000	-3.90	52.48	1,959	1,150	3.95	1
2/6/12 11:50:00 AM	0.519	0.000	-3.74	52.48	1,963	1,151	3.94	1
2/6/12 11:55:00 AM	2.785	0.000	-3.82	51.78	1,970	1,151	3.95	1
2/6/12 12:00:00 PM	0.000	0.000	-3.86	0.85	1,974	1,150	3.98	1
2/6/12 12:05:00 PM	0.063	0.000	-3.79	0.03	1,979	1,150	4.01	1
2/6/12 12:10:00 PM	0.245	0.000	-3.97	0.00	1,991	1,148	3.99	1
2/6/12 12:15:00 PM	0.000	0.000	-4.03	0.00	2,001	1,147	3.96	0
2/6/12 12:20:00 PM	0.000	0.000	-4.50	0.00	2,009	1,147	3.89	0
2/6/12 12:25:00 PM	0.000	0.000	-4.05	0.00	2,009	1,148	3.87	1
2/6/12 12:30:00 PM	0.000	0.000	-3.75	0.00	2,008	1,151	3.89	1
2/6/12 12:35:00 PM	0.000	0.000	-3.39	0.00	2,006	1,152	3.94	1
2/6/12 12:40:00 PM	0.108	0.000	-3.18	0.00	2,000	1,153	3.98	1
2/6/12 12:45:00 PM	2.306	0.000	-3.14	0.00	1,996	1,154	4.01	1
2/6/12 12:50:00 PM	5.176	0.000	-3.08	0.00	1,992	1,155	4.01	1

2/6/12 12:55:00 PM	3.645	0.000	-3.53	0.00	1,984	1,156	4.01	1
2/6/12 1:00:00 PM	2.281	0.000	-4.09	0.00	1,974	1,157	4.01	1
2/6/12 1:05:00 PM	0.220	0.000	-4.42	0.00	1,965	1,158	4.02	1
2/6/12 1:10:00 PM	0.000	0.000	-3.84	0.00	1,956	1,158	3.99	1
2/6/12 1:15:00 PM	1.205	0.000	-4.10	0.00	1,948	1,160	3.95	1
2/6/12 1:20:00 PM	4.699	0.000	-4.44	0.00	1,941	1,162	3.95	1
2/6/12 1:25:00 PM	0.000	0.000	-4.44	0.00	1,936	1,162	4.00	1
2/6/12 1:30:00 PM	0.000	0.000	-4.41	0.00	1,930	1,161	4.02	1
2/6/12 1:35:00 PM	0.000	0.000	-4.30	0.00	1,927	1,160	4.00	1
2/6/12 1:40:00 PM	0.000	0.000	-4.41	0.00	1,927	1,159	3.99	1
2/6/12 1:45:00 PM	0.000	0.000	-4.49	0.00	1,928	1,158	3.99	1
2/6/12 1:50:00 PM	0.000	0.000	-4.58	0.00	1,924	1,157	4.01	1
2/6/12 1:55:00 PM	0.682	0.000	-4.52	0.00	1,923	1,156	4.03	1
2/6/12 2:00:00 PM	4.570	0.000	-4.56	0.00	1,919	1,155	3.99	1
2/6/12 2:05:00 PM	0.305	0.000	-4.47	0.00	1,917	1,155	3.99	1
2/6/12 2:10:00 PM	0.000	0.000	-4.55	0.00	1,916	1,155	3.99	1
2/6/12 2:15:00 PM	2.017	0.000	-4.42	0.00	1,913	1,155	4.03	1
2/6/12 2:20:00 PM	0.000	0.000	-4.35	0.00	1,913	1,155	4.10	1
2/6/12 2:25:00 PM	0.000	0.000	-4.49	0.00	1,916	1,155	4.12	1
2/6/12 2:30:00 PM	0.000	0.000	-4.77	0.00	1,917	1,155	4.12	1
2/6/12 2:35:00 PM	0.000	0.000	-4.98	0.00	1,917	1,155	4.12	1
2/6/12 2:40:00 PM	0.000	0.000	-5.18	0.00	1,919	1,155	4.07	1
2/6/12 2:45:00 PM	0.000	0.000	-4.22	0.00	1,919	1,155	3.99	1
2/6/12 2:50:00 PM	0.000	0.000	-5.07	0.00	1,919	1,154	3.97	1
2/6/12 2:55:00 PM	0.000	0.000	-5.11	0.00	1,919	1,154	3.97	1
2/6/12 3:00:00 PM	0.000	0.000	-4.92	0.00	1,918	1,154	4.00	1
2/6/12 3:05:00 PM	0.000	0.000	-5.06	0.00	1,919	1,154	4.03	1
2/6/12 3:10:00 PM	0.000	0.000	-4.36	0.00	1,919	1,155	3.97	1
2/6/12 3:15:00 PM	0.000	0.000	-5.21	0.00	1,919	1,155	3.92	1
2/6/12 3:20:00 PM	0.000	0.000	-4.98	0.00	1,918	1,155	3.90	1
2/6/12 3:25:00 PM	0.000	0.000	-5.15	0.00	1,917	1,155	3.89	0
2/6/12 3:30:00 PM	0.000	0.000	-5.06	0.00	1,916	1,155	3.89	0
2/6/12 3:35:00 PM	0.000	0.000	-4.71	0.00	1,916	1,154	3.89	1
2/6/12 3:40:00 PM	0.000	0.000	-4.63	0.00	1,919	1,154	3.94	1
2/6/12 3:45:00 PM	0.063	0.000	-4.52	0.00	1,924	1,152	4.01	1
2/6/12 3:50:00 PM	0.000	0.000	-4.40	0.00	1,931	1,151	4.00	1
2/6/12 3:55:00 PM	0.000	0.000	-4.75	0.00	1,940	1,152	4.00	1
2/6/12 4:00:00 PM	0.000	0.000	-4.66	0.00	1,940	1,151	4.01	1
2/6/12 4:05:00 PM	0.000	0.000	-4.45	0.00	1,944	1,151	4.02	1
2/6/12 4:10:00 PM	0.000	0.000	-4.66	0.00	1,950	1,151	4.02	1

2/6/12 4:15:00 PM	0.106	0.000	-4.65	0.00	1,956	1,151	3.99	1
2/6/12 4:20:00 PM	0.000	0.000	-4.54	0.00	1,961	1,151	3.98	1
2/6/12 4:25:00 PM	0.000	0.000	-4.85	0.00	1,962	1,151	3.96	1
2/6/12 4:30:00 PM	0.162	0.000	-4.71	0.00	1,964	1,151	3.93	1
2/6/12 4:35:00 PM	0.000	0.000	-4.42	0.00	1,965	1,151	3.90	1
2/6/12 4:40:00 PM	0.000	0.000	-5.22	0.15	1,954	1,151	3.90	1
2/6/12 4:45:00 PM	0.000	0.000	-5.10	0.15	1,948	1,151	3.90	1
2/6/12 4:50:00 PM	0.000	0.000	-4.96	0.15	1,938	1,153	3.98	1
2/6/12 4:55:00 PM	0.000	0.000	-5.04	0.15	1,936	1,153	4.03	1
2/6/12 5:00:00 PM	0.184	0.000	-4.93	0.15	1,934	1,153	3.97	1
2/6/12 5:05:00 PM	0.000	0.000	-4.99	0.15	1,929	1,154	3.95	1
2/6/12 5:10:00 PM	0.000	0.000	-4.82	0.15	1,921	1,154	3.94	1
2/6/12 5:15:00 PM	0.000	0.000	-4.94	1.33	1,917	1,154	3.96	1
2/6/12 5:20:00 PM	0.000	0.000	-5.21	1.50	1,909	1,154	4.01	1
2/6/12 5:25:00 PM	0.000	0.000	-5.20	1.50	1,908	1,154	4.04	1
2/6/12 5:30:00 PM	0.000	0.000	-5.23	1.50	1,904	1,152	4.06	1
2/6/12 5:35:00 PM	0.000	0.000	-5.24	1.50	1,903	1,150	4.10	1
2/6/12 5:40:00 PM	0.000	0.000	-5.24	1.50	1,903	1,149	4.15	1
2/6/12 5:45:00 PM	0.000	0.000	-5.24	1.35	1,906	1,147	4.17	1
2/6/12 5:50:00 PM	0.000	0.000	-5.24	1.35	1,904	1,147	4.20	1
2/6/12 5:55:00 PM	0.000	0.000	-5.22	1.35	1,905	1,147	4.22	1
2/6/12 6:00:00 PM	0.000	0.000	-4.69	12.88	1,905	1,147	4.26	1
2/6/12 6:05:00 PM	0.000	0.000	-5.15	16.90	1,905	1,147	4.33	1
2/6/12 6:10:00 PM	0.000	0.000	-5.14	16.98	1,905	1,146	4.40	1
2/6/12 6:15:00 PM	0.000	0.000	-4.94	16.98	1,909	1,145	4.47	1
2/6/12 6:20:00 PM	0.324	0.000	-5.08	15.80	1,913	1,144	4.53	1
2/6/12 6:25:00 PM	0.121	0.000	-5.20	15.63	1,918	1,145	4.58	1
2/6/12 6:30:00 PM	0.435	0.000	-5.10	15.63	1,917	1,148	4.63	1
2/6/12 6:35:00 PM	0.011	0.000	-4.90	15.63	1,920	1,153	4.66	1
2/6/12 6:40:00 PM	0.389	0.000	-4.57	15.63	1,919	1,158	4.67	1
2/6/12 6:45:00 PM	0.071	0.000	-4.83	15.92	1,921	1,162	4.66	1
2/6/12 6:50:00 PM	0.071	0.000	-4.80	15.92	1,924	1,165	4.63	1
2/6/12 6:55:00 PM	0.000	0.000	-5.14	15.92	1,929	1,165	4.60	1
2/6/12 7:00:00 PM	0.000	0.000	-5.23	15.92	1,930	1,162	4.57	1
2/6/12 7:05:00 PM	0.000	0.000	-5.20	15.92	1,934	1,159	4.55	1
2/6/12 7:10:00 PM	0.000	0.000	-5.18	0.37	1,936	1,157	4.53	1
2/6/12 7:15:00 PM	0.000	0.000	-5.07	0.32	1,936	1,156	4.51	1
2/6/12 7:20:00 PM	0.000	0.000	-4.90	0.28	1,935	1,156	4.47	1
2/6/12 7:25:00 PM	0.026	0.000	-4.96	0.28	1,935	1,154	4.40	1
2/6/12 7:30:00 PM	0.018	0.000	-5.03	0.28	1,939	1,150	4.34	1

2/6/12 7:35:00 PM	0.000	0.000	-5.04	0.28	1,938	1,146	4.26	1
2/6/12 7:40:00 PM	0.000	0.000	-5.12	0.28	1,938	1,144	4.17	1
2/6/12 7:45:00 PM	0.000	0.000	-5.12	0.28	1,936	1,141	4.06	1
2/6/12 7:50:00 PM	0.000	0.000	-4.96	0.00	1,935	1,140	4.04	1
2/6/12 7:55:00 PM	3.120	0.000	-4.93	0.00	1,935	1,139	4.05	1
2/6/12 8:00:00 PM	0.019	0.000	-5.10	0.00	1,932	1,140	4.07	1
2/6/12 8:05:00 PM	0.068	0.000	-5.15	0.00	1,928	1,140	4.08	1
2/6/12 8:10:00 PM	0.000	0.000	-5.11	0.00	1,925	1,141	4.10	1
2/6/12 8:15:00 PM	0.095	0.000	-5.08	0.00	1,922	1,141	4.09	1
2/6/12 8:20:00 PM	0.000	0.000	-5.08	0.00	1,922	1,143	4.01	1
2/6/12 8:25:00 PM	0.000	0.000	-5.09	0.00	1,920	1,143	3.93	1
2/6/12 8:30:00 PM	0.000	0.000	-5.12	0.00	1,918	1,143	3.90	1
2/6/12 8:35:00 PM	0.000	0.000	-5.00	0.00	1,917	1,143	3.92	1
2/6/12 8:40:00 PM	0.515	0.000	-5.10	0.00	1,919	1,143	3.98	1
2/6/12 8:45:00 PM	0.238	0.000	-4.96	0.00	1,916	1,142	4.07	1
2/6/12 8:50:00 PM	2.276	0.000	-4.80	0.00	1,917	1,142	4.17	1
2/6/12 8:55:00 PM	0.889	0.000	-4.70	0.00	1,912	1,143	4.22	1
2/6/12 9:00:00 PM	1.656	0.000	-4.62	0.00	1,912	1,145	4.21	1
2/6/12 9:05:00 PM	2.175	0.000	-4.34	0.00	1,913	1,149	4.18	1
2/6/12 9:10:00 PM	1.030	0.000	-4.25	0.00	1,914	1,154	4.13	1
2/6/12 9:15:00 PM	0.492	0.000	-4.29	0.00	1,920	1,158	4.09	1
2/6/12 9:20:00 PM	0.242	0.000	-4.56	0.00	1,925	1,159	4.09	1
2/6/12 9:25:00 PM	0.000	0.000	-4.55	0.00	1,927	1,159	4.11	1
2/6/12 9:30:00 PM	1.301	0.000	-4.01	13.67	1,930	1,159	4.13	1
2/6/12 9:35:00 PM	0.000	0.000	-4.50	193.07	1,940	1,160	4.08	0
2/6/12 9:40:00 PM	0.000	0.000	-5.10	193.35	1,953	1,162	4.07	0
2/6/12 9:45:00 PM	0.000	0.000	-5.20	193.35	1,953	1,163	4.04	0
2/6/12 9:50:00 PM	0.000	0.000	-5.22	193.35	1,955	1,165	3.98	0
2/6/12 9:55:00 PM	0.000	0.000	-5.24	193.37	1,955	1,164	3.91	0
2/6/12 10:00:00 PM	0.000	0.000	-5.24	193.37	1,955	1,160	3.88	0
2/6/12 10:05:00 PM	0.000	0.000	-5.24	193.37	1,952	1,155	3.88	0
2/6/12 10:10:00 PM	0.000	0.000	-5.24	193.37	1,947	1,151	3.90	0
2/6/12 10:15:00 PM	0.000	0.000	-5.24	193.37	1,947	1,151	3.94	0
2/6/12 10:20:00 PM	0.000	0.000	-5.21	193.37	1,947	1,151	3.94	0
2/6/12 10:25:00 PM	0.000	0.000	-5.20	193.37	1,947	1,151	3.94	0
2/6/12 10:30:00 PM	0.000	0.000	-5.18	193.37	1,947	1,151	3.94	0
2/6/12 10:35:00 PM	0.000	0.000	-5.24	179.70	1,944	1,150	3.94	0
2/6/12 10:40:00 PM	0.000	0.000	-5.24	0.40	1,937	1,148	3.97	1
2/6/12 10:45:00 PM	1.572	0.000	-5.22	0.02	1,934	1,148	4.07	1
2/6/12 10:50:00 PM	3.009	0.000	-5.00	0.02	1,929	1,148	4.16	1

2/6/12 10:55:00 PM	2.796	0.000	-5.00	0.02	1,916	1,147	4.26	1
2/6/12 11:00:00 PM	2.325	0.000	-5.10	0.00	1,905	1,142	4.38	1
2/6/12 11:05:00 PM	2.764	0.000	-5.09	0.00	1,905	1,139	4.45	1
2/6/12 11:10:00 PM	2.887	0.000	-4.54	0.00	1,903	1,137	4.53	1
2/6/12 11:15:00 PM	2.589	0.000	-3.81	0.00	1,901	1,137	4.65	1
2/6/12 11:20:00 PM	2.571	0.000	-3.64	0.00	1,902	1,137	4.80	1
2/6/12 11:25:00 PM	2.307	0.000	-3.53	0.00	1,899	1,139	4.90	1
2/6/12 11:30:00 PM	1.816	0.000	-3.36	0.00	1,899	1,142	4.98	1
2/6/12 11:35:00 PM	1.470	0.000	-3.39	0.00	1,900	1,146	4.99	1
2/6/12 11:40:00 PM	0.761	0.000	-3.30	0.00	1,900	1,150	4.93	1
2/6/12 11:45:00 PM	0.811	0.000	-3.50	0.00	1,899	1,152	4.85	1
2/6/12 11:50:00 PM	0.828	0.000	-4.67	0.00	1,896	1,154	4.79	1
2/6/12 11:55:00 PM	0.624	0.000	-5.06	0.00	1,892	1,154	4.77	1
2/6/12 12:00:00 AM	0.000	0.000	-3.75	0.07	1,935	1,403	3.97	1
2/7/12 12:05:00 AM	0.582	0.000	-4.26	0.00	1,884	1,155	4.76	1
2/7/12 12:10:00 AM	1.072	0.000	-4.01	0.00	1,884	1,156	4.72	1
2/7/12 12:15:00 AM	1.171	0.000	-3.38	0.00	1,885	1,157	4.60	1
2/7/12 12:20:00 AM	1.373	0.000	-4.01	0.00	1,885	1,158	4.47	1
2/7/12 12:25:00 AM	1.844	0.000	-4.02	0.00	1,888	1,157	4.34	1
2/7/12 12:30:00 AM	1.960	0.000	-3.87	0.00	1,888	1,156	4.23	1
2/7/12 12:35:00 AM	2.491	0.000	-4.10	0.00	1,889	1,155	4.15	1
2/7/12 12:40:00 AM	3.134	0.000	-4.04	0.00	1,890	1,153	4.15	1
2/7/12 12:45:00 AM	3.841	0.000	-3.86	0.00	1,892	1,152	4.17	1
2/7/12 12:50:00 AM	4.309	0.000	-3.42	0.00	1,893	1,148	4.18	1
2/7/12 12:55:00 AM	4.593	0.000	-4.30	0.00	1,896	1,147	4.22	1
2/7/12 1:00:00 AM	4.594	0.000	-4.30	0.00	1,898	1,146	4.25	1
2/7/12 1:05:00 AM	4.546	0.000	-4.50	0.00	1,901	1,145	4.27	1
2/7/12 1:10:00 AM	4.478	0.000	-4.22	0.00	1,901	1,145	4.27	1
2/7/12 1:15:00 AM	4.485	0.000	-4.19	0.00	1,901	1,145	4.24	1
2/7/12 1:20:00 AM	3.876	0.000	-4.16	0.00	1,899	1,144	4.22	1
2/7/12 1:25:00 AM	4.060	0.000	-4.32	0.00	1,899	1,143	4.22	1
2/7/12 1:30:00 AM	3.785	0.000	-4.28	0.00	1,900	1,143	4.21	1
2/7/12 1:35:00 AM	3.919	0.000	-4.44	0.00	1,900	1,142	4.21	1
2/7/12 1:40:00 AM	4.058	0.000	-4.53	0.00	1,901	1,142	4.25	1
2/7/12 1:45:00 AM	4.298	0.000	-4.51	0.00	1,901	1,142	4.24	1
2/7/12 1:50:00 AM	2.790	0.000	-4.92	0.00	1,902	1,142	4.25	1
2/7/12 1:55:00 AM	4.488	0.000	-5.01	0.00	1,902	1,144	4.27	1
2/7/12 2:00:00 AM	1.386	0.000	-3.21	2.68	1,904	1,145	4.24	1
2/7/12 2:05:00 AM	1.156	0.000	-4.52	2.68	1,905	1,148	4.15	1
2/7/12 2:10:00 AM	2.252	0.000	-4.43	2.68	1,907	1,151	4.07	1

2/7/12 2:15:00 AM	2.710	0.000	-4.65	2.68	1,906	1,154	4.03	1
2/7/12 2:20:00 AM	4.682	0.000	-4.67	2.68	1,907	1,156	4.00	1
2/7/12 2:25:00 AM	5.690	0.000	-4.79	2.68	1,906	1,158	4.00	1
2/7/12 2:30:00 AM	5.264	0.000	-4.85	2.68	1,906	1,160	4.04	1
2/7/12 2:35:00 AM	5.083	0.000	-4.77	2.68	1,905	1,162	4.07	1
2/7/12 2:40:00 AM	4.003	0.000	-4.80	2.68	1,905	1,163	4.06	1
2/7/12 2:45:00 AM	3.646	0.000	-4.97	2.68	1,905	1,162	4.09	1
2/7/12 2:50:00 AM	3.312	0.000	-5.16	2.70	1,903	1,161	4.13	1
2/7/12 2:55:00 AM	3.095	0.000	-5.19	2.70	1,902	1,160	4.11	1
2/7/12 3:00:00 AM	2.845	0.000	-4.32	2.70	1,902	1,158	4.10	1
2/7/12 3:05:00 AM	2.970	0.000	-4.67	0.98	1,902	1,157	4.09	1
2/7/12 3:10:00 AM	2.776	0.000	-4.71	0.02	1,901	1,156	4.09	1
2/7/12 3:15:00 AM	2.815	0.000	-4.81	0.02	1,901	1,153	4.09	1
2/7/12 3:20:00 AM	2.911	0.000	-4.76	0.02	1,901	1,151	4.10	1
2/7/12 3:25:00 AM	2.847	0.000	-4.69	0.02	1,902	1,150	4.07	1
2/7/12 3:30:00 AM	2.458	0.000	-4.78	0.02	1,902	1,149	4.07	1
2/7/12 3:35:00 AM	2.393	0.000	-4.91	0.02	1,905	1,148	4.10	1
2/7/12 3:40:00 AM	3.076	0.000	-4.88	0.02	1,905	1,147	4.07	1
2/7/12 3:45:00 AM	4.351	0.000	-4.97	0.02	1,908	1,146	4.03	1
2/7/12 3:50:00 AM	4.776	0.000	-5.11	0.02	1,907	1,146	4.00	1
2/7/12 3:55:00 AM	1.419	0.000	-5.06	0.00	1,910	1,146	3.96	1
2/7/12 4:00:00 AM	2.368	0.000	-4.83	0.00	1,912	1,146	3.88	1
2/7/12 4:05:00 AM	4.416	0.000	-4.89	0.00	1,913	1,148	3.87	1
2/7/12 4:10:00 AM	5.337	0.000	-3.53	0.00	1,913	1,149	3.88	1
2/7/12 4:15:00 AM	5.168	0.000	-4.85	12.20	1,915	1,149	3.88	1
2/7/12 4:20:00 AM	5.220	0.000	-4.93	12.20	1,920	1,149	3.91	1
2/7/12 4:25:00 AM	5.507	0.000	-4.83	12.20	1,920	1,149	3.96	1
2/7/12 4:30:00 AM	4.795	0.000	-4.89	12.20	1,919	1,149	3.96	1
2/7/12 4:35:00 AM	5.183	0.000	-4.93	12.20	1,919	1,149	3.95	1
2/7/12 4:40:00 AM	5.192	0.000	-4.92	12.20	1,917	1,149	3.97	1
2/7/12 4:45:00 AM	5.247	0.000	-4.92	12.20	1,917	1,150	3.98	1
2/7/12 4:50:00 AM	5.317	0.000	-5.04	12.20	1,917	1,151	4.02	1
2/7/12 4:55:00 AM	5.317	0.000	-4.95	12.20	1,917	1,151	4.00	1
2/7/12 5:00:00 AM	5.235	0.000	-4.76	12.20	1,917	1,152	3.99	1
2/7/12 5:05:00 AM	5.259	0.000	-4.78	12.20	1,917	1,153	3.97	1
2/7/12 5:10:00 AM	5.546	0.000	-4.59	12.20	1,918	1,154	3.96	1
2/7/12 5:15:00 AM	5.170	0.000	-4.33	12.20	1,915	1,156	3.98	1
2/7/12 5:20:00 AM	4.992	0.000	-4.80	0.00	1,915	1,157	4.00	1
2/7/12 5:25:00 AM	4.801	0.000	-4.89	0.00	1,916	1,159	3.99	1
2/7/12 5:30:00 AM	4.517	0.000	-4.12	0.00	1,916	1,159	3.99	1

2/7/12 5:35:00 AM	4.206	0.000	-5.04	0.00	1,915	1,160	4.01	1
2/7/12 5:40:00 AM	3.773	0.000	-5.09	0.00	1,915	1,160	4.01	1
2/7/12 5:45:00 AM	3.355	0.000	-5.18	0.00	1,914	1,159	4.02	1
2/7/12 5:50:00 AM	2.981	0.000	-5.22	0.00	1,916	1,159	4.01	1
2/7/12 5:55:00 AM	2.623	0.000	-5.18	0.00	1,915	1,159	4.01	1
2/7/12 6:00:00 AM	2.274	0.000	-5.15	0.00	1,916	1,158	4.01	1
2/7/12 6:05:00 AM	1.957	0.000	-5.01	0.00	1,916	1,156	4.01	1
2/7/12 6:10:00 AM	1.643	0.000	-5.01	0.00	1,916	1,155	4.01	1
2/7/12 6:15:00 AM	1.342	0.000	-4.96	0.00	1,916	1,153	4.00	1
2/7/12 6:20:00 AM	1.067	0.000	-4.90	0.00	1,916	1,152	3.97	1
2/7/12 6:25:00 AM	0.814	0.000	-4.93	0.00	1,917	1,151	3.97	1
2/7/12 6:30:00 AM	0.561	0.000	-4.84	0.00	1,918	1,150	4.00	1
2/7/12 6:35:00 AM	0.328	0.000	-4.82	0.00	1,918	1,149	4.01	1
2/7/12 6:40:00 AM	0.113	0.000	-4.71	0.00	1,918	1,149	4.01	1
2/7/12 6:45:00 AM	0.000	0.000	-4.68	0.00	1,922	1,150	4.00	1
2/7/12 6:50:00 AM	0.000	0.000	-4.66	0.00	1,926	1,154	3.97	1
2/7/12 6:55:00 AM	0.000	0.000	-4.63	0.00	1,930	1,158	3.97	0
2/7/12 7:00:00 AM	0.000	0.000	-2.34	13.78	1,918	1,164	3.98	0
2/7/12 7:05:00 AM	0.000	0.000	-0.40	44.85	1,894	1,170	4.01	0
2/7/12 7:10:00 AM	0.000	0.000	-0.53	81.13	1,864	1,182	4.02	0
2/7/12 7:15:00 AM	0.000	0.000	-3.57	121.42	1,834	1,207	4.02	0
2/7/12 7:20:00 AM	0.000	0.000	-3.63	121.60	1,812	1,234	4.02	0
2/7/12 7:25:00 AM	0.000	0.000	-2.55	121.60	1,798	1,262	4.04	0
2/7/12 7:30:00 AM	0.000	0.000	-2.07	121.60	1,792	1,294	4.03	0
2/7/12 7:35:00 AM	0.000	0.000	-2.02	121.60	1,788	1,329	4.02	0
2/7/12 7:40:00 AM	0.000	0.000	-2.03	121.60	1,785	1,365	4.00	0
2/7/12 7:45:00 AM	0.000	0.000	-2.17	121.60	1,780	1,400	3.98	0
2/7/12 7:50:00 AM	0.000	0.000	-2.09	121.60	1,775	1,435	3.99	0
2/7/12 7:55:00 AM	0.000	0.000	-2.21	121.60	1,774	1,468	4.03	0
2/7/12 8:00:00 AM	0.000	0.000	-2.13	121.60	1,774	1,501	4.04	0

EXHIBIT C

32 CFR Part 242

[DoD Directive 6010.7]

Admission Policies and Procedures for the School of Medicine, Uniformed Services University of the Health Sciences

AGENCY: Department of Defense.

ACTION: Final rule.

SUMMARY: This amendment makes administrative changes to 32 CFR Part 242. It also raises the age from 32 to 34 years old for a Uniformed Services University of the Health Sciences student who have served on active duty in the Armed Forces that he or she may exceed the normal age limitation (age 28) by a period equl to the time served on active duty provided he or she does not become age 34 by June 30 of the year of admission.

EFFECTIVE DATE: June 6, 1989.

FOR FURTHER INFORMATION CONTACT: Mr. Charles Mannix, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814, telephone (703) 295–3028.

List of Subjects in 32 CFR Part 242

Medical and dental schools; Military personnel.

Accordingly, 32 CFR Part 242 is amended as follows:

PART 242—[AMENDED]

1. The authority citation continues to read as follows:

Authority: 10 U.S.C. 2112.

2. Section 242.4 is amended by revising paragraph (a)(2) and amending paragraph (a)(5)(ii) by changing "5210.9" to 5200.2".

§ 242.4 Policies.

* * * * *

(a) * * *

(2) Are at least 18 years old at the time of matriculation, but have not become 28 years old as of June 30 in the year of admission. However, any student who has served on active duty in the Armed Forces may exceed the age limitation by a period equal to the time served on active duty provided that student has not become 34 years old by June 30 in the year of admission.

* * * * *

§§ 242.4, 242.5 and 242.7 [Amended]

3. Paragraphs 242.4(c), 242.5(d), and 242.7(c) are amended by changing "(Health and Environmental) to "(Health Affairs)".

§ 242.10 [Amended]

4. Paragraph 242.10 is amended by changing "(Comptroller)" to "(Health Affairs)."

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

July 24, 1989.

[FR Doc. 89–17612 Filed 7–27–89; 8:45 am]

BILLING CODE 3810–10–M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[SWH–FRL–3620–3]

Hazardous Waste Management System; Identification and Listing of Hazardous Waste

AGENCY: Environmental Protection Agency (EPA).

ACTION: Availability of data pertaining to the hazardous characteristics of CFC refrigerants and clarification of the applicability of RCRA subtitle C regulations to CFC refrigerants.

SUMMARY: EPA's Office of Air and Radiation has been undertaking efforts to encourage the recycling of chlorofluorocarbons (CFCs) used as refrigerants. In conducting these efforts, it has become evident that many people in the regulated community hold misconceptions regarding the applicability of Subtitle C of the Resource Conservation and Recovery Act (RCRA) to CFCs when used as refrigerants. The resulting confusion has often served to hinder the implementation of recycling schemes designed to mitigate the adverse impacts of CFCs on the environment, in particular, the depletion of the ozone layer. Therefore, EPA's Office of Solid Waste and Emergency Response is publishing today's Notice to clarify the applicability of RCRA Subtitle C to CFC refrigerants. In addition, today's Notice announces data which will greatly simplify the burden that the generator of any solid waste must undertake to determine whether the solid waste is hazardous by demonstrating that CFC refrigerants will not exhibit a characteristic of a hazardous waste under normal operating conditions.

EFFECTIVE DATE: July 28, 1989.

ADDRESS: The data announced in this Notice are in the administrative record identified as Docket Number F–89–CFCA–FFFFF and is located in the EPA RCRA Docket (located in Room M2427) 401 M Street SW., Washington, DC 20460. The docket is open from 9:00 am to 4:00 pm, Monday through Friday, except for public holidays. To review docket materials, the public must make an appointment by calling (202) 475–9327. The public may make copies of the docket materials at a cost of $.15 per page.

FOR FURTHER INFORMATION CONTACT: For general information regarding the applicability of RCRA to CFCs or regarding the data announced in this Notice, contact Mitch Kidwell, Office of Solid Waste (OS–332), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 475–8551. For information regarding the recycling of CFC refrigerants, contact Jean Lupinacci, Office of Air and Radiation, Global Change Division (ANR–445), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 382–7750.

SUPPLEMENTARY INFORMATION:

Background

On May 19, 1980, the Environmental Protection Agency (EPA) promulgated a final rule pursuant to section 3001 of the Resource Conservation and Recovery Act of 1976, as amended (RCRA). This rule (45 FR 33084) specifically listed 85 process wastes as hazardous wastes and approximately 400 chemicals as hazardous wastes if they are, or are intended to be, discarded. It also identified four characteristics of hazardous wastes to be used by persons handling a solid waste in determining whether that waste is a hazardous waste (see 40 CFR Part 261 Subpart C).

The list of hazardous wastes (see 40 CFR 261.31–261.33) includes certain chlorofluorocarbons (CFCs). These CFCs are listed as certain spent halogenated solvents from non-specific sources (i.e., F001 and F002, found at 40 CFR 261.31) and two CFCs are listed as commercial chemical products (i.e., dichlorodifluoromethane (CFC–12) and trichloromonofluoromethane (CFC–11), U075 and U121, respectively, found at 40 CFR 261.33(f).

Note: F001 includes all chlorofluorocarbons used in degreasing; F002 includes only limited chlorofluorocarbons, including trichlorofluoromethane.

The applicability of RCRA Subtitle C regulations to CFCs is limited to three basic scenarios: (1) Where CFCs are used as solvents and the wastes containing the CFCs meet the F001 and F002 listing descriptions, (2) where either dichlorodifluoromethane (CFC–12) or trichloromonofluoromethane (CFC–11) is an unused commercial chemical product, off-specification commercial chemical product, inner liner or

container residue, or spill residue that is (or is intended to be) discarded, or (3) where CFCs are solid wastes that exhibit a characteristic of hazardous waste. However, through efforts by EPA's Office of Air and Radiation to promote the recycling of CFC refrigerants, it has become evident that some confusion exists in the regulated community regarding the RCRA regulatory status of CFC refrigerants. Today's Notice of Data Availability will clarify this status.

Clarification of the RCRA Regulatory Status of CFCs Used as Refrigerants

By way of clarifying the regulatory status of recycled CFC refrigerants, the Agency will discuss the first two scenarios listed above, and announce data that applies to the third scenario (i.e., whether CFC refrigerants exhibit a characteristic of hazardous waste). First, the spent solvent listings found at 40 CFR 261.31 (specifically, CFCs listed under F001 and F002) apply solely to wastes containing listed solvents when they are used for their solvent properties. CFCs used as refrigerants are not typically subject to the spent solvent listings because, as refrigerants, the CFCs are not used as solvents. Second, the U-listings found at 40 CFR 261.33(f) apply to commercially pure grades of listed chemicals, technical grades, and formulations in which the listed chemical is the sole active ingredient. The U-list does not include chemical mixtures where the listed chemical is not the sole active ingredient, and does not apply to chemicals that have been used for their intended purpose. Thus, CFC refrigerants that are removed from a refrigeration system and are reclaimed would not be classified as "commercial products," but rather would be classified as "spent materials." If the CFC refrigerants were not used for their solvent properties, they could not be F001 or F002 wastes, and thus, these spent materials could only be hazardous wastes under the characteristics of 40 CFR 261.21–261.24.

As a spent material, a CFC refrigerant is a solid waste. It is therefore the generator's responsibility to test the waste or apply knowledge of the waste to determine whether the waste exhibits a characteristic of a hazardous waste (see 40 CFR 261.5(f)(1), 261.5(g)(1) and 262.11(c)). The characteristics of a hazardous waste (i.e., ignitability, corrosivity, reactivity, or EP toxicity) are found at 40 CFR 261.21–261.24. The "generator" includes each person, by site, whose act or process produces a hazardous waste, or whose act first causes the waste to become subject to regulation. In most cases, the generator would be the owner of the refrigeration equipment, as well as the service person or company who, in servicing the equipment, collects the material for reclamation (i.e., there may be "co-generator" situations (see 45 FR a 72026)). This Notice announces the availability of data that relate to a generator's application of knowledge of the waste in addressing the possible hazardous characteristic of corrosivity (see 40 CFR 261.22).

The Agency has previously determined that CFC refrigerants are not likely to exhibit a characteristic of a hazardous waste; however, the Agency maintained reservations regarding the characteristic of corrosivity (see the July 21, 1988 letter from Sylvia K. Lowrance, Director of EPA's Office of Solid Waste to Mr. Marshall R. Turner, Vice President of Racon Refrigerants, included in the docket for this Notice). EPA was concerned about the possible formation of hydrochloric acid due to the breakdown of the CFCs at high compressor temperatures. EPA has since received data (included in the docket for this Notice) demonstrating that the conditions under which CFC refrigerants would break down and form hydrochloric acid, while theoretically possible, are not a practical possibility during normal use. Generators of CFC refrigerants that are reclaimed are not required to test their wastes to determine that their CFCs are not hazardous wastes. Of course, the generator is required to know if the CFC is a hazardous waste. Therefore, in circumstances where something outside the realm of normal practice may cause a CFC refrigerant to exhibit a characteristic (e.g., a CFC refrigerant is inadvertently mixed with an acid material), generators may need to determine, using testing or knowledge, whether the waste is hazardous. Even if the material is a hazardous waste, full Subtitle C management standards may not apply. Exemptions for household hazardous waste or waste from small quantity generators may apply to some of these wastes (see 40 CFR 261.4(b)(1); 40 CFR 261.5).

The Agency notes, however, that the preceding discussions pertain to Federal regulations. While EPA strongly encourages State regulatory agencies to adopt similar regulations to facilitate the recycling of CFC refrigerants, States can and do have their own regulations which may be more stringent than Federal regulations. The regulated community is advised to consult the appropriate State regulatory agency to determine the State regulatory status of CFC refrigerants that are recycled.

List of Docket Materials

1. July 21, 1988 letter from Sylvia K. Lowrance, Director of EPA Office of Solid Waste, to Marshall R. Turner of Racon Refrigerants.
2. August 3, 1988 letter from Stephen O. Andersen and Jean Lupinacci of EPA Office of Air and Radiation to David J. Stirpe of the Air-Conditioning and Refrigeration Institute.
3. October 11, 1988 letter from David J. Stirpe of the Air-Conditioning and Refrigeration Institute to Stephen O. Andersen and Jean Lupinacci of EPA Office of Air and Radiation.
4. August 8, 1988 letter from David J. Bateman of E.I. du Pont de Nemours and Company to Stephen O. Andersen of EPA Office of Air and Radiation.
5. September 5, 1988 letter from R.E. Boberg of Allied-Signal Inc. to David J. Stirpe of the Air-Conditioning and Refrigeration Institute.
6. September 28, 1988 letter from L. Denise Pope of Racon Inc. to David Stirpe of the Air-Conditioning and Refrigeration Institute, and attachment entitled "Development of Worst Case Scenario."
7. August 25, 1988 EPA internal memorandum from N. Dean Smith of the Industrial Processes Branch to Steve Andersen of the Program Development Division, and attachment (an excerpt from "Test Methods for Evaluating Solid Wastes" (SW–846).
8. November 8, 1988 letter from J.E. Cox of American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. to Jean Lupinacci of EPA Office of Air and Radiation, and two enclosures: "Rates of Thermal Decomposition of CHCLF2 and CF2CL2" by Frances J. Norton (1957) and "Reactions of Chlorofluorocarbons with Metals" by B.J. Eiseman (1963).
9. June 10, 1988 letter from Harold J. Lamb of Racon Inc. to Joseph M. McGuire of the Air-Conditioning and Refrigeration Institute.
10. September 14, 1987 letter from L. Denise Pope of Racon Inc. to John P. Goetz of the Kansas Department of Health and Environment.
11. October 5, 1987 letter from John S. Ramsey of the Kansas Department of Health and Environment to L. Denise Pope of Racon Inc.
12. October 21, 1987 letter from L. Denise Pope of Racon Inc. to John S. Ramsey of the Kansas Department of Health and Environment.
13. October 30, 1987 letter from John S. Ramsey of the Kansas Department of Health and Environment to L. Denise Pope of Racon Inc.

14. January 22, 1988 Racon Inc. internal memorandum from L. Denise Pope to the File.

15. February 1, 1988 letter from Marshall R. Turner of Racon Refrigerants to Lee Thomas, Administrator of EPA.

16. March 21, 1988 letter from Matthew A. Straus of EPA Characterization and Assessment Division to Marshall R. Turner of Racon Inc.

17. May 20, 1988 internal Racon Inc. memorandum from L. Denise Pope to the File.

Date: July 14, 1989.

Robert Duprey,

Acting Assistant Administrator.

[FR Doc. 89-17383 Filed 7-27-89; 8:45 am]

BILLING CODE 6560-50-M

EXHIBIT D

9441.1988(32)

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

JUL 1988

Mr. Marshall R. Turner
Vice President, Manufacturing
Racon Refrigerants
6040 South Ridge Road
P.O. Box 198
Wichita, KS 67201

Dear Mr. Turner:

This letter is in response to your February 1, 1988 petition to change 40 CFR Part 261 to encourage chlorofluorocarbon recycling. It is based on information contained in your petition and in telephone conversations with Michael Petruska of the Office of Solid Waste (OSW) and with our contractor, Becky Cuthbertson of Geo/Resource Consultants, Inc. This response is based on the Federal RCRA regulations; individual states implementing RCRA may have more stringent requirements, or regulations which are broader in scope. The tentative conclusion we have reached is that under Federal rules, the refrigerants you are concerned about are probably not hazardous waste. Therefore, your rulemaking petition may be moot. Our conclusion is explained in detail below.

The Agency understands that the refrigerants manufactured by your company may become contaminated during customers' use. The contamination may occur because atmospheric moisture condenses, because lubricating oil from the compressor is released into the refrigerant, or because the compressor's high temperature may cause small amounts of hydrochloric acid to form. We understand that when servicing the refrigeration system, the service person may either vent the used refrigerant to the atmosphere, or collect the used refrigerant in cylinders to transfer it for reclamation.

Refrigerant that has been used and has become contaminated through use fits the definition of a spent material (40 CFR Section 261.1(c)(1)) if it must be reclaimed prior to its reuse. Spent materials that are reclaimed are solid wastes per Section 261.2(c). Your environmental engineer, Denise Pope, indicated that the used refrigerant is collected from customers in cylinders and transferred to your facility for reclamation, and is not tested to determine whether it can be reused directly

i.e., without processing. Thus, it would fall under the definition of a spent material going for reclamation, which is a solid waste.

The used refrigerant would not be considered a listed spent solvent. The spent solvent listings in Section 261.31 apply to certain materials that have been used for their solvent properties and have become spent. See the December 31, 1985 Federal Register notice (50 FR 53315) which clarifies the scope of the spent solvent listings.

The used refrigerant would not meet the listing description in Section 261.33(e) for trichlorofluoromethane (U121) or dichlorodifluoromethane (U075) because it has been used. The listings in Section 261.33(e) and (f) apply to the commercially pure grades of the listed chemicals, technical grades, and formulations in which the listed chemical is the sole active ingredient, but not to used chemicals.

If the solid waste is not identified as a listed hazardous waste, the generator's responsibility is to test the waste or apply knowledge to determine if the waste exhibits a characteristic. See Sections 261.5(f)(1), 261.5(g)(1) and 262.11(c). "Generator" includes the person who act or process produces hazardous waste, or whose act first causes the waste to become subject to regulation. In most cases, the generators would be the owner of the refrigeration equipment, as well as the service person who may be involved in determining whether the refrigerant is still useful, or who may be collecting the material for reclamation, i.e., there would be a co-generator situation.

Based on the information available at this time, it seems unlikely that the used refrigerant would exhibit any of the four characteristics of hazardous waste (ignitability, corrosivity, reactivity, or EP toxicity - see Sections 261.20 - 261.24). Corrosivity may be a characteristic of concern, if hydrochloric acid is present due to breakdown of the chlorofluorocarbons at high compressor temperatures. However, the characteristic in Section 261.22 refers to aqueous wastes with a pH less than or equal to 2, or liquid wastes that corrode steel at a rate greater than one-quarter inch per year. The Paint Filter

Liquids test (Test Methods for Evaluating Solid Wastes, Method 9095) is the method that is recommended for generators to isolate the liquid portion of their waste. See 50 FR 18372, April 30, 1985. If the hydrochloric acid is present in the liquid phase, and the waste does exhibit the corrosivity characteristic, it is a hazardous waste.

The generator's responsibility includes determining whether a waste is hazardous using the steps outlined in Section 262.11. If the waste is not listed, the generator has the option of testing or applying knowledge to determine whether the waste exhibits a characteristic. Enclosed is a portion of the background document for the hazardous waste generator regulations. The enclosed portion details the generator's option to apply knowledge "in light of the materials or processes used." Pages I-2.11 and I-2.12 explain that "If operations at different facilities are sufficiently similar as to provide the requisite basis, then nothing in the regulation prevents the use of such information. Persons are cautioned, however, that data from one facility are not necessarily transferrable to another; that subtle differences in the facilities or raw materials may significantly alter the character of the resulting waste."

If your company is interested in testing the used refrigerant that you would normally be reclaiming to see if it exhibits a characteristic of hazardous waste, the data obtained may be quite useful in that equipment owners or service personnel could use the data to make their hazardous waste determinations. If testing shows that these refrigerants never exhibit any of the characteristics, they may be reclaimed without complying with the EPA hazardous waste rules.

Finally, states authorized to implement RCRA are required to have programs that are consistent with the Federal RCRA program. These states' requirements may be more stringent or more extensive than the Federal regulations (Section 270.1(i)(1)), as long as they are consistent according to the criteria in Section 271.4. States may have requirements more stringent than EPA's.

If you have further questions in this area, please contact Michael Petruska at (20) 475-9888.

Enclosure

Sincerely,

Original Document signed

Sylvia K. Lowrance, Director
Office of Solid Waste

EXHIBIT E

9441.1989(40)

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

AUG 2 1989

James T. Allen, Ph. D.
Chief
Alternative Technology Section
Toxic Substances Control Division
Department of Health Services
714/744 P Street
P.O. Box 942732
Sacramento, California 94234-7320

Dear Mr. Allen:

This letter responds to your February 6, 1989, correspondence requesting written confirmation of the regulatory status of chlorofluorocarbons (CFCs) used as refrigerants under the Resources Conservation and Recovery Act (RCRA).

As a spent material being reclaimed for reuse, the spent CFCs meet the definition of solid waste under Federal regulations (see 40 CFR 261.2). However, to meet the definition of hazardous waste and, thus, be subject to Subtitle C of RCRA, the spent CFCs must either be specifically listed as a hazardous waste, or must exhibit one or more of the characteristics of a hazardous waste

Certain CFCs that are used for their solvent properties are listed as hazardous wastes when spent (see EPA Hazardous Waste Nos. F001 and F002 at 40 CFR 261.31). Also, certain CFCs that are unused commercial chemical products are listed hazardous wastes when discarded (see 40 CFR 261.33). However, CFCs used as refrigerants, do not meet any of the hazardous waste listings. Thus, a used CFC refrigerant is a hazardous waste only if it exhibits one or more of the characteristics of a hazardous waste.

On July 28, 1989, published a Federal Register notice (54 FR 31335) that clarified the applicability of RCRA Subtitle C regulations to CFC refrigerants (see enclosure). This notice also announced the availability of data relating to whether CFC refrigerants exhibit the characteristic of a hazardous waste. In determining whether the CFC refrigerant to be recycled is a hazardous waste because it exhibits a characteristic of a hazardous waste, a generator may cite the Federal Register notice to demonstrate that such materials do not exhibit a hazardous characteristic under normal operating conditions.

Should you have any further questions regarding the applicability of RCRA Subtitle C regulation to the recycling of CFC refrigerants, you may contact Mitch Kidwell, of my staff, at (202) 475-8551.

Enclosure

Sincerely,

Original Document signed

Michael J. Petruska
Acting Chief
Waste Characterization Branch

EXHIBIT F

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[SWH-FRL-3904-5/EPA/OSW-FR-91-005]

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic

AGENCY: Environmental Protection Agency.

ACTION: Interim final rule with request for comments.

SUMMARY: On March 29, 1990, the Environmental Protection Agency (EPA) promulgated revisions to the toxicity characteristic, one of several characteristics used to identify waste regulated as hazardous under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Since the promulgation of the Toxicity Characteristic (TC), the Agency has received information that the rule's immediate application may cause certain used chlorofluorocarbon (CFC) refrigerants to be subject to hazardous waste regulations because they exhibit the TC. EPA is concerned that subjecting used CFC refrigerants to Subtitle C regulations will promote continued or increased venting, increasing the levels of ozone-depleting substances in the stratosphere. As a result of this new information and to allow time for gathering additional information and giving all relevant facts careful consideration, the Agency is promulgating today's interim final rule to suspend the TC rule for used refrigerants which exhibit the toxicity characteristic and which are recycled. The exemption only applies if the refrigerants are reclaimed for reuse. At the same time, the Agency is seeking public comment on the merits of this suspension.

DATES: *Effective Date:* February 5, 1991. *Comment Date:* Comments must be submitted on or before April 1, 1991.

ADDRESSES: The public must send an original and two copies of their comments to: RCRA Docket Information Center (OS-305), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

Place the docket number F-91-CFIF-FFFFF on your comments. The EPA RCRA docket is located at: EPA RCRA Docket (room M2427), 401 M Street SW., Washington, DC 20406.

The docket is open from 9 a.m. to 4 p.m., Monday through Friday, except for Federal holidays. The public must make an appointment to review docket materials. Call (202) 475-9327 for appointments. Copies of docket materials cost $0.15/page.

FOR FURTHER INFORMATION CONTACT: For general information about this notice, contact the RCRA/Superfund Hotline at (800) 424-9346 toll free, or (703) 920-9810 in the Washington, DC, metropolitan area. For information on specific aspects of this notice, contact Becky Cuthbertson, Regulatory Development Branch, Office of Solid Waste (OS-332), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 475-8551.

SUPPLEMENTARY INFORMATION:

Outline of Today's Notice

I. Background

A. Refrigeration System Operations

Vapor compression refrigeration systems typically use CFC refrigerants as the working fluid. The most common refrigerants include CFC-11, 12, 114, 502 and HCFC-22. These cycles are closed systems, relying on the ability to continually compress and evaporate the refrigerants to provide the proper heat transfer for cooling.

CFC-11 is typically a liquid at room temperature, but because its boiling point is around 75 °F, it volatilizes easily. An infrequently used refrigerant, CFC-113, also has a high boiling point (117 °F). However, the other more common refrigerants, such as CFC-12 and HCFC-22, have very low boiling points (−21 and −41 degrees F respectively), which cause them to immediately volatilize; therefore, they are not likely to leach from wastes into groundwater in any measurable quantities.

Refrigerants, as the working fluid of a mechanical cooling process, are not deliberately vented or removed from the system, unless the systems are being tested, serviced, maintained, retired, or retrofitted to use new CFC alternatives. In order to service the refrigeration hardware, the closed refrigeration loop must be opened. Because of the rapid volatilization of CFC refrigerants when they are released from the closed refrigerant system, traditional service and maintenance procedures involved venting the refrigerant. However, because of environmental concern regarding ozone depletion, recent international regulations phasing out production of CFCs, (see London Amendments to the Montreal Protocol) and increased price and decreased CFC availability, service technicians are beginning to capture and reuse refrigerant.

B. RCRA Applicability

RCRA regulations apply to materials that are solid wastes (including solids, liquids, semi-solids, and contained gases), as that term is defined in 40 CFR 261.2. Used Refrigerants are considered spent materials, and if reclaimed, are solid wastes under 40 CFR 261.2(c)(3). However, a limited subset of used refrigerant, i.e., those which are used or reused without prior reclamation, are not subject to regulation under the RCRA hazardous waste program (see 40 CFR 261.2(e)(1)(ii)).

On March 29, 1990 (55 FR 11798), EPA promulgated the Toxicity Characteristic to replace the EP toxicity characteristic. (The TC went into effect September 25, 1990.) The Toxicity Characteristic is used to identify solid wastes which are identified as hazardous based on the presence of constituents that may leach from the waste. The TC expanded the range of wastes subject to subtitle C (hazardous waste) controls, because a number of constituents not regulated under the EP toxicity characteristic, which it replaced, were included in the TC.

Two of the new TC constituents may be present in certain used refrigerants (e.g., those containing CFC-11) and are likely to leach from the waste at levels that may cause the used refrigerants to be subject to the federal hazardous waste regulations. The two constituents which are of concern in CFC-11 are carbon tetrachloride, which is present in used CFC-11 refrigerant at levels of 25-115 mg/l, and chloroform, present in used CFC-11 refrigerant at levels of 6-52 mg/l. (The TC regulatory level for

carbon tetrachloride is 0.5 mg/l, and for chloroform, it is 6.0 mg/l.) These contaminants are present in low levels in the manufacturing raw feedstock required to produce CFC–11 and are left over in used CFC–11 and remain as residuals in used CFC–11. Thus when the refrigerant is removed from the refrigeration system, it may contain carbon tetrachloride and/or chloroform at levels that cause it to exhibit the characteristic of toxicity. See the data provided in the August 29, 1990 letter from C.A. McCain of E.I. DuPont de Nemours and Co., to Ms. Lena Nirk of EPA, available for public viewing in the docket for this notice.

For the data on CFC–11 provided in the docket, there is no documentation of the analytical methods or quality control/quality assurance procedures used. We also do not have data on other CFC refrigerants, e.g., CFC–113. EPA solicits comments on whether other data are available that can be used to determine whether used CFC refrigerants are TC hazardous. EPA also solicits comment on whether the suspension should be extended to hydrofluorocarbon (HFC) refrigerants, which are being used as refrigerants (for example, in mobile air conditioning systems); EPA has no data at all on whether HFCs would exhibit any hazardous waste characteristics when removed from refrigeration systems.

C. Previous EPA Actions on Refrigerants

The issue of RCRA applicability to refrigerants being recycled has been discussed previously; see the July 28, 1989 **Federal Register** notice (54 FR 31335) describing the status of recycled refrigerants under the 1989 Federal hazardous waste regulations. Under the regulations in place from 1980 to 1990, recycled refrigerants were unlikely to be Federally regulated as hazardous wastes because they would not have exhibited any of the characteristics of hazardous waste, nor did they fit any of the hazardous waste listing descriptions. However, as discussed above, the TC regulation promulgated on March 29, 1990, which added new constituents to the Toxicity Characteristic, may change the RCRA regulatory status of those recycled refrigerants containing carbon tetrachloride or other Toxicity Characteristic constituents.

No commenters on the original Toxicity Characteristic proposal raised the issue of possible negative impacts on recycling of used refrigerants if they were to become regulated as hazardous wastes. One reason this may have occurred is that at the time of the original TC proposal (June 13, 1986; see 51 FR 21648) most refrigerants were being vented and recycling was not feasible.

EPA has taken a related action under the Clean Air Act by issuing an Advanced Notice of Proposed Rulemaking (ANPRM) on May 1, 1990 (55 FR 18258) to develop a national CFC and halon recycling program. Some commenters on that notice raised concerns about RCRA applicability to recycled refrigerants and described potential disruption of recycling markets if refrigerant is managed as a hazardous waste under RCRA. However, the commenters did not specifically mention the Toxicity Characteristic.

D. Regulations under the Clean Air Act

The recently enacted amendments to the Clean Air Act require EPA, by 1992, to issue regulations regarding the use and disposal of certain CFCs in appliances and industrial process refrigeration units. The regulations must include requirements to maximize recapture and recycling and ensure safe disposal. The amendments, as a general rule, also prohibit venting of certain CFCs to the environment.

The new Clean Air Act authority is the Agency's best available tool to limit CFC emissions. The Clean Air Act authority enables the Agency to regulate the handling, recycling, reuse and disposal of CFCs by refrigerant recyclers, service technicians and equipment owners and manufacturers. When EPA proposes and finalizes a prohibition on venting chlorofluorocarbons under the Clean Air Act, and the prohibition becomes effective, the Agency will reconsider the issue of RCRA applicability to used CFC refrigerants being recycled.

II. Application of Existing Regulatory Framework

A. Definition of Solid Waste

One of the first questions that arises in determining RCRA applicability to refrigeration system maintenance and repair is whether a material is a solid waste. The hazardous waste regulations of RCRA Subtitle C apply to materials that are "solid wastes," which are defined in RCRA section 1004(27) as

> * * * discarded material including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities * * *

Contained gases thus clearly are solid wastes under RCRA, whereas uncontained gases not associated with solid waste management units are outside of RCRA.

As stated in the July 28, 1989 **Federal Register** (54 FR 31336), EPA's regulations classify the used refrigerants as spent materials that are solid wastes when reclaimed. (The refrigerants must be collected as a contained gas under this scenario.) See 40 CFR 261.2(c)(3). If the waste also exhibits a characteristic of a hazardous waste, it is a hazardous waste in addition to being a solid waste. Thus, the equipment servicer who must remove the chlorofluorocarbon refrigerants in order to service the equipment must decide whether to vent them (and thus avoid hazardous waste regulatory requirements) or collect them and possibly be required to manage them as hazardous wastes. EPA is concerned that, if the refrigerants are regulated as hazardous wastes, most servicers will vent the material rather than collect it for recycling.

B. Refrigerant Handlers' RCRA Requirements

This section presents the hazardous waste requirements for handlers of used CFC refrigerants being reclaimed, if those used CFC refrigerants were to be classified as hazardous wastes because they exhibit the Toxicity Characteristic. The requirements described here are suspended by today's action (discussed further in section IV of this notice).

Currently, the owners of refrigeration equipment using CFC refrigerant as the heat transfer fluid are considered hazardous waste generators if the used CFC refrigerant exhibits the characteristic of Toxicity, and if they collect the used CFC refrigerant for reclamation or disposal. In addition, parties who repair or maintain the refrigeration equipment under contract with the equipment owners would be "co-generators" if their actions produced hazardous waste, or caused it to be subject to regulation (see 45 FR 72026, October 30, 1990). Parties co-generating hazardous waste must arrange among themselves who is to take responsibility for managing the hazardous waste, although all parties remain potentially liable for hazardous waste mismanagement.

As of September 25, 1990, generators who generate more than 1000 kg of hazardous waste per month must manage their TC hazardous wastes according to the requirements in 40 CFR parts 261 and 262 and other relevant parts of the hazardous waste regulations. For generators of 100–1000 kg of hazardous waste per month, the effective date for managing TC hazardous wastes according to the hazardous waste requirements is March 29, 1991. (Generators of less than 100 kg

hazardous waste per month are conditionally exempt from hazardous waste management standards.)

In a scenario in which the refrigeration equipment servicer collects the CFC refrigerant and transports it from a large quantity generator's site for recycling, that servicer acts as a transporter (in addition to being a co-generator) and must comply with the requirements in 40 CFR part 263 if the used CFC refrigerant exhibits a hazardous waste characteristic. Transporters may hold hazardous wastes at "transfer facilities" for up to ten days, consistent with activities undertaken in the normal course of transportation, without needing a RCRA storage permit.

As of September 25, 1990, the recycling facility accepting CFC refrigerants that are hazardous wastes from large quantity generators (greater than 1000 kg/month) must meet the definition of a "designated facility," which requires that the facility either has a permit or interim status, or meets certain other conditions as a recycling facility (see 40 CFR 260.10 for the definition of designated facility).

III. Issues Arising From the TC Rule

A. Impacts on Recycling Markets

EPA has received information since promulgation of the TC indicating that certain companies currently recycling CFC refrigerants may stop doing so if they must manage the CFC refrigerants as hazardous wastes. See Items No. 2–7 in the public docket for this notice. These companies and other groups generally cite the cost and complexity of the hazardous waste regulations, along with specific RCRA requirements such as manifesting, and other requirements that may be imposed at the local level as a result of the hazardous waste requirements (i.e., rezoning refrigerant distribution centers as hazardous waste transfer stations), as reasons that recycling will diminish or cease. Although EPA is still evaluating the merits of the arguments presented by the parties submitting this information, EPA is concerned that some of the results suggested may cause serious environmental harm, the nature and significance of which EPA did not explore during the TC rulemaking. EPA is concerned that the increased requirements associated with regulating refrigerants as hazardous wastes will result in increased venting. EPA has not considered the feasibility of administrative options to reduce the impacts on recycling of these materials under current RCRA regulations. Therefore, EPA is suspending application of the rule in order to have time to evaluate these issues.

In order to evaluate these issues, EPA is soliciting public comment on whether handling used CFC refrigerants as a hazardous waste is causing or will cause a decrease in current recycling rates, and whether the decrease (if any) is or will be occurring for the reasons these parties put forward, or for other reasons.

To assess the potential impacts of the hazardous waste regulations on used CFC refrigerant recycling, EPA will consider information on the universe of used CFC refrigerant handlers (numbers of facilities reclaiming, number of facilities that use the CFC–11 and other refrigerants and would be classified as generators if the CFC refrigerants were hazardous wastes, and how many transporters there are currently). Finally, EPA is soliciting comment on whether the concerns can be redressed by phased compliance rather than exemption, and on whether alternative approaches (such as streamlined permitting, or reduced manifesting requirements) could be used to reduce any adverse recycling impact of RCRA regulations.

Under RCRA, there is a requirement to obtain a permit prior to beginning construction of a new hazardous waste management facility (if the facility did not manage hazardous wastes prior to the effective date of regulations for those hazardous wastes—see 40 CFR 270.10(f)). This requirement exists for facilities that intend to treat, store, or dispose of hazardous wastes from generators other than conditionally exempt small quantity generators. (In the case of used CFC refrigerants, if such facilities had begun storing and reclaiming used CFC refrigerants prior to September 25, 1990, and met certain other requirements, they would be able to obtain "interim status" and would have been able to continue storing and reclaiming after September 25. However, it appears that few parties were aware of the TC's potential application to used CFC refrigerants.) EPA believes that this requirement may act as a deterrent to firms contemplating entering the CFC reclamation market after the effective date of the TC rules. EPA notes that the preceding discussion applies only to the facilities actually conducting the reclamation or reprocessing of the refrigerants, and not to all refrigeration equipment owners who have used refrigerants that can be reclaimed.

In addition to potential requirements on reclaimed refrigerants, other factors may be influencing the reclamation/reprocessing firms' decision to enter the CFC refrigerant recycling market. Because of the ease with which equipment servicers can vent, as opposed to collect, used CFC refrigerants, and the low cost and ready availability of refrigerant, recycling has not been common in the past. (Equipment design, including the ability to attach devices to collect the refrigerant, may also influence the equipment servicer's decision.) In order to increase recycling rates, the refrigeration industry must contend with both the need to change the equipment servicers' behavior, and the need to change some equipment design.

However, the recent (July 1989) implementation of Phase I of the Montreal Protocol reduces CFC supplies by over 20%, resulting in price increases. In addition, a tax on chemicals that deplete the ozone layer further increases the price and provides incentives to collect used CFC for recycling; this tax is scheduled to increase yearly.[1] The current price of CFCs are at the margin at which recycling becomes economically feasible. If used refrigerant is regulated as a RCRA hazardous waste, the cost of recycling is likely to increase enough to make recycling economically less attractive. Since venting is not currently prohibited, venting is likely to continue to occur until the economics of recycling improve, or regulations prohibiting the venting go into effect.

B. Impacts on an Orderly CFC Phaseout and Transition to CFC Substitutes

The Agency is concerned that if recycling is not practiced due to the increased costs of recycling that results from handling the used CFC refrigerants as RCRA hazardous wastes, industry may begin using other, more environmentally costly practices. These practices could include premature retirement of CFC-using equipment or retrofitting that equipment to work with alternatives. A premature retrofit to an alternative that has not yet been completely evaluated may result in the wrong refrigerant choice, leading to negative environmental impacts. The Agency is currently evaluating the toxicity, global warming potential, energy efficiency, safety, flammability, ozone depletion and materials compatibility of various alternative refrigerants. Many of the results will not be available until 1991–1994, and thus, information is not currently available to completely identify alternatives which

[1] EPA analysis indicates that the cost of recycling is approximately $2 per weighted kilogram of CFC (see the Advance Notice of Proposed Rulemaking dated May 1, 1990, 55 FR 18259).

satisfy all environmental, health, and safety concerns. For instance, a premature selection of an alternative that is less energy efficient would result in increases in carbon dioxide and other air pollutants which may cause increases in global warming.

Recycling CFCs provides the opportunity for industry to postpone or even avoid entirely the need to retire prematurely or retrofit equipment. The Agency estimates that a recycling program in the major air conditioning and refrigeration sectors, fully implemented by the early 1990's, could result in a net saving of over 159,000 metric tons of CFCs by the year 2000. Complying with RCRA regulations may increase venting of CFC refrigerants, and thus increase the cost of the Agency's CFC phaseout regulations. The Agency discussed the potential for increasing the costs of a recycling program if there are delays in its implementation in an advance notice of proposed rulemaking published on May 1, 1990 (55 FR 18256).

C. Environmental Concerns

In the ANPRM of May 1, 1990 (55 FR 18256), the Agency described the human health and environmental risks of CFCs. An EPA analysis shows that chlorine levels will continue to increase from current levels of 3.0 to about 4.0 parts per billion (ppb) despite a phaseout in production of controlled substances by the year 2000. The Antarctic ozone hole was discovered at chlorine levels of approximately 2.5 ppb; natural chlorine levels are .7 ppb. Earlier reductions in CFCs before 2000 would reduce the environmental risks (described below) even as chlorine levels continue to increase over the next decade.

The largest environmental impact from emissions of CFCs comes from the chlorine's ability to deplete the ozone layer, and thereby increasing the amount of ultraviolet radiation reaching the earth's surface. EPA believes that an increase in UV radiation will result in increased deaths from skin cancer, increased incidence of cataracts, reduction in the function of the body's immune system, and damage to crops. CFCs are also suspected greenhouse gases.

Recycling provides an opportunity to delay or reduce the increase in chlorine levels. Indeed, estimates based on preliminary EPA analysis of a proposed recycling program indicate that one-third of all CFCs could be recycled by the turn of the century. Recycling may reduce the peak rate of chlorine loading to the stratosphere.

The Agency is currently investigating the impact that recycled CFCs may have on the ozone layer. Since these chemicals are difficult to destroy, it is likely that they will be eventually released although at a later point in time.[2] EPA is investigating the impact of their eventual release on peak chlorine concentrations. Recent scientific evidence suggests that a reduction of the peak chlorine concentrations may more than proportionally reduce ozone depletion.[3] It is likely that delayed or reduced release of CFCs due to recycling over the next 30 to 40 years will lower the peak of chlorine concentration.

The Agency is promulgating today's interim final rule with the belief that this action will encourage used refrigerant recycling. EPA is interested in hearing from commenters who have evidence on the effect of this exemption. EPA is also interested in evidence of harmful environmental or health effects other than those discussed in this rulemaking. Because EPA is attempting to balance the potential environmental harm caused by disruption to emerging refrigerant recycling markets against the potential environmental harm caused by removing this wastestream from RCRA subtitle C regulatory control, EPA is asking for commenters to provide any available information to aid in evaluating the human health and environmental effects of these actions.

D. Time Considerations

Of paramount concern to the Agency is mitigating the potential for significant adverse health and environmental impacts, as discussed above, while investigating these issues further. Under the Clean Air Act amendments, a prohibition on venting must become effective by July 1, 1992. Thus because of the potential seriousness of the risks posed by CFC refrigerant venting, EPA believes that immediate action to temporarily postpone the RCRA regulation of these materials pending further investigation is warranted to mitigate the potential health and environmental effects. EPA is exercising its authority under the good cause exemptions in sections 553(b)(3) and 553(d)(3) of the Administrative Procedure Act to immediately suspend the requirements imposed as a result of the TC for CFC refrigerants being recycled. EPA believes that, without the immediate suspension, recycling of CFC refrigerants may decrease substantially, with potentially serious impacts on stratospheric ozone levels that are contrary to the public's best interest.

IV. Suspension of TC Requirements

A. Eligible Refrigerants

The refrigerants that are eligible for this exemption are those chlorofluorocarbons that are recycled and that were used as the heat transfer fluid in a refrigeration cycle in totally enclosed heat transfer equipment. These chlorofluorocarbons include CFC-11, CFC-113, and the other chlorofluorocarbon refrigerants, including HCFCs. Examples of the equipment in which these chlorofluorocarbons may be used include mobile air conditioning systems (e.g., those used in mass transit vehicles), mobile refrigeration (refrigerated trucks and rail cars), and commercial and industrial air conditioning and refrigeration systems. The requirements imposed by the TC are suspended for such refrigerants by today's interim final action. The spent CFCs that are being reclaimed will not be regulated as a Federal hazardous waste as a result of today's action (unless a future determination to do so is made). Thus, the hazardous waste regulatory requirements for generators, transporters, and recyclers of used chlorofluorocarbons that are being reclaimed (discussed in section II.B. of this notice) are suspended, effective February 5, 1991.

B. Rationale for Suspension

As a result of the new information provided in this notice, and to allow adequate time to collect additional data and give careful consideration to all the relevant issues and regulatory options, the Agency is today promulgating an interim final rule that suspends the TC rule for handlers of used CFC refrigerants being recycled. The suspension will allow time for individuals to submit comments on the various issues raised in this proposal, and it will allow the Agency time to consider all information concerning these operations. Had the Agency been aware of this issue during the comment period on the TC proposal, the Agency would have carefully considered the impacts and consequences of the TC and determined the appropriate action at that time. Faced with new information concerning the potential adverse environmental impacts caused by the TC, EPA weighed the benefits of

[2] The Agency is assessing the possibility that such chemicals could either be destroyed or transformed into other chemicals at a later date, thus diminishing their eventual impact on the ozone layer.

[3] U.S. Environmental Protection Agency. "Analysis of Environmental Implications of the Future Growth in Demand for Partially Halogenated Chlorinated Compounds", EPA 400/190001, January 1990.

the rule as applied to CFC refrigerants against the potential public health consequences of applying the rule to CFC refrigerants in the interim while EPA considers the new information. In this case, due to the environmental and health consequences from ozone depletion, EPA believes that the public interest may be better served by suspending the rule to evaluate the consequences. EPA solicits public comment on its decision to suspend the TC regulation for used CFC refrigerants being reclaimed.

V. State Authorization

A. Applicability of Rules in Authorized States

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. Following authorization, EPA retains enforcement authority under sections 3008, 3013, and 7003 of RCRA, although authorized States have primary enforcement responsibility. The standards and requirements for authorization are found in 40 CFR part 271.

Prior to the Hazardous and Solid Waste Amendments of 1984 (HSWA), a State with final authorization administered its hazardous waste program in lieu of EPA administering the Federal program in that State. The Federal requirements no longer applied in the authorized State, and EPA could not issue permits for any facilities that the State was authorized to permit. When new, more stringent Federal requirements were promulgated or enacted, the State was obliged to enact equivalent authority within specified time frames. New Federal requirements did not take effect in an authorized State until the State adopted the requirements as State law. In contrast, under RCRA section 3006(g) (42 U.S.C. 6926(g)), new requirements and prohibitions imposed by HSWA take effect in authorized States at the same time that they take effect in nonauthorized States. EPA is directed to carry out these requirements and prohibitions in authorized States, including the issuance of permits, until the State is granted authorization to do so. While States must still adopt HSWA-related provisions as State law to retain final authorization, HSWA applies in authorized States in the interim.

B. Effect on State Authorizations

EPA considers this rule to be part of the TC rule, and thus also a HSWA rule. As a result, EPA will implement the provisions of today's rule in authorized States until their programs are modified to adopt the final toxicity characteristic and the modification is approved by EPA. Implementation of today's rule beyond the date of a State's receiving final authorization for the toxicity characteristic depends upon actions taken by the State, as discussed below. EPA will implement the provisions of today's rule in unauthorized States.

Today's rule suspends the requirements imposed in the final Toxicity Characteristic regulation (see 55 FR 11798, March 29, 1990) for certain CFC refrigerants being recycled. The Toxicity Characteristic was promulgated pursuant to a HSWA provision and must be adopted by States which intend to retain final authorization. However, today's rule provides for a standard which is narrower in scope than would be imposed in the final Toxicity Characteristic for certain CFC refrigerants which may fail the characteristic and are recycled. In order to promote recycling operations, today's rule provides that these wastes would not be hazardous wastes under the Federal regulations, and States would not be required to mandate their management as such in order to retain their RCRA authorization. However, Section 3009 of RCRA provides that States may impose requirements that are broader in scope or more stringent than those imposed under Federal regulations. States, whether using RCRA authorities (e.g., authorities under State law where States have received final authorization to implement the toxicity characteristic provisions in lieu of their implementation by EPA), or other State authorities under other statutes, may impose hazardous waste requirements on such operations, or may require other more stringent conditions upon management of these wastes.

VI. Additional Information

A. Executive Order 12291—Regulatory Impacts

Under Executive Order 12291, EPA must determine whether a regulation is "major," and therefore subject to the requirement of a Regulatory Impact Analysis. The overall effect of today's rule would be to suspend requirements imposed by the final Toxicity Characteristic rule for certain CFC refrigerant recycling operations. There are no sampling or analysis requirements in today's rule. The net effect of this rule is to extend cost savings to certain segments of the potentially regulated community. Consequently, no regulatory impact analysis is required.

B. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act, 5 U.S.C. 601–612, whenever an agency is required to publish a General Notice of Rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the impact of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). No regulatory flexibility analysis is required, however, if the head of the Agency certifies that the rule will not have a significant impact on a substantial number of small entities.

The suspension of the Toxicity Characteristic requirements for certain limited CFC recycling activities in this rule is deregulatory in nature and thus will only provide beneficial opportunities for entities that may be affected by the rule. Accordingly, I hereby certify that this regulation will not have a significant economic impact on a substantial number of small entities. This regulation, therefore, does not require a regulatory flexibility analysis.

C. Paperwork Reduction Act

There are no reporting, notification, or recordkeeping (information) provisions in this rule. Such provisions, were they included, would be submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

VII. References

Copies of the following documents are available for viewing only in the OSW docket room:

1. August 29, 1990 letter from C.A. McCain of E.I. du Pont de Nemours & Company to Lena Nirk of EPA.

2. September 24, 1990 letter from Kevin J. Fay of the Alliance for Responsible CFC Policy to Sylvia Lowrance of EPA.

3. September 24, 1990 letter from Gerald Hapka of du Pont to Steve Cochran of EPA.

4. September 4, 1990 letter from Lorraine Segala-Long of Omega Recovery Services to Steve Seidel and Jean Lupinacci of EPA.

5. September 4, 1990 letter from William Chaisson of the Air Conditioning Contractors of America to Sylvia Lowrance of EPA.

6. September 24, 1990 letter from James Patrick Leonard of National Refrigerants to Sylvia Lowrance of EPA.

7. September 24, 1990 letter from James Patrick Leonard of United Refrigeration Inc. to Sylvia Lowrance of EPA.

8. Properties—du Pont Freon® Refrigerants (August 1986).

9. Scientific Assessment of Stratospheric Ozone: 1989 (July 14, 1989).

10. Status of Used Refrigerants under 40 CFR 261.2—Memorandum to the Docket from Michael Petruska, Acting Chief, Waste Characterization Branch (October 18, 1990).

11. October 12, 1990 letter from Harold J. See of C.F.C. Inc. to EPA's Asbestos and Small Business Ombudsman.

12. September 7, 1990 information from du Pont on Used CFC Refrigerants.

13. U.S. Environmental Protection Agency. "Analysis of Environmental Implications of the Future Growth in Demand for Partially Halogenated Chlorinated Compounds." EPA 400/190001, January, 1990.

List of Subjects in 40 CFR Part 261

Administrative practice and procedure, Air pollution control, Hazardous materials transportation, Hazardous substances, Hazardous waste, Natural resources, Penalties, Recycling, Waste treatment and disposal.

Dated: February 5, 1991.

William K. Reilly,

Administrator.

For the reasons set forth in the preamble, title 40, chapter 1 of the Code of Federal Regulations is amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, and 6938.

2. Section 261.4 is amended by adding paragraph (b)(12) to read as follows:

§ 261.4 Exclusions.

* * * * *

(b) * * *

(12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.

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